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Columbia University's Introductory Pedagogy (1986 - 1991)

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by

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1. Pedagogical Innovation: From Beaux Arts to Modernism

Harvard Graduate School of Design and The Transformation of Bauhaus Pedagogy into Functionalism: Critique of The Decorated Diagram.

> "...years before World War II, American architectural education had reached a consensus that the Beaux-Arts system as it had evolved in America was both rigid and unwieldy as a system of education, and that its architectural idea were moribund. Schools dropped out of the system. The inspiration for the new system was the Bauhaus."[1]

During the 1920's, post-war America was being transformed by the swiftly advancing technological breakthroughs resultant of the industrial revolution. This emphasis on technological experimentation and development saw its artistic renaissance, in Germany, at the Bauhaus, under the direction of architect Walter Gropius from 1919 to 1932. The Bauhaus responded to the rapidly changing technological culture by facilitating an educational system based on experimentation, observation, expressionism and scientific objectivity.[2] Architecturally speaking, this type of design-model contrasted heavily with the current educational structure of the Ecole des Beaux-Arts which championed an intensified objective study and application of typology and style, through the recycling and refining of an established propriety of architectural expression. This historical perspective of architectural study was losing its relevance in a technologically advancing country, where speculation of form through the expression and experimentation of emerging technologies became a primary architectural interest. This technological renaissance opened an avenue for a broad spectrum of change, within which architectural education would find a path for transformation as the American academy was "unable to formulate a credible response to modern architecture's insistent agenda of technology, function, and social utility."[3]

This time in America was the perfect breeding ground for the transplanting of the Bauhaus model for education, as its "anti-academic spirit was able to find fertile ground in North America at a moment when the Beaux-Arts system was [also] corroding under the impact of industrial civilization and Depression-era realities."[4] The Bauhaus tradition however did not just import itself directly into the American system of education, as the American context was far more "liberal [and] collegiate" than that of Germany during the time of the Bauhaus' rise to academic power.[5] American culture was dealing with different issues which could not be ignored, thus when Walter Gropius arrived at Harvard in 1937 at the invitation of Dean Joseph Hudnut, the Bauhaus had to remodel itself appropriately.

The Bauhaus model, as it was assimilated and transformed at the GSD, was "congruent with the Bauhaus ethos: [which] on the one hand [was] a union of 'scientific objectivity' and individual self-expression, on the other a rejection of theory or intellectual speculation and historic example, precedent, or model."[6] The Bauhaus model at GSD, disavowed architectures historical lineage, stripping it down to a diagrammatic and functional essence which was in search of innovation. The logic in the removal of historical precedent can be seen as an opposition to the propagation of architectural styles enforced by the Beaux-Arts tradition, thus seeking innovation and personal expression without the distraction of precursory architectural canons. As a result architectural education and design was reduced to a historically removed method of production which produced pragmatically constructed "decorated diagrams;" designs which were functionally organized and then superimposed with a superficial arrangement of exterior patterning which aimed to produce clever retinal excitement.[7]

The initial emphasis was placed on functionalist attitudes, excluding all others, which was followed by a visual reemergence of decoration. This reading of Harvard came from, Klaus Herdeg in his polemical book "The Decorated Diagram," which was a critique of the resultant work born from the merging of Bauhaus principles into the American institution. Herdeg describes the result of the pedagogy at Harvard best when characterizing the architectural products of the graduates of the esteemed institution during the Gropius' three-decade tenure:

> "Its plan is diagrammatic—a literal expression of functional relationships—and the nonshelter aspects of the exterior of the building appear to be reduced to one purpose: to excite the eye (in a purely physiological sense) by clever pattern designs or by a total absence of pattern. Visual cues incorporated in the design of the building defy intellectual and often emotional resolution because they appear to have no meaning beyond their own existence; they are simply recorded by the retina."[8]

Herdeg critiques Gropius for his ultimate faith in objectivity, viewing architecture as something that is highly quantitative and measurable, as a physical apparatus which "stresses the mechanical aspects of perception at the expense of the intellectual and emotional."[9] In this examination of what is referred to as "Gropius's misunderstanding of perception,"[10] Herdeg makes four correlations to this interpretation of perception; of the four, one is of particular importance: the fourth and last corollary in which Herdeg asserts that because of the objective nature of evaluative criteria, the self-awareness of the designer is removed, thus eliminating the ability or motivation to self-criticize the work. This objectivity, responsible for the generation of functional organizations and measurable effects, mixed with a highly subjective attitude predicated on the prejudiced notion of "what I like is good" and "what feels good is good," resulted in an architecture

which became essentially inarguable.[11] On the one hand the student work's formal structures were justified through an objective logic, which was measurable and empirical, yet the work's physical articulation, whether under-or-over-articulated, was measured by the personal likes and dislikes of the architect, through the "honesty of thought and feeling."[12] Both of these positions avoided self-criticism due to the fact that one was seemingly provable, being based on practical knowledge, and the other was so entirely immeasurable through such an extreme subjectivity that the ability to edit or critique became futile. As a result the modernist architecture germinating from this ethos was criticized as being "falsely psychologistic [and constructed with an] empty [formalist] aesthetic." This ultimately lead to the most common critique of modernism, that it had "[failed] to address [the] cultural, spiritual, and emotional needs" of civilization.[13] This is not to step onto ground positioning that modernism was a failed movement, more just a comment which attempts to connect a common critique of modernism to Herdeg's critique of the work resulting from Harvard's pedagogical model.

The University of Austin at Texas: Critique of Mid-Century Functionalist Practice

Architectural education came back into question post World War II, however this time, change was isolated, occurring simultaneously with the propagation of the Bauhaus/Harvard model. This development in architectural education was taking place at the University of Texas at Austin, where new director Harwell Hamilton Harris, inspired by Josef Alber's innovations at both Black Mountain College and Yale, decided to hire a group of young architects to help innovate the school by rethinking the nature of an architectural curriculum.[14] This young new faculty (known as the "Texas Rangers") included such future icons as Colin Rowe, John Hejduk, Robert Slutzky and Bernhard

Hoesli. Hoesli arrived first in 1951, one year before Harris' arrival[15] in 1952, and, with the primary assistance of Colin Rowe,[16] established "a new, alternative academy, which would function as a critique of contemporary [pedagogy]." In their 1954 Memorandum they established the intellectual foundation of the new curriculum:

> "1. That the process of design is essentially the criticism of a given situation,
>
> 2. That the power of generalization and abstraction (in the student) must be aroused,
>
> 3. That the act of selection assumes a commitment to certain principles,
>
> ` 4. That an academic institution should offer an essential knowledge and an essential attitude."[17]

The pedagogy developed at the University of Texas at Austin was one principled on the act of discovery, through the conceptualization of embodied and learned knowledge and a rigorous critique of education based on practice models. To establish this pedagogical perspective, Hoesli questioned contemporary pedagogy by first asking the question, "What is wrong with architectural education today?" He continued by stating that, "the answer [resided] in another question: What is wrong with architectural practice today?"[18] The fact was that architectural practice was in a functionalist era, focused on technology and pragmatism, and at this point in time the American architectural academy was modeling itself off these concerns, replacing intellectual fervor with the pragmatic concerns of practice.

To approach the problem of breaking the American academy from the problems of contemporary practice, Hoesli put forth that the "key [was] to [improve] teaching" and that meant that teaching could no longer be "preoccupied with 'the subject matter,'" but

rather should be more concerned with the student's "capacity to learn, his possibilities to learn, his method." This shift in hierarchy placed the *how* of design over the *what,*[19] effectively placing emphasis on the acquisition and development of conceptual skill over the execution of a prescribed list of necessary technical abilities. In other words, the attention of the student was concentrated on the architectural process rather than a subject-based check list which the student had to complete upon graduation. This emphasis was similar to the Bauhaus/Harvard model, which also encouraged personal exploration in order to gain understanding and innovation, however the primary differences lay within the emphasis of the importance and utilization of historical precedent[20] combined with the understanding and construction of an intellectual and conceptual fabric which would act as a supportive and meaningful referent for every moment of articulation.

At the center of this pedagogy was the notion of the 'architectural idea,' the spirit of the project which informed its logic and united it as a cohesive whole,[21] making it ultimately comprehendible and intellectually stable to both the student and critics based on a simple understanding of the conceptual fabric from which it was made. This 'idea' would be the thoughtful apparatus from which the student would decisively select, effectively assess, and ultimately defend their constructed arrangements. "Hoesli had stressed to his students the importance of gaining an overarching ‘idea’ that would clearly illustrate and express an architectural response to the requirements of program, site, and structure.”[22] An idea which is formulated from a personal position which is ultimately established by the student, but initially informed by the criteria and conditions set up by the instructor. The validity of a student's idea would invariably come into

question however because "the choice of an architectural idea was always a personal, [and] individual one"[23] it was not the focus of the criticism. Students were instead judged on their effective application of "three inter-related abilities: one, the ability to evolve [the] idea; two, the ability to develop the idea in architectural terms; and three, the ability to present that idea in drawings or models."[24] All of which revolved around establishing a meaningful relationship between the work and the conceptual framework from which the project was constructed.

The emphasis on the 'architectural idea' effectively set up two conditions: one, it established an environment where the student's desires were placed at the forefront of their education, where their personal frameworks, or goals, became the primary editorial condition for which both they and the critic could examine and appraise the quality of the work; and two, it set up a particular logic from which assignments could be constructed from, a structure which included a limited amount of constraints, objectives and requirements, such that there was a certain amount of ambiguity which required the student to navigate and ultimately construct a position within. The pedagogical structure was a nested condition, one in which there was a critical framework constructed by the instructor and an internal framework which was to be constructed by the student, with the hierarchy favoring the student's position over that of the initial project brief. This is not to say that the requirements, constraints and conditions were unimportant, in fact quite the opposite, but it was the student's ability to construct an idea born from ambiguity defined by a set of conditions which was at the heart of learning. It again comes back to the *how* of it all: *How* do the students construct ideas within indefiniteness? *How* do they interpret and articulate architecture? *How* do they learn?

These were the fundamental questions asked within the pedagogy of the 1950's curriculum at UT Austin.

It is important to reiterate the differences between the pedagogical perspective at UT Austin and that of the Bauhaus/Harvard model as there are some important overlaps and distinctions. As previously stated, one of the first key differences between these two approaches lies in the utilization of the architectural precedent. The appointment of Joseph Hudnut at Harvard saw the removal of the study of architectural history within the graduate curriculum as Hudnut believed that the "heavy requirements and time constraints of graduate-level training" were just too demanding for master-level students to handle.[25] This removal of historical precedent was also to distance the curriculum from the Beaux-Arts tradition which was contingent upon the utilization of historical precedents as a mode of design investigation. The perspective on the application of architectural precedent was quite different at UT Austin where the analysis of early modern architecture became a critical tool for a student's understanding of how space is conceptually structured. This could be seen as a modernized shift back towards the Beaux-Arts model, where the study of historical formal systems became an important tool for architectural investigation, albeit now through an early modernist approach similar to that of Le Corbusier, Wright and Mies van der Rohe.

As documented, in 1956 the students were given a list comprised of seven different modernist architects and twenty buildings and asked to analyze them two and three-dimensionally in order to gain an understanding of their conceptual structure. The students were given a list of topics which they were to use as a guide for their analysis:

"1. Analysis in Terms of Space Sequence,

2. Analysis in Terms of Structural System,

3. Analysis in Terms of Planes,

4. Analysis in Terms of Volumes,

5. Analysis in Terms of A Sequence of Views,

6. Analysis in Terms of the Relation of Space to Structure."[26]

The application of early modern history was conceptually related to the pedagogical ethos of the school, such that the emphasis of study was placed on the abstraction of architectural concepts in order to gain understanding on how these concepts were informed by spatial construction and elemental articulation. The Bauhaus/Harvard model rejected the study and use of historical precedent as a means to maximize creativity and innovation. In the case of UT Austin, inventiveness was instilled within the pedagogy as the methods of analysis and synthesis demanded that the student creatively deconstruct and reconstruct the conceptual ideas which held together each precedent. The inventiveness was within the abstraction and translation of these conceptual underpinnings.

See Figure's 1 - 3

The other primary difference between the two pedagogies lies in their particular perspectives on architectural objectivity, of which has already been covered in the case of Harvard, as Klaus Herdeg asserted was only concerned with supporting a scientific and technological perspective in which to objectively construct and critique architecture. The Harvard model used this supposedly quantifiable objectivity to create architecture

which could be proven or affirmed in some direct way, holding onto functional considerations as the basis for critique and to allow for liberal and subjective decoration to be imposed on the styling of materials and other non-functional elements. Objectivity was also an underlying principle and basis for critique at UT Austin, but it was not dependent on a functionalist understanding of architecture. Instead the UT Austin model employed objectivity "into the process of composition, [order], and [overall] design." This objectivity was evident within the individual assignment briefs which typically included a stated goal or specific types of requirements, such as "to 'define space' or to 'introduce a system of rank or scale.'"[27] How the student defined space and how the student constructed hierarchy was still a personal choice, however the implication or hope was that the student would construct a conceptual framework through which decisions could be made and tested. For example a student may have constructed a rule that every proportion within their project would be divisible by two, thus creating a degree of objectivity which would allow them to determine if they were remaining true to that particular element of their concept; if a proportion showed up with a dimension of five, then objectively they could evaluate it, changing it to a dimension divisible by two or keeping it as it is to perhaps create a moment of difference based upon another idea within their project. This was an integral part of the students education within this model, the ability to construct individual parameters which became an editorial framework which could be objectively critiqued based on the inherent rules embedded within. Both Gropius and the Texas Rangers realized the necessity for objectivity within the teaching and critique of design, as pure subjectivity was essentially incapable of being effectively assessed, thus objective strategies are necessary to be employed in order for proper

evaluation to occur. The key difference lies within the origin of the objectivity; in the case of Harvard it arose from ideas about the appropriate uses of science and technology, where at UT Austin it was born from the conceptual parameters constructed by both the instructors and the students.

Cooper Union & Cornell: The Extension of the Critique of Mid-Century Functionalist Practice

By 1959 the first generation Texas Rangers had moved on from UT Austin to pursue other avenues, which inevitably lead back to education. Colin Rowe established a prominent role at Cornell, as head of urban design. John Hejduk became the Dean of the Cooper Union School of Architecture, where Robert Slutzky also found a continued career, and Bernard Hoesli famously directed first year and then chaired for many years, at the ETH School of Architecture in Zurich. It was in-fact at the ETH where the most well-rounded extension of the Texas pedagogy occurred, largely due to the schools tradition of promoting a broadly engaged education. The Rangers' pedagogical practices did not die at UT Austin, in-fact that was simply the initial testing ground from which future influential pedagogy was born from. The critique of functionalist practices continued at the aforementioned institutions where the Texas pedagogy was extended and further developed. Within the American academic environment The Cooper Union School of Architecture and Cornell University played a significant role in inspiring the minds of young architects during the 1970's, when Hejduk and Slutzky taught together in New York City, and when Colin Rowe arrived 240 miles to the northeast in the mountains of Ithaca.

Both Cooper and Cornell became an extension of the pedagogy established a decade prior in Texas, where the abstraction of architectural history and the explorative probing into architectural space was able to grow and flourish. While the notable educational leaders of these two institutions came from the same pedagogical moment, their respective interests were different and as a result created two different kinds of institutions. Cornell, under the influence of Rowe, took a path which led to an overt obsession with the analysis, abstraction and translation of historical architectural precedents, especially in the area of urbanism where Rowe pushed and developed figure/ground analysis and the notion of the "collage city." Down in the heart of New York City at Cooper Union, John Hejduk and Robert Slutzky continued exploring the plasticity of space through abstract exercises which searched for visually rich spatial discoveries, typically through an examination of cubist art.

It is important to discuss the pedagogies of both schools individually in order to understand their individual approaches, but first it is important to discuss the common ground which they share, the conceptual underpinnings which unites them. This connectivity stems from the 1950's during their short common tenure at UT Austin. It was here where Colin Rowe and Robert Slutzky wrote and published two iconic articles regarding the phenomena of transparency, "Transparency: Literal and Phenomenal." The content of these articles provides a particularly good lens by which to understand the conceptual underpinnings of the pedagogical approaches developed at UT Austin which transferred over to Cornell and Cooper Union. In the second article Rowe and Slutzky proclaim that "for the present we are concerned neither with function nor structure (as generally understood), nor with the social context, the technology,

economics, not content; but simply with the manifestations which reveal themselves to the eye."[28] This underscored the two major fundamental themes which structured the pedagogical approach of the academic institutions mentioned.

The first, and most directly stated, being the visual manifestations of architecture, that which we perceive through our eyes. This is quite a powerful and revealing statement has it infers that our most important sense in understanding architecture is that of vision, our optical sense. The emphasis is placed on a visual understanding of form and space, or in other words solid and void. The complexity of materiality is replaced by a haptic homogeny, which essentially sterilizes the connection between architecture and sense of touch, smell, taste and hearing. This perspective essentially reduces architecture from becoming a full sensory experience, even through the exclusion of functional, social, and economical considerations. This reduction of architecture, down to simply a visual game of solid and void is reminiscent of the critique which Herdeg provided regarding the facade/material treatment of the Harvard era architecture, which reduced perception to a mere visual game of patterns and geometric configurations.

The primary difference here lies in the implied second fundamental theme, that of conceptual structure. The passage states that "structure" is not a concern, but then carefully specifies that it is structure, in the traditional architectural sense of the word, which is of no consequence. I posit that the structure which *is* of importance here is the *conceptual structure*, the "architectural idea," which *structures* or *orders* the aforementioned visual manifestations which stimulate the eye. It is the idea behind the form, the formal logic, or system, which gives strength and power to these visual effects

which manifest themselves through constructed and controlled ideas. The power of the visual qualities of architectural space, intertwined with the underlying conceptual structure essentially became the starting point which Rowe, Hejduk and Slutzky used as their basis for exploring architecture. This was not entirely unlike the Beaux-Arts model, where the formal structures of buildings formed the conceptual basis for a "parti" or "composition" from which the students would generate a design.

The approach which Hejduk and Slutzky took at The Cooper Union was based in the fundamental structuring of space through the manipulation of visual relationships, typically using cubist or neo-plastic art as the abstract site from which ideas were to be extrapolated,[29] much as in the work of Le Corbusier and his contemporaries. This artistic point of departure became the unique platform which established and characterized the work coming out of Cooper Union. From the perspective of the student work, the school appeared to not (necessarily) be concerned with the objectivity of the practical sciences, in the case of planning and engineering, nor the social sciences of sociology, psychology, and anthropology which dealt directly with multi-dimensional qualities of human experience.[30] Instead the work was intensely visual, exploring composition, depth, transparency and other optic qualities. This was perhaps most explicitly evident in an assignment known as the "Juan Gris Problem" which charged the students with the task of constructing a residence inspired by the work of Cubist painter Juan Gris. The students were to "translate the notions of a specific Cubist painter [Juan Gris] into a controlled three-dimensional envelope of space." The intent was to test the students ability to abstract and synthesize spatial ideas into an "explicit composition" which explored the themes of shape, space, repetition, unity, and

organization in order to create a "dynamically stable" composition.[31] The emphasis was again placed on compositional order and stability in relationship to a specified conceptual structure, in this case, the artistic work of Juan Gris. There certainly was involvement and interest with program and sequence, but it was the visual compositional characteristics which were the emphasis and the primary evaluative content which was to be critiqued.

See Figure's 4 - 5

The work coming out of Cornell University during this same time was sometimes disengaged the from the humanistic and technological considerations of architecture, though the urban studies from Colin Rowe during this time, specifically "Collage City," reveals a more sensitive and human perspective of space. In regards to studying architecture the major impetus was to be the visual and conceptual structuring of space. Due to Rowe's interest in abstracted historical analysis, the examination and interpretation of historical precedent (both modern and classical) became the school's typical starting point for architectural exploration. This process is most evident in the examination of classical building facades which was a reaction to the belief that "preconception, tradition, or even linear logic" were the "most common enemies of invention." The instructors believed that those "enemies" could in-fact "stimulate invention when the process acknowledged not just a relationship but a reciprocity between form and content, object and idea, and when the instinct to explore found encouragement, a format and the means."[32] The most revealing part of the assignment can be found in the list of "pedagogical objectives" which were outlined by the instructors. Here they emphasize the importance of dealing with architectural form and

surface definition as the essential lessons embedded within the assignment. This reflected the visual priorities of the school, over the type of experience that was multi-sensory and socially considered.

See Figure's 6 - 8

The overt abstraction of space synthesized into a conceptually structured and visually comprehended composition of formal language dominated the work which materialized from both Cornell and Cooper Union. This concern with the optic qualities of architecture, regardless of its artistic or historical references, was ultimately lacking, in that its concern for the multi-dimensional human experience which architecture fundamentally attempts to respond to was a distant consideration. This pedagogical approach prioritized visual experience over bodily experience, thus eliminating the notion that humans socially and physically relate to, and interact with, space. While the Harvard/Bauhaus model was criticized for its overt desires for function and meaningless subjective flourishes, the Cornell and Cooper Union pedagogies could be criticized for its disregard for a comprehensive human experience in favor an architecture which was concerned with the conceptually articulated optical composition formal relationships. Both of these approaches might have benefited from a cross pollination of ideas, such that the functional considerations of the Bauhaus/Harvard model, which are at least related to human interaction, should have mixed with the conceptually structured formal characteristics of the Cornell/Cooper school of thought, in order to generate an architecture which was conceptually strong (on a spatial/constructive level) and at least somewhat concerned with humanistic relationships.

Columbia University: The Synthesis of Functionalism, Abstraction, and Human Experience

If Harvard and the University of Texas at Austin (mostly by way of Cooper Union) were primary centers for major pedagogical change during the first half of the twentieth century, then I would like to suggest that Columbia University in the mid-1980's was the site of another critical turning point in architectural education. Before I elucidate this opinion, I think it is important to understand the historical context which leads to this pedagogical shift, in order to not only contextualize the impetus for the change but to also gain more understanding of how architectural pedagogy has changed throughout our modern history.

As it has been now been described, since the 1930's American architectural education had gone through a transformation that was born out of America grappling with new technologies which had rapidly emerged from the industrialization at the turn of the century, new theories regarding the uselessness of ornament (leading to functionalism), new psychologically-based conceptions of spatial form (gestalt theory), and theories regarding architectures role in shaping the city and domestic life (urban planning). Architects had seemingly spent half the century trying to redefine architecture in order to respond to the complex demands of a rapidly changing modern world which was being torn apart and reconfigured through major international wars. The second half of the century was no different in the sense that war was to have a dramatic effect on the transformation of society and, for our interests, architectural education. Mary McLeod wrote about this shift:

> "Almost anyone who studied or taught in American architecture schools from the late 1960's to the 1980's would probably agree...that architecture education had changed dramatically during those years and that this change centered on the collapse of a belief in the principles of modern architecture. Functionalism, structural rationalism, and, most of all, the idea of architecture as an agent of social reform were no longer verities and no longer a basis for architecture education. Nearly everything about modern architecture seemed open to question, and a new set of preoccupations with form, ornament, urban context, regionalism, and symbolism dominated studio discussions and reviews."[33]

Here, McLeod is referencing the major shift from modernism to postmodernism which was essentially an attempt to reset and reconsider architecture on all levels, almost in a sense, starting over. It was a reaction against modernism and all of the ideals which had reinforced it, which had seemingly failed society at large. Once again war set the stage for change, along with the Civil Rights movement of the 1960's which caused major racial tension across the United States. Needless to say, it was a tumultuous time in which "urgent concerns provoked radical upheavals in academic institutions."[34] Tensions quickly mounted and soon activism was happening at a broad scale all over the country. This activist attitude was also found within American universities as students across the country were challenging the various institutions, demanding change as well. In regards to Architectural education, this was extremely true, as seen at Columbia University during the late 1960's, which went through a social upheaval when "the Afro-American Students occupied Hamilton Hall and took a dean of the college hostage, architecture students seized Avery Hall, the architecture building, and formed an Avery Commune." The students assembled and demanded that the

University change its curriculum to focus more on socially relevant issues, [35] bringing some form of social relevance and responsibility back into their education.

During this critical time of the school's history, Columbia hired James S. Polshek in 1972, as Dean. Polshek, a Yale graduate, came to Columbia nine years after starting his own firm, James Stewart Polshek Architect. Upon his arrival at Columbia, in response to the advancement of M.Arch. degrees and the desire to take Columbia to new academic heights, "Polshek insisted that Columbia convert from a five-year B.Arch. program to a three-year M.Arch. program" as a condition for accepting the deanship. This was also in part a strategy which aimed to stimulate enrollment, taking advantage of the S-2 graduate student deferments from the draft that the government was issuing during the height of the Vietnam War.[36]

During the 1970's Polshek's role was highly administrative, working on the professional image of the school. He not only changed the program to a three year M.Arch. but he also merged the various programs together to form the Graduate School of Architecture, Planning and Preservation (GSAPP). Polshek also had the insight to hire a few key faculty who would begin to transform the school from within. These hires were that of Robert Stern (a Yale graduate/Venturi Pupil), Richard Plunz (a RPI graduate/Team X member) and Klaus Herdeg (a Cornell graduate/Rowe Pupil), which set the stage for the student work which was to come during a decade and a half. Polshek also had the insight to hire Architectural historian Kenneth Frampton, then teaching at Princeton, who just had been a finalist with Alvin Boyarsky to become the Chairman of the Architectural Association School of Architecture in London. Frampton's hiring was a critical move as by 1986 his role as the history and theory coordinator

developed as he was given the chair position for the Graduate School of Architecture which focused on addressing the thematic foundation of the curriculum.

In order for work to be conducted on changing the pedagogy of the school the student work needed to be assessed. This evaluation occurred in the 1980's in an attempt to restructure and establish criteria for a newly envisioned pedagogy. The work at Columbia during this time was described as being overtly plan oriented and separated from its context as "the work [looked] divorced of its locale as if it could [just have easily been] plopped down in Saudi Arabia."[37] Stylistically speaking, Frampton described the work of having subdued "pastiche neo-classical schemes and motifs"[38] which, while still modern, seemed to be the result of the historical abstraction of form which was being heavily promoted by Cornell at the time.

The reasons as to why the work was perhaps based in a sort of historically reflective understanding of architectural form might be found in understanding the curricular structure at the time, which was heavily focused on the study of typology.

1 yr	Fall	Analysis, Abstract Space, Housing, Public Building
1 yr	Spring	Urban Public Building, Suburban Public Building
2 yr	Fall	Housing
2 yr	Spring	Addition to a Public Building, Large Public Building
3 yr	Fall	Urbanism
3 yr	Spring	Thesis (or a Terminal Studio)

It is evident by looking at the curriculum that the school was extremely focused on building types, primarily public in nature, similar to the Beaux-Arts tradition. It was only in the first semester and the third semester where private space (housing) was addressed. What is most revealing about this curriculum is the content of the very first semester, the introduction to the school. Here the students were given four assignments which aimed to "introduce [the] students to the formal, social, symbolic and technological issues of architectural space and surface." The first third of the semester was spent analyzing existing buildings in Manhattan and exploring spatial relationships in an abstract way, emphasizing the "necessity for an 'architectural idea' and the need to create order through consistency, hierarchy, cue ambiguity, context, figure vs. ground."[39] This method was taken right from the Cornell model, or as we can more appropriately trace it back to the innovations at UT Austin which was based off of the spatial achievements of Le Corbusier. The interesting part about this semester occurred directly after these initial assignments, where for the rest of the semester the students are asked to jump into extremely real scenarios dealing with the design of a one-story housing scheme and eventually a four to six story public building. This quick transition into building type seemed to place emphasis on the pragmatic, technological and social dimensions of architecture. It essentially represented a very conservative approach to architectural education, which was not searching for overt experimentation, but rather a relatable theoretical construct. This can be seen as a response to the students desire for a more relevant and professional education which was also a belief held by Dean Polshek. This method of teaching and the influence of faculty such as Kerdeg, Plunz,

and Stern was the most likely source of the historical motifs which Frampton observed and criticized.

See Figure's 9 - 14

This curriculum ran from 1978-1986 when Frampton (having been appointed chair in 1986) established a new set of ideals as the basis for the school. Frampton introduced five "interrelated factors"[40] which would influence the teaching of history, theory and design in the new graduate program in the coming years. These five factors revealed an attitude that was centered around a typological and anthropological approach to the teaching architecture, specifically towards the generation of architecture's formal structures. Another key factor centered around the artistic act, or the poetic act, of construction as a basis for articulating these aforementioned formal structures. There was also emphasis placed on the socio-cultural considerations of architecture along with the importance of contextual sensitivity, which would later unfold within Frampton's writing on critical regionalism. What is fundamental here is the focus on the human condition of architecture (undoubtingly inspired by the writing of Hannah Arendt),[41] the reference to the anthropological condition including the public and private aspects integral to understanding architectural space as a socio-cultural apparatus. These principles completely contrasted those which underscored the pedagogical dogma's of Harvard, Cornell and Cooper Union, and also began to address the complaints of the students.

Below is a brief synopsis of the curriculum which Frampton introduced in 1986. The most major changes occurred in the first semester of the first year and in both

semesters of the third (final) year. There still was an overarching theme on type throughout the curriculum, which was upheld from the former curriculum as it also was one of Frampton's primary interests.

1 yr	Fall	House, Analysis, Line-Plane-Volume Projects
1 yr	Spring	Small Urban Public Building, Small Suburban Public Building
2 yr	Fall	Housing
2 yr	Spring	Large Public/Institutional Buildings
3 yr	Fall	Long Span Structure,
3 yr	Spring	Thesis (or a Terminal Studio)

Frampton was intelligent enough to realize that in order to successfully implement and instill these core principles into the program, it was essential that the first year of the program delivered a concentrated dose of the these architectural objectives. Knowing that the first two semesters of a student's education would set the tone for the rest of their academic experience, Frampton assigned Steven Holl, a faculty member at Columbia since 1981, to develop the first year curriculum, debuted in the Fall of 1986. It was this move which inevitably ensured the effective infusion of Frampton's anthropological and tectonic philosophies, making them the pulse of the school, and ultimately transforming the work into highly constructed, poetic and humanistic interpretations of architecture. However it was not just Frampton's philosophical and anthropological framework which helped shape the school, it was also, and most importantly, the phenomenological interests of Steven Holl which helped shape the direction of the school, at the very least in the first year of the program. It was the

combination of experiential phenomena and tectonic poeticism which eventually transported the school into a brand new era, leaving behind the ethos established and promoted within the first half of the century. A renewed modern era had begun, and Columbia was at the forefront of this experimental and innovational time.

2. Point-Line, Plane, Volume: A Phenomenological Approach

The Intertwining of Semperian and Phenomenological Theory

All of the students who were accepted into Columbia's Architecture program were subjected to a full three years of education, thus one of the key challenges that Columbia University faced was establishing a first semester curriculum that intellectually stimulated the minds of its diverse assortment of students. Diversity in this instance refers to the fact that there are two primary types of students which enter a graduate curriculum of architecture: one, those who have completed a B.S. Arch. and two, those who have completed a four-year degree in another concentration outside of architecture. Within these two groups there is often more diversity to consider. Some students in the first category may have had extensive professional work experience in addition to their architectural degree, as well as some who may already be professionally licensed. Diversity in the second category could obviously range from students who have English degrees to those with Finance degrees, although Fine Arts backgrounds were common. Students in this category may also have had some exposure to architectural training, through life experience, work experience, or some minimal amount of classes. The point is, two different groups representing two very different experience levels entered the same curriculum. This condition was not typical as programs such as Harvard's provided three different tracks which catered to and separated students of different skill levels. The challenge for Columbia was that they had to provide an academic experience that was intellectually stimulating for the experienced student, while also providing an experience which was manageable for students with no experience in which to learn fundamental architectural skills. As Tom Hanrahan, one of the first year faculty at Columbia at the time (and Frampton protégé),

put it, "The first semester [needs to establish] a common base of architectural exploration that allows both the novice and experienced designer to consider the problem of architectural space in a sophisticated manner."[42] This was precisely the challenge that Kenneth Frampton and Steven Holl faced in the creation of a new first year, first semester curriculum at Columbia in the mid-1980's.

The new curriculum could be described as being a combination of Semperian ideals intertwined with a phenomenological understanding of space. To elaborate on what this means we need to examine both Semperian thought, through the perspective of Kenneth Frampton, and phenomenological thought, through the perspective of Steven Holl. From here we can establish the overall philosophy which these two theories produced, setting the tone for understanding the nature and objectives of the first semester assignments.

Kenneth Frampton's seminal article, "The Case for the Tectonic," is the key source for understanding the Semperian underpinnings which would begin to underscore (philosophically) the work at Columbia in the mid-late 1980's.[43] The article's key position, that of the act and art of construction of meaningful architecture is essentially a poetic condition, is born from the writing of Gottfried Semper. Frampton outlines Semper's Four Elements[44] as the anthropological foundation of architecture. These four elements included "1. a hearth, 2. an earthwork, 3. a framework and roof, and 4. an enclosing membrane"[45] The first two elements are seen by Frampton as the foundation for architectural creation, viewing the manipulation of the earth as the first act of architecture. "The term 'breaking ground' and the metaphorical use of the word 'foundation' are both obviously related to [a fundamental] sense of [this idea regarding]

earthwork."[46] The hearth was also viewed as coming from the earth, which established a notion of stereotomic form, or that which is constructed out of mass. This is contrasted with tectonic form, such as the idea of the "frame," which is used as a primary example. The last two elements represent this notion of tectonics, with the framework and roof being the horizontally constructed elements, and the enclosing membrane representing the vertically constructed components. The most important aspect of these four elements is the relationship which occurs between the stereotomic and tectonic elements. Frampton writes, "Semper's emphasis on the joint implies that fundamental syntactical transitions have to be expressed as one passes from the stereotomic base to the tectonic frame, and that these transitions constitute the very essence of architecture..."[47] This constructs the idea that the joint, the intersection, the constructed interrelationship between the heavy and the light, is the most essential and poetic dimension of architecture. The relationship between these two types of construction act as poetic metaphors of the earth and the sky, or as Frampton put it, "These gravitational opposites, the immateriality of the sky and the materiality of the earth may surely symbolize the two fundamental cosmological attributes to which such tectonic differences allude." Thus this relationship between the mass under our feet and the limitlessness of the sky becomes poetically folded into our understanding of architectural construction, as "these polarities still largely constitute the experiential limits of our lives."[48] This essentially establishes a critical poetic link between place and architecture, or in this example, the earth, the sky, and the constructed idea.

This established poetic idea of place and architecture leads us into a conversation regarding that of phenomenology, a field of study which, in architecture, is

concerned with the experience of building materials and their sensory properties. Furthermore phenomenology establishes its position regarding these experiences from the notion of "place":

> "In phenomenology, the environment is concretely defined as "the place," and the things which occur there "take place." The place is not so simple as the locality, but consists of concrete things which have material substance, shape, texture, and color, and together coalesce to form the environment's character, or atmosphere. It is this atmosphere which allows certain spaces, with similar or even identical functions, to embody very different properties, in accord with the unique cultural and environmental conditions of the place which they exist."[49]

Outside of architecture, and according to philosopher Taylor Carman, "Phenomenology is an attempt to describe the basic structures of human experience and understanding from a first person point of view, in contrast to the reflective, third person perspective that tends to dominate scientific knowledge and common sense."[50] This perspective begins to contrast with the objective sciences which had been infiltrating the professional and academic environment of architecture for several decades. Phenomenology begins to take into account human experience in a much more holistic way, considering not only the objective experiences but the subjective and intangible ones which help structure our existence.

The word "experience" is the key to understanding a phenomenological perspective of architecture, as experience, in this context, is understood as a poetic and cosmologically determined characteristic which is intrinsically connected to our sensory perceptions. It is as if our understanding of architecture is a constructed metaphor for our inherent understanding of the natural order of the universe. This sensory-based

understanding of architecture departs from the purely visual construction of architecture, as it is primarily considered with, and dependent upon, the activation of all sensory perception, which allows us to understand architecture as a complete and embodied experience. Holl writes that "Phenomenology restores the importance of lived experience, yet relies on perception of existing conditions."[51] This reinforces the idea that our prior experiences, which have structured our understanding of our existence, helps us in understanding our surroundings, or in other words, assist us in connecting to circumstance and context. This once again establishes and reinforces the theme which is ultimately embedded in Frampton's reading of Semperian ideology, that architecture is connected to our poetic understanding of place; that without that understanding, without *experience*, we cannot form a meaningful relationship with our constructed environment.

Again, the preeminent link between these two ideologies is the notion of experience. In the Harvard curricular model experience was simply a functional, programmatic issue that was addressed through the objectively designed relationships of spaces. In the UT Austin, Cornell and Cooper Union models, experience could be described as being the interaction between the mind and eye through the "simultaneity, interpenetration, superimposition, [and] ambivalence of architectural composition.[52] Neither of these implied a total bodily experience, as phenomenology requires, as they both ignored the mutli-sensory experience of architecture in favor of one particular aspect of it. At Columbia, both Frampton and Holl recognized the need to construct an educational system which promoted the idea that architecture was both a poetically constructed act, and one which was intrinsically connected to, and understood through,

our bodily experience. From this position arose three assignments which, through their construction, would facilitate poetic thought through a phenomenological lens. The three essential components which Holl utilized to stimulate this first-year experience were: site/circumstance, materiality and concept.

The first essential component, site or circumstance, established the importance of place, meaning that each project needed to have a context which the student could respond to and interpret. This could not be an abstract context, meaning that the site could not be a painting, in the way of the Juan Gris project at Cooper Union. The context had to be connected to the students' understanding of the earth, which is why all three projects directly dealt with the reality of topography. These topographical conditions, while still relatively abstract, resembled and recalled the reality of a particular place. The particular conditions of these sites also provided particular opportunities from which to construct and develop ideas, as each site created a particular situation. As Steven Holl said, "Architecture is bound to situation. Unlike music, painting, sculpture, film, and literature, a construction (non-mobile) is intertwined with the experience of a place. The site of a building is more than a mere ingredient in its conception. It is its physical and metaphysical foundation."[53] Thus the site (or circumstance) would be the first condition from which the student was to conceptualize a relationship.

The second essential component, materiality, established three important ideas: one, the idea of gravity and weight, which aimed to stimulate both a physical and psychological thought process in regards to building; two, it introduced a constructive logic through the specifications of the materials; and three, it limited the students in

particular ways which challenged them to conceptually deal with the inherent characteristics of given materials. These three ideas helped open the discussion to, and reveal the importance of, tectonic thought as it forced the student's to deal with essential issues which would challenge them to think conceptually about the nature of construction through the language of material. The material constraints also engaged the student to an understanding of the haptic qualities of architecture, as "when the materiality of the details forming an architectural space become evident, the haptic realm opens up. Sensory experience is intensified, [and the] psychological dimensions [are] engaged."[54] Here, materials become more than just physical objects, they become essential and meaningful devices which activate our minds and body through our sensory perception.

The third and final essential component, concept, was provided as a means to challenge the students to structure a personalized framework from which to make conceptual and editorial decisions. This component can be seen as being related to the UT Austin philosophy of the "architectural idea," which was seen as the implicit structure which informed and held together the articulation of architectural elements. Holl explained the importance of constructing a concept by stating that "a concept defines a field of inquiry–a territory of research for investigation that helps to form meaning. The idea is the force that drives the design. The field of inquiry sets the focus and the limit and, most importantly, the responsibility of work in rigor and depth."[55] In order to help stimulate a concept, each project had very basic but fundamental programmatic considerations that were defined yet provided enough ambiguity for the students to invent within. These directions (or limits) were given to set the stage for interpretation

and invention. Holl viewed these limits as the impetus for the creative effort. All of these projects were linked together through the idea of movement. The importance of having movement as the basic programmatic consideration, directly relates back to the idea of experience, in the sense that movement reinforced the idea that human experience was to activate the space. This idea of motion also stemmed from Bauhaus artist/educator, Paul Klee, whom Holl used as a primary point of inspiration,[56] (which will be discussed in depth in the subsequent sections of the chapter). For the moment, the following quote by Klee summarizes the importance of movement in regards to space: "All becoming is based on movement, for space itself is a temporal concept. When a point turns into movement, and line-that takes time. Or when the line is displaced to form a place. And the same is true of the movement of planes into spaces."[57] All of this combines and amounts to a position which states that architecture could no longer simply be considered just a visual compositional game, or as Frampton described it, "aesthetic scenography."[58] Instead architecture must be described and constructed in experiential terms which considered the idea of habitation essential to understanding and generating architectural form.

All of these components combined to create a project structure that was completely open to interpretation. They provided students who had years of architectural training with a platform to experiment, investigate and rediscover the multiple dimensions of architecture, while also providing students who had little-to-no architectural experience a supportive environment to discover fundamental a conceptual space from which to construct and explore an endless variety of ideas, became the common language, or the common base, "for architectural exploration that [allowed]

both the novice and experience designer to consider the problem of architectural space in a sophisticated manner."[59]

The Preliminary Assignments

There were two preliminary assignments which the incoming Columbia students were to first tackle before diving into the first of the three major design assignments. These two preliminary assignments were essentially a "handshake," a device for the instructors to gauge the various levels of knowledge, skills and craft among the student body. These two projects were not related to the overarching themes of the semester, they were a moment which examined the students and introduced them to the faculty.

The first project, "Dwelling for a Poet/Riveter," was a three-day drawing exercise which asked the students to graphically construct a design for the home of a Poet/Riveter who "rivets in the daylight [and] writes in the dark."[60] There was a given site, which was not required to be visited (imagination was required) and a simple three part program (eating, working/living, sleeping/washing) however there were specific requirements regarding what was to be produced. Ultimately the students had to present their design on a 30"x22" sheet of watercolor or vellum, in the form of plan, section, perspective and axonometric drawings.[61]

See Figure 15

In my interviews with former students, this project was described as "deceptively simple," but was eventually a real "eye-opener" not only to those with non-architecture backgrounds, but also to those with experience. The deception here was that this project attempted to set everyone up to fail, by hoping that preconceptions of

architecture would arise in order for them to be critiqued and dismantled in front of them on presentation day. Alumnus, John Stuart describes it this way:

> "All of the guys with backgrounds in architecture would kind of be like, 'yeah, I'll show him [Steven Holl] everything I can do...I know how to size doorways, and I can lay out a great bathroom, etc.' [These guys] would just get slammed on this first project, because of course Steven Holl was interested in the poetics [of architecture]."[62]

This description implies that this assignment had an aim to reset the standard in the classroom, and not of course on a technical level, but on a conceptual one. If the abstraction and the poetics of architecture was to be discussed through very specific lenses (tectonics and phenomenology), then those who thought they understood architecture had to reexamine their perspective in order to tackle the pedagogical objectives of this curriculum. This project, through the critiques of the instructors, might have lowered the advanced students' sense of comfort by making them feel like they actually didn't understand architecture, at least in the terms the faculty was using. For those students who had no architectural backgrounds, this assignment acted in a similar way in that it exposed and helped lessen the importance of architectural preconceptions, but it also perhaps made them realize the importance of conceptualization, which is evident in the following comments:

> "I said, well, I guess this is what a poet's retreat would look like, it should be a small building, etc. And at the end of the day I stepped back and said, 'Well, that's not driving me anywhere.'...I was basically preconceiving my idea of what it was to be an architect, which was a problem."[63]

"[For] those of us who came in without knowing anything...we said, 'hey look, we're not even going to try to design what we think of being architecture, we're just going to start from the ideas."[64]

The second assignment was a week-long graphic analysis of an assigned New York City building. The students were asked to select a building in the city from a list provided and graphically analyze it, initially through sketching but ultimately through hard-lined drawings on a minimum of six 11"x17" sheets of paper. The objectives of this analysis were as follows:

"Dissect the architecture into its elements, look closely at the relation of the whole to its parts, investigate, explore parallel abstractions. Analyze the assigned buildings for the following:

- Spatial components (zones, axis, rhythms, divisions, directions, hierarchies, proportions, etc.)
- Activities and circulation (public vs. private).
- Light, texture, color.
- Time (rush hour, day vs. night).
- Verticality vs. horizontality, internal vs. external spaces, metaphor or abstract references.
- Experimental analysis."[65]

This assignment was a remnant of the past first semester curriculum, as this essentially was the first assignment which students were given upon their arrival into the school. A project like this is valuable in the sense that it opens a conversation regarding the conceptual and technical aspects of architectural drawing. This assignment would

be a refresher for those with experience, and would give the instructors another chance to observe and critique their current skill sets, but would also aim in helping students with no experience to gain basic understanding of these fundamental conventions. Again, these two assignments were not necessarily here to set the tone for the semester thematically, but rather to open a discussion about preconceived ideas of architecture, and to establish an understanding of everyone's inherent abilities.

See Figure 16

Point-Line: A Linear Composition

For Steven Holl, the artist and Bauhaus educator Paul Klee was a huge inspiration for the three central projects of the curriculum. Each project had a focused narrative based on a specified composition type. These narratives of the Point-Line-Plane-Volume were associated with Klee's writing on this topic,[66] which Holl had closely studied. The issue of Point-Line-Plane actually originated from Klee's fellow Bauhaus artist/educator, Wassily Kandinsky, who wrote a book by the same name. Klee continued the conversation on these issues, expanding them to discuss ideas regarding volume. Nonetheless, the projects were based and sequenced on these fundamental ideas, and thus, this first assignment focused on the issue of the line.

One cannot discuss the nature of a line, without understanding it's preface, the point. Kandinsky wrote:

> "The geometric point is an invisible thing. Therefore, it must be defined as an incorporeal thing. Considered in terms of substance, it equals zero. Hidden in this zero, however, are various attributes which are "human" in nature. We think of this zero—the geometric point—in relation to

> the greatest possible brevity, i.e., to the highest degree of restraint which, nevertheless, speaks. Thus we look upon the geometric point as the ultimate and most singular union of silence and speech."[67]

Here, Kandinsky describes the point as the moment of pause, the moment of inception. It is the beginning, the act of decisiveness. It begins with a point of thinking, which inevitably leads to a geometric point onto a surface. The point is the inactive place which awaits to be transformed, it is the starting point for this, or any project.

The assignment brief was extremely simple. The site was provided to the students, a 64'x64' plot of land described to be in a hot and arid desert environment, which was inscribed with furrows at four foot intervals, parallel to the edge of the site. Students were asked to describe a path of spatial events which would bring a person from a gate on the east end of the site to a basin of water along the west side. This direction of movement implicitly introduced the idea of solar orientation, which would inevitably open a conversation regarding light and shadow. The student's were instructed to use only linear wooden elements (basswood) to describe their path; these elements were not to exceed 15' in height. By the end of the two week period the students had to produce a 1/4" = 1'0" scale basswood model, a concept statement, and 1/4"=1'0" scale ink and pencil orthographic drawings (plans, and elevations) and perspectives on a 20"x30" format.[68] These directionS, these limitations, became the starting point for this project, and these specifications became essential within each subsequent project as they provided the structural framework from which the student was to initially respond to.

See Figure 17

This linear project built off of the idea of the point, which was described before as the moment of thought, or the initial point when the pencil touches the paper. Once the student made the decision of where to place this first point they must animate it in order to generate a line. Kandinsky describes this moment of activation:

> "The geometric line is an invisible thing. It is the track made by the moving point; that is, its product. It is created by movement—specifically through the destruction of the intense self-contained repose of the point. Here, the leap out of the static into the dynamic occurs. The line is, therefore, the greatest antithesis to the pictorial proto-element—the point."[69]

Klee expands on this idea through a dichotomous lens which compares the active character of a line to the passive character of a plane.[70] The reason why the idea of plane is added to this discussion is due to the fact that a physical point needs a surface to exist on, whether it be paper, land, or otherwise. The plane in this project is the surface of the landscape, which plays a passive role in regards to the point and the line which inevitably have to dance across the surface creating movement through path. The point in this project can also be understood as "a point of arrival" if we consider that the path must lead to a particular destination, and perhaps implying that this destination becomes a hierarchical point within the project.[71] The path which gets one to this point is arguably the actual hierarchical space within this composition, as movement is implied to be the main programmatic element within the brief. This concept of movement also seems to be inherently topographic in the sense that it was to move one across a landscape, a landscape which was inscribed with lines (furrows) [72]. These lines, or furrows, in the earth play a critical role in this project, as they were understood intuitively as agricultural in origin thus they provided an anthropological dimension to the

site–symbolic of Semperian ideals. The presence of these furrows "heightens the awareness of the relationship between architecture and agriculture as two ways of cultivating the earth, but reinforces the belief that the marking of the earth is the first moment of dwelling and making place."[73] Thus the students are faced with a site which echoes a history of anthropological engagement, as well as a circumstance which requires them to traverse this landscape through the guidance of linear elements.

It is interesting to discuss the furrows in another way, related it to an assignment that originated at UT Austin and made famous at Cooper Union, the Nine Square Problem. This project was "used as a pedagogical tool in the introduction of architecture to new students. Working within this problem the student [began] to discover and understand the elements of architecture."[74] The assignment was relatively just as straight forward as Columbia's Linear Project, as the site was a square which contained a perfect grid of nine points which subdivided the space into nine equal squares. Within this existing matrix the students were to create a spatial composition. The student was to explore ideas through modeling and drawing in order to establish a meaningful connection between the two. The furrows in Columbia's Linear Project are essentially another version of this grid. They act as a place defining matrix to which the students can begin to respond. The difference here is that the columns within the nine square problem have no true scale in relationship the body, nor do they contain an idea of habitation. The furrows, on the other hand, have a specific scale, one which measures the site in relationship to the body, and also provides an anthropological/agricultural dimension to the space. Thus the Nine Square Problem ignores scale on a human level and remains in a completely abstract reality, where the Linear Project cannot be

separated from its relationship to human experience, as scale and meaning become injected into the problem.

See Figure's 18 - 22

The next condition they must deal with is the issue of materiality. The students were limited the use of linear basswood elements for describing their path. The students were to imagine that these elements would actually be constructed out of wood or steel. which, placed the student in a position from which he/she must consider the specific characteristics and opportunities contained by linear wood or steel construction. What does it mean to construct a linear system? What could that look like? These are questions the student is expected to address in regards to this material problem. Another question is that of the spatial qualities of a field of linear elements. What is that space like? One can imagine the transparency of these spaces, the multiple overlapping fields of space which could occur as a result of a complex composition. This is where the importance of the elevation drawings come into play as elevation is the beginning to understanding the actual experience, which is obviously refined and more specifically described in the perspectival drawings. As in the Nine Square Problem students could explore the relationship which exists between drawing and building, and with this project they could start with either one and have them meet together in a very beautiful and poetic way. Hanrahan explained that he has "always thought [that this project was a] kind of three-dimensional drawing."[75] This thought puts forth the idea that the act of drawing is essentially addressed through the manipulation of lines, thus the interconnected quality between drawing and making within this project was particular strong.

See Figure's 23 - 28

Naturally nothing can be created without the formation or the assistance of an idea, which is where this project was most liberating. The students of course had the constraints of the brief, however, the rest was up to them to define. The open ended quality of the brief invited the designer to invent an idea which would inform their project. The beginning of that idea was expected to be in relationship to the "known's" or limits of the project; the qualities of the site, the program and the material, which were the foundation from which to begin thinking. The rest of the narrative could essentially come from anywhere, a personal desire, a past experience, another field of study, etc. And that is exactly what occurred. The students I interviewed described many different sources for their inspiration.

> "I thought about the site. The furrows indicated human civilization and with nothing else on the site I imagined a desert; a place where water comes from below, not above. So I made a kind of sculpture to the wind as a way to irrigate whatever was planted in the furrows"[76] - Pia Wortham

> "[I asked questions such as] do I line my lines along the plane of the ground? Like furrows in a field? Or do I stack them up like columns in space? What does this mean? So for me, I was looking for a kinetic bridge between the space and the plane of the field and the thing that made the connection [for me] was the shadow...I started building cubes, triangles and things, [asking myself] 'Well okay, so I have this wire frame of a cube. Well, that's interesting, but is there another way to experience that cubeness?' I started breaking it apart and looking for ways that when the light hit it, it would actually project the cube onto the ground. So my whole project turned into this idea that there were these lines floating in space, and in certain moments they would cast shadows...but at a certain moment, they all form Euclidean projected forms on the ground plane."[77] - Chris Sharples

"I went back to my roots as a musician...and I looked at how I could understand [musical] rhythms through the lines, through this path."[78] - John Stuart

See Figure's 29 - 40

"[I viewed the project of being] related to the avant-garde...Kandinsky, Oskar Schlemer, Moholy-Nagy...From this understanding, I approached the project thinking about the spatial relationships in the works by choreographers and composers such as John Cage and Arnold Schoenberg."[79] - Mario Gooden

See Figure's 41 - 42

All of these concepts were vastly different, which is part of what makes an assignment like this so exciting, as it can inspire an endless amount of variety. Some students, like Pia Wortham, utilized the site as an intensely integral component, thinking about the meaning of a desert landscape and its relationship to water agriculture. Mario Gooden focused on the movement of the body as seen through the choreography of dance, utilizing the lines and rhythm of the body to organize and delineate space. The last two students called on their prior backgrounds for inspiration, John Stuart, used his background in music to construct his project, whereas Alumnus Chris Sharples, later founder of SHoP Architects, referenced his artistic background in regards to printmaking as his inspiration, establishing an analogue between the relationship between the construction of lines and the imprinting of those lines through a different media. In this case it was the shadows that became that media.[80] This brings up another important observation, one which is evident when examining the work, the nature of light and shadow in the work. Within this project the points and lines became activated through light and shadow. In plan vertical linear elements would appear as points, but when their

vertical dimension interacted with light the shadow cast on the ground would transform that point into a line. This relationship was an important and implicit lesson in this project, one which students may or may not have explicitly examined in regards to their projects. Primarily it was the ability to utilize the site as a starting point combined with the crucial step of generating a related idea in conjunction with the site conditions, which was the primary conceptual hope for this project. These relationships to the site and their concept can be seen within the students accounts of their work, both abstractly, in the case of simply using the existence of rhythm and movement on the site and in the program, to explicitly by constructing a system which references the implied agricultural history of the site. It was through the ambiguity of the project which allowed for this inventiveness to prosper, and gives the project one of its biggest strengths. Tom Hanrahan summarized this project the best when he wrote:

> "Inspired by word, drawn by hand, made real by material, these lines in the desert are the manifestation of thought into a place of action and experience."[81] - Tom Hanrahan

Line-Plane: A Planar Composition

The second project transformed the idea of line into the idea of the plane, through a study of planar composition. But before we explore what that means it is important to again discuss the conceptual origins of planar thinking. When examining the notion of plane through the words of Kandinsky we see that it was a thought which originated from the idea of the plane being the canvas which would receive treatment.

> "The term "Basic Plane" is understood to mean the material plane which is called upon to receive the content of the work of art...The schematic Basic Plane is bounded by 2 horizontal and 2 vertical lines, and is thereby set off as an individual thing in the realm of its surroundings."[82]

This notion of plane is not what created the impetus for this project, however it does reinforce the notion that a plane is a surface that has the potential to affect the environment around it. In regards to the Line Project, the plane was stated to be passive and receptive to active intervention. In the case of this project the horizontal plane of the earth still remained relatively passive and receptive, while the vertical planes play an active role in affecting its environment through a boundary condition. Klee describes the transformation from point to plane as follows:

> "Point. the point as primordial element, all pervasive.
>
> Line. A point discharges its tension towards another point. The casual principle is the will inherent in recipricol tension. Essence of a dimension. One-dimensional element.
>
> Plane. Tension between line and line results in a plane. Essence of two dimensions. Two-dimensional element.
>
> Body. The line moves and produces the plane; the plane moves the body comes into being. Essence of three dimensions. Three-dimensional element."[83]

See Figure 43

Here Klee describes that the tension between two lines generate a plane, and when planes move amongst each other, they define three dimensional space, which is activated by the body. Simply put, the presence of a plane implies habitation. Holl picked up on this idea that a plane implies the body, and from this generates a project that has as much to do with the continued movement of lines (in this case planes) as it does with thinking about the nature of habitation.

The project brief outlines a three-week assignment which asked the student to design an open air path of spatial hierarchy defined by walls made of massive materials; the student was to design a path of movement that traversed the site from east to west (again,solar orientation), and arrive at a hearth which was not to exceed twenty feet in height. The walls also received a height limitation of ten feet, and a material specification of masonry or stone. The site again was a 64'x64' square piece of land, with the same environmental conditions, however this time the site was articulated by a vertical shift or shearing of three feet which occurred at the center of the site. The model and drawing requirements were kept the same with the only addition being a set of interior perspectives which were to be rendered with shadows.[84] The introduction and importance of these rendered drawings were to introduce the students to proper drawing techniques regarding these issues.

See Figure 44

The first issue this project set up again involved the site, which here was characterized as sheared in the middle through a sudden vertical shift. This condition was implemented to stimulate the thought of section, and this shift spoke directly to the nature of plane, as the shift in the earth created a hard vertical boundary which was very planar in nature. The prior site the students had to deal with was extremely passive where this site was less so, in the sense that it had a greater and stronger presence, presenting a challenge which needed to be faced very directly. The shift in the site interrupted the flatness of before and now required students to think of a how to vertically navigate the mass of the earth. This massiveness also reinforced the need to engage with the earth, as in-line with Semperian ideology. The presence of this shift

also directly placed the body within this environment, as it, like the furrows, established a scale along the horizontal plane and "[grounded] the body in a more precise place."[85]

The material challenge this time around also related to the massive shearing of the site, through the requirement that heavy materials were to be used in construction of the walls. This requirement opened the discussion regarding architecture as a stereotomically constructed idea, the antithesis of the tectonic materiality of the Line Project. There was another nuance to the material requirement which added to the challenge and opened up another dialogue regarding the nature of building with stereotomic materials, and that was the notion of the unit. In the brief it specified that the students must construct the walls out masonry or stone, both of which automatically described a specific idea regarding scale. Immediately the walls the student's were to construct had a human scale associated within their materiality, while also including inherent geometrical properties which created construction challenges. As Robert McCarter put it, "If you [decide to] curve [a wall] you have to think seriously about how do you do it with a block. What kind of wall comes out of that?"[86] However given the challenge of the unit, it seems that students may have ignored this constraint as seen in the images of the work, which the planes are primarily constructed out of a solid piece of basswood and receives no treatment which implies a unitary system. Typically the drawings were used to emphasize the unit-based construction qualities (as representing this in modeling is often difficulty), however there are images that suggest that certain students did respond to this challenge in three dimensions. It is clear that this idea of the unit was important to Holl, as he often writes phenomenonolgically regarding this type of construction method:

"Sitting by an old stone wall, a few moments past midday, one can see the sunlight, not quite perpendicular catching all the stones that protrude and casting long shadows on the wall below. Where sunlight shines on irregular, convex stones, orange-brown and purple-gray hues are dramatically enhanced. In another instant. the sun passes and the wall is completely in shadow."[87]

See Figure's 45 - 59

The apparent increasing instances of omission of the masonry unit, after the initial years speaks about the variety of struggles which the students experienced with this project, as they often spoke to me about this project being the most difficult of the three. From what I was able to ascertain this came from the prescription of program, including the image of the hearth. What this implies is that the students had a difficult time dealing with more specified elements, where they could have possibly struggled less if there was more ambiguity to play with. Some struggled with abstracting the idea of a hearth into a more elemental and compositional component.

"I grew up on a farm in a very old house and my idea of a hearth was something that was the size of this wall that you could walk under...So it wasn't like you were coming from a place where you've never had a fireplace, and [the question], 'Well, what is a hearth?' [Didn't really come up in my mind]."[88] - Chris Sharples

This comment seems to insinuate that the "labeling" of hearth and the program surrounding it stimulated too many preconceived ideas which were seemingly difficult to detach from. Some students, like Pia Wortham, were able to abstract the idea of the hearth into something more diagrammatic as she described that her "hearth was more of a point on a pilgrimage or path rather than a home. Others like John Stuart and Mario Gooden struggled with the inclusion of program, grappling with thinking about the

function of their walls and boundaries rather than on how walls, as elements simply describe a path. [89] It appears that some instructors, such as Robert McCarter and Steven Holl, used architectural precedents to help students navigate the struggles of this project:

> "Robert did something very interesting -- he assigned us [a] building to analyze as the preamble to the work and I was given Brion-Vega (the Scarpa Cemetery). It seemed to me at the time and in conjunction with this assignment that that entire project was conceived of as occurring within the space of a wall – a poetic idea – and that really caught my imagination. I remember that I had a very Frank Lloyd Wright sort of project..."[90] - Mary Fernando Conrad

Hanrahan further supported that there was a constant struggle with this project, but he referred to the issue through his experience with teaching this assignment, as being involved with the issue of dealing with the sectional shift in the earth, the notion of vertical displacement along a horizontal trajectory. He stated that "I always wanted to somehow get [the] students to understand that the ground plane was something that could be manipulated and that the wall system implied volume."[91]

No matter the reason, the challenge of the project was evident, and it seemingly was due to the increased amount of explicit conditions in which to deal with, whether it was the nature of construction, the shift in the site, or the addition of explicit programmatic considerations. It does not seem that this project was flawed, in fact the progression here (in regards to content) was logical, appropriate and well structured. It contained all of the important elements which was previously outlined as being the three essential characteristics of these assignments (site/circumstance, materiality, concept), but the struggle here seem to come from the preconceived architectural images of

space, as dealing with the hearth created issues of function which perhaps were presented as less abstract as they could possibly have been. It was not different than the basin was in the first project however the destination in this project projected much more realistic images rather than that of an abstracted landscape.

Plane-Volume: A Volumetric Composition

The final project aimed to synthesize the elements and issues of the first two projects into a volumetric study of space. If a point leads to a line and line expands to generate a plane, then planes can be seen as being able to be extruded and arranged together to create volume. The issue of volume is not one which Kandinsky particularly wrote about and was more directly a thought coming from Klee.

See Figure's 60 - 61

As seen in the figure above, Klee sketched and wrote about the conditions of volumetric space, at least in two-dimensional form, examining the notion of body, space and the idea of inward. The latter condition led into an element incorporated into the project which involves the basic Euclidean shapes: square, triangle and circle. Klee described these forms of having inherent tensions and inner relations. Klee stated that these tensions create an inner coherence both externally and internally which causes a reciprocal tension between inside and out.[92] This can be understood as a geometric notion of place, where the descriptive geometries which construct these basic forms are the inner and outer tensions with which can be engaged.

To translate the idea of Volume into architecture, Holl created a five-week assignment which aimed to balance and combine all of the elements of the previous

projects. The brief asked the student to design a rudimentary dwelling which included a cooking area, sleeping area, living area and rooftop exercise area, of no more than thirty-two feet high of heavy construction (masonry, stone, concrete, etc). This dwelling tower was to be contrasted and integrated with a programmatically unspecified second tower which was to be of light construction (wood, steel etc). These two towers were to be constructed in a 64'x64' site with a constant east facing slope (solar orientation) of twenty degrees. The buildings also had to respond to a particular plan type of either: square, circle, or triangle. The drawing and model requirements were a combination of all of the prior requirements with the addition of section detail drawings at a 1"=1'0" scale.[93]

See Figure 62

The challenge of the site in this project was extreme in relationship to the previous assignments, as now the horizontal plane was constantly active, needing to be negotiated with, given its constant slope. This also gave the site a substantial mass or weight in which to deal with, students could really begin to explore the sculpting of the earth. The site was less tentative than in the Plane Project, and required the students generate a conceptual relationship to it from the very beginning, in a similar way to how the furrows acted in the Line Project. The furrows warranted a relationship as they were evenly spread across the entire site, where similarly the drama of the slope had a constant presence across the site. The site of the Plane Project was sitting in the middle of these two conditions, as it was split down the middle straddling two different conditions, there wasn't a constant repetitive condition to respond to, it was more sudden and alarming. The site was now a very active place which warranted a

significant amount of engagement. Students approached this site in a multitude of ways, some creating major divisions into the earth, effectively removing a significant portion of the landscape, where some mildly cut into it and focused more on floating above it.

See Figure's 63 - 65

The material challenge of this project synthesized the tectonic lessons of the Line Project and the stereotomic lessons of the Plane Project, into one composition where they had to exist in the same environment asking the student to consider the relationship between these two construction types. This dichotomy which was initiate by the studio brief brought into question and stimulated a response to the fundamental poetic dimension of architecture which Frampton put forth as being the connection between the stereotomic base and the tectonic frame.[94] This allowed the metaphor that the tectonic, in its light weight appearance, was related to the sky, versus the stereotomic, in his pull on gravity, was bound to the earth. Framtpon described this as:

> "...the way in which the framed structure tends toward the aerial and the dematerialization of mass, whereas the mass structure is earthbound, tending towards embedding itself ever deeper into the earth. The one tends towards the light and the other towards the dark."[95]

The importance of dichotomy is essential here in that it sets up the need to understand the opposite of something in order to truly understand the other. Both Paul Klee and Steven Holl share this thinking as Holl once wrote that "a phenomenal architecture calls for both the stone and the feather."[96] Whereas Klee elaborates further by stating that,

> "A concept is not thinkable without its opposite. There is no such thing as a concept in itself; generally speaking there are only pairs of concepts. What does 'above' mean if there is no 'below'?"[97]

By comprehending that no concept can exist without its opposite the whole project can then be viewed as an intertwining relationship of various dichotomies: stereotomic/tectonic, above/below, inside/outside, to/from, etc. The site and the materials would unite to establish the basis for conceptual development and act as a primary provider of inspiration.

It is interesting to note that this project has much more program than the other two, yet students did not seem to struggle here, as they stated they did dealing with program in the Plane Project. This is interesting because not only was the program more complex it was more inundated with referential content that could impede inventiveness. "The familiarity of the word [dwelling] suddenly injects memory and [places you in locations you've been]."[98] The students were able to take their memories and imaginations about the idea of dwelling and transform them into something more inventive. They were bound more than before but within those boundaries had a wide variety of options, through ambiguity, to push back against. The idea that the dwelling tower was to be heavy created ideas of living in the earth, or in a stone tower, which would seemingly inspire the question, "What would that be like?" The open-ended quality of the tectonic tower was also a benefit due to the fact that it could be imagined to be anything. There were no square footages, only the suggestion a plan type, which some seemed to either reject altogether, or embrace whole-heartedly. The problem offered freedom to not be bound to specific dimensions, allowing the students to dream

about what these spaces could be like, geometrically speaking. At the end of the day, "all you needed was a space with some kind of volume around it"[99] and that ambiguity with the suggestion of function was the impetus for major conceptual invention. This allowed students to once again reach into their minds and their various backgrounds to search for a conceptual fabric which would envelope and help shape their projects.

See Figure's 66 - 86

> "I based my tower on my parents; my Mexican artist mom with my American business/banker father. But I explained it as an introverted and an extroverted tower. The circulation within the towers [were] very important to their design; as if the path through the building could affect your state of mind"[100] - Pia Wortham

> "For me it was a moment where we personalized the programs of the [towers]. In my case [my concept came from] thinking about music in an abstract way...[also an abstract] way to play, [and to] understand a piece [of music, and to] understand a particular moment in the piece [and] designing a tower in which the piece would be performed. It was this whole thing about when you play a wind instrument, how you breathe and the importance of the diaphragm...there [was a] certain kind of exercise where you'd play lying on your back...in order to strengthen the diaphragm muscles...So my tower was about going up the hill to this dark area and then coming out to a platform on the top of the tower where you'd lie kind of at an angle and you'd play [your instrument]. And as you play, you'd kind of see the lines extending beyond where there would kind of be this dream world, this world of spatial possibilities that you would then inhabit while you were playing the music."[101] -Jon Stuart

For Chris Sharples the process was initially filled with memories of his childhood, which became a starting point for thinking about the nature of interior space constructed of a variety of materials.

"[I grew] up having a barn, and everything was made up of frames, and those frames would get filled up sometimes with hay, and sometimes they would get filled up with dust and light would come through. And I just found it incredibly amazing the sense of scale that was defined by those frames, and in a way it wasn't very different from the way that you looked at the line project."[102] - Chris Sharples

His project ended up becoming inspired remotely by his knowledge of Japanese architecture, thinking about the engawa, a frame within a frame.

"[I had] this light frame and this heavy frame, and they [nested] into each other. The light frame, in a way, became sort of the engawa or the porch...I liked that idea that there was sort of space between the interior and the outside...so that light frame felt like that would be the mediator - that would also demarcate the entrance to the whole thing...And so I used the light frame as the circulation and the hard frame as the occupation, and right there was program enough." - Chris Sharples

As his project developed he generated another spatial, or experiential language that attempted to organize the experience of maneuvering into the interior spaces.

"When you go into this house, you always go in on the corner, and you always traverse it on an angle. You know, coming in on the oblique and then moving in and then turning, and then coming in on the oblique [again], and so it was [always] about reorienting yourself."[103] - Chris Sharples

See Figure's 87 - 88

This final project very successfully pulled together the lessons of the Point-Line-Plane into the idea of volumetric space. It allowed students to explore the dichotomies embedded within the site, circumstances and materials in order to imagine new environments which would redefine what it meant to dwell, reimaging what home could look like. The beginning of the semester asked them to imagine the home of a

poet/riveter, which was stated as always being engulfed with preconceived notions of architectural space and form. It is fitting that the last project gave the students another opportunity at attacking a similar programmatic problem, but now through the phenomenological, anthropological and poetically tectonic lenses which they had spent the semester experimenting with on a variety of focused levels.

The Second Semester Projects

Conceptually speaking, if the first semester was about and fundamental and elemental understanding of architecture then the second semester could be viewed as one which primarily dealt with the programmatic issues of public and private space, or in other words program in relationship to the social dimensions of architecture. The Program Director in 1991, Ken Kaplan describes:

> "The first problem, a five week exercise was a gallery and live/work apartment for photographers on a corner site in New York City. The second problem, a seven week exercise, was an elementary school on a wooded suburban site in Staten Island, New York. The principle aim of this studio was to ask the student to integrate site, program, space, structure. architectural technology and cultural ideas in a cohesive manner."[104]

The two projects in this semester departed from the abstraction of space by placing the student's in a very real condition involving a dense urban environment and a natural and open suburban environment. In regards to the urban infill project, there was no notion of site other than the sense that the building had to only exist on two external elevations, where the rest was primarily establishing an internal place. One could argue that dealing spatially with the public realm on the street level was contextually important but essentially the "place-making" characteristics of the first semester projects were

essential removed and internalized making program the defining element for architectural organization. The second project in this semester was a little more related to the abstract sites of the first semester as the students had to deal with a more open environment reminiscent of their prior experiences. Given the fact that the students were in a three-year program, the need to jump into more practical or "real" problems seems appropriate. It would be naive to continue to facilitate and romanticize the idea that architecture exists only in a vast open and imaginative environment, where the reality is that most sites for architecture are far less picturesque and more along the lines of being heavily constrained and surrounded by uninspiring contextual fabric.

The student work that was published in the school's annual book "Abstract" seemed highly complex and tectonically engaged. Similar constructive languages are present, which indicates to me that the students were able to translate architectonic ideas into new site conditions. Due to the constraints of the sites, especially in regards to the urban project, the student needs to rely even more so on an external concept as with the gritty reality of the city, architecture becomes a little more autonomous and concerned with itself.

> "Despite the challenge inherent in each of these architectural issues, the individual student and ultimately the professional designer has the potential to engage and discover the freshest source for new ideas in these two areas [urban and suburban]. However, turning rock into lava requires heat, a lot of it. So each student must bring his own thermodynamic reactor...to each of the problems given."[105]

See Figure's 89 - 92

3. Conclusion: The Importance of Scale in Architectural Education

Shortly after these projects began the school changed in more critical ways reflecting the arrival and presence of the new Dean Bernard Tschumi in 1988, who had sought to take Columbia into the next decade by embracing computational advancements and creating the first "paperless studio." By 1992, Tschumi's presence inside the halls of Columbia, along with the popularity of deconstructivism, began to mix together to ultimately change the tone of the school which became increasingly more interested in avante-garde experimentation of form, utilizing the unique and powerful abilities that the computer offered. The Point-Line-Plane-Volume projects continued but transformed in response to the new interests of the student body emerging at the time. Now points, lines, planes and volumes were able to be constructed and examined in digital space, opening new possibilities that lead to more abstract explorations of form and space. The projects became much more experimental and increasingly less anthropologically conceived of, as formal exploration through the computer, seemed to override the desire to address the anthropological conditions of the assignments. This shift into an abstract exploration of space can be connected to the autonomous formalism being explored at Cornell and Cooper Union. Ideas were now being explored in the abstract realm of digital space which primarily removed ideas regarding materiality, weight and gravity. This new abstract space provided limitless possibilities without the distraction of these considerations. This once again placed emphasis on the visual qualities of architectural form over concrete realities which connect architecture with the senses.

The first semester projects at Columbia, as they were from 1986 to 1991, can be seen as a critical shift in architectural pedagogy, which was initially shaped from the

outcry of student activism occurring on campuses around the country. Students demanded more social relevance, and an education that separated from and questioned the failures of modernism, in an attempt to once again make architecture socially relevant and socially valued. From this desire James Polshek, Kenneth Frampton and Steven Holl worked together to restructure Columbia and set the stage for a new school, one which both met the demands of the student body and one which projected a future for architectural education. Polshek's contribution was exceedingly professional in nature, meaning he was able to bring together the various departments within the school, update the degree paths and create a more professional image for the institution in general. Frampton, as chair, was able to re-envision the school's values and what it strived to accomplish pedagogically. This undoubtedly saw its greatest and most effective moment with the implementation of Steven Holl's phenomenologically inspired first semester curriculum. All together the transformation which occurred at Columbia University, post the destruction and unsettling civil unrest caused by the Vietnam War, can be seen as one which absorbed the failures of the past, examined them and responded in a way that critically scrutinized and effectively changed the values of architectural education at the time. For a brief and concentrated moment, a shift from an overtly formalist and anti-human exploration of architectural space was cast aside for a venture into what it meant for a human being to poetically connect back to architecture and it's various forms. The total human experience took center stage and became the driver for architectural expression. Form was discovered through an anthropological and conceptually phenomenological lens, putting total-bodily experience ahead of visual fantasy, thus creating a highly poetic and tectonically considered

construction of architectural space. The human experience had once again returned, perhaps more than ever, to architecture and architectural education which not only addressed the critiques of modernism but also the student interest in an architecture that considered more than just formalist and compositional depth.

It is necessary to reexamine what made these first semester projects at Columbia so important in order to understand their critical significance. First and foremost they reached back in time to examine the primitive, elemental considerations of architecture through the lens of Semperian ideals. They tapped into Semper's idea of architecture being "cosmogonic, or 'world creating'...cosmos, micro-cosmos...the capacity of the human subject to create a world."[106] Frampton states that this invented world was thought of in regards to the importance of craft production, with "earthwork being associated with [stereotomy], masonry, [the] heavy. The roof and the framework being associated with wood and with lightness...and then the internal wall to the wood weaving and the [primordial] fire associated with [the] making [and] smelting [of] metal. All of these kinds of things [were able to be extracted from] these four elements [and related back to] craft production, which is [so extremely] didactic."[107] These basic and fundamental qualities of craft and human ingenuity had become so lost in an era swept away with industrialization and science, that the humanity of construction had faded and as a result a spatial sterility, one with anti-human, anti-poetic properties emerged. The examination and implementation of Semperian ideals, helped restore the human being into the consideration of the production of architecture. No longer was architecture a purely autonomous construction, only referencing itself. It became self-less through its conversation and integration with site/circumstance, materiality, concept and most

importantly experience. From this point of view architecture was considered from a socio-cultural perspective, postulating how humans inhabit and construct the space around them. The importance of tectonic form in its poetic relationship to site, circumstance and constructive intelligent, was able to be addressed, explored and advanced, re-reestablishing a seemingly lost connection between civilization and making.

The emphasis of the human being within architecture was perhaps brought even more to the forefront through the application of phenomenological perspicacity. Phenomenology put the sensory perception of architectural space into focus, questioning how our bodies related to and understood our environment, both natural and constructed. This sensory-based theory also took into consideration what it meant for human beings to inhabit space and how space connects to us on a multi-sensory level. Here, architectural form took its cues from the human experience of space and considered how form, space and experience intertwined together to create a meaningful and poetic sense of dwelling. Phenomenology considered that architecture was intrinsically related to "real places and precise human endeavors,"[108] and that architecture could not be removed from site and situation. This implied that the meaningful and successful fusion of building and situation created a third condition where "denotation and connotation [emerged]; expression [became] linked to idea which [was] joined to site." This fusion of ideas and their resultant expressive qualities was felt and understood through this inescapable "organic link between concept and form."[109] Concept here, as seen through these projects came from the cues (or limitations) of site, circumstance and material suggestion, which provided a platform from which to

depart. From these cues a more personalized endeavor could be explored through a vast variety of lenses which helped invent new possibilities in the construction and habitation of space. "Site, force, circumstance, program and phenomena [were] connected with idea-force." The notion that these elements would combine together to define a "field of inquiry, a territory for investigation that [helped] to form meaning."[110] Thus meaning became intrinsically connected to the human experience and the human capacity to link the intellectual thought to the poetics of spatial construction.

The construction of these assignments were also integral to their success as they provided the exact type of apparatus which would stimulate architectural thought through a Semperian and phenomenological standpoint. That is to say that if the faculty wanted to pursue these philosophies, they had to construct assignments which provided students with conditions that leant themselves to these ideas. In order to achieve this they considered three specific conditions: site/circumstance, materiality and concept. These assignments dealt with abstracted ideas of place which were humanized and brought into reality through the inclusion of familiar topographic conditions and the indication of human scale. The inclusion of scale was essential as it placed the human body within these contexts which inevitably brought human experience to each individual site. The issue of scale was also addressed through the specification of materiality, whether it be the tectonic qualities of wood and steel, or the stereotomic qualities of stone and masonry. The scale of the materials intertwined with the scalar qualities of the various sites to create an inescapable and essential human condition. Through these scalar ideas the site, materials and the resultant architecture could be read through the understanding of the human body in space. This was a critical

departure from the formalist pedagogies of the past which only indicated scale abstractly through the relationships of the components in relationship to one another. This self-referential and abstracted understanding of scale did not require, nor did it imply, the need for understanding human habitation in regards to tectonic and spatial generation. That is to say that scale in these pedagogies were not human in nature but rather compositional and related more to the constructed system and its various components. These pedagogies effectively removed the human being through the abstraction and ambiguity of scale and material within the context and construction of the assignments. Finally, the limits embedded within these three assignments gave the students the ability to explore abstract and far reaching ideas which they could relate and tie back to some element of the site, material or programmatic conditions. Simple programs of focus, such as linear, planar and volumetric combined with site and material focus became the springboard for conceptual development, which beyond these initial idea generating conditions, could come from anywhere, which inevitably resulted in an extreme amount of inventiveness and creativity.

The Point-Line-Plane-Volume projects at Columbia created a supportive and well structured environment where architectural ideas could be explored fruitfully, regardless of one's experience or exposure to architectural thinking. They created a collegial place where "no ideas were belittled" and where everyone could feel like they were investigating, "doing research. Engaging in glorious experiments that might result in failure but [where] the [honesty] of the experiment was what mattered"[111] They allowed every student to take their own unique position regarding fundamental, elemental and almost primitive considerations of architecture. These projects allowed students to

dream and tap into their embodied experiences, allowing them to translate ideas from their minds, through their bodies and into their work which inevitably became meaningful architectural space. They set a common ground for exploration, one where all students found themselves "at the beginning...in order to discover architecture" either for the first time, or all over again.[112] These projects effectively kept students in a "really interesting threshold between something really experimental and something kind of architectural." This allowed them to "discover something about [themselves] and [simultaneously, something] about architecture."[113] Chris Sharples summed it up by indicating that these assignments helped him discover his very own "design space."[114]

Another factor important to consider, is where these projects occurred in the curriculum and the implications that has for future pedagogical models. Frampton and Holl's choice of focusing their energy on the first semester of the program was a critical, highly intelligent and revealing maneuver. It indicates that the hierarchy within design education resides in the introductory moment of first year. This fact was brought to light through my discussion with Tom Hanrahan, who stated that:

> "First year pedagogy is sort of endlessly in turmoil and it's simultaneously challenged. How do people treat first year pedagogy in schools? They're endlessly complaining about it in that they think it's in constant crisis and not preparing the students properly for everything going forward. It's incredibly important in that whatever they learn in the first semester [as it has the ability] to transform them [positively] or simultaneously [damage] them for the rest of their life...[thus first year pedagogy is] constantly debated, [but] one thing that's agreed upon is that it should in some way reflect the kind of fundamental values of either the school or the group of faculty who are teaching it...so therefore [it becomes] emblematic of that particular moment [of] the school...therefore that pedagogy should [somehow] be emblematic of the values of the school. [It

has the ultimate responsibility] to provide [the students with] the fundamentals and kind of sum up the universe at the same time."[115]

What Tom says here is incredibly accurate, and potentially exactly what drove Frampton and Holl to put their attention on embedding the new core values of the school into the introductory studio in which students would first arrive. This sets up the idea that first year education is a snapshot of what the school believes in, and suggests that schools of architecture ask should themselves, "What does our first year pedagogy say about us?" Perhaps that is all students should examine when searching for a school in which to study. If that became the fundamental criteria for a student to select a specific institution perhaps those schools would think more about the message which their first year studios communicates to prospective students.

This leads into a final conversation, a moment of reflection on what has been learned here and how it can apply to the future of architectural education. After examining this moment in Columbia's history what remains is the power of the work and its inherent beauty both as experiential constructions, but also as compositional objects. This comes from a resolution of, and an essential engagement with, human scale. The work consistently had a well articulated sense of scale through its elemental articulation of form and material. There was always a graceful and delicate quality in regards to the tectonic elements, balanced with a sense of weight, strength and gravity in regards to the stereotomic forms, whether architectural or in their integration with the implied earth. The relationship between these two conditions were always at the forefront of the designs which provided a sense of balance through the articulation of material. The architecture produced during this time, in this core studio, indicates through its quality

an idea that the students were able to dream and create experimental spaces which challenged preconceived ideas which explored new ways to experience site and situation. The students created a balance of fantasy that activated the imagination yet also provided a rationality which helped ground the work in some idea of reality. None of this would have been possible without the inclusion of elements which indicate human scale, and most importantly that this scale was being derived from site, material and experiential considerations related to the scale of the body. The site, materials, space and form could all be measured with an understanding of the human body as an integral device which was meant to interact with these architectural investigations.

> "Design is a fundamental act of existence, a switch that allows us to place our bodies in relation to the world of matter in which we find ourselves. It defines our very humanity and assures our continued existence and survival in the world."[116] - Mark Foster Gage

Moving forward, this research has resulted in a perspective which recommends that architecture schools need to consider the lesson of human scale which developed at Columbia during the mid-1980's. If architecture is to remain relevant to ideas regarding human experience, then it must consider scale as the absolute most determining factor for stimulating architectural thought. This is born from the fact that human beings inherently measure themselves against the world through their bodily senses. The scale of space and the elements within it penetrate our senses and communicate ideas. It is through scale in which human beings understand and relate to architecture and the environment around them, thus the issue of scale should constantly be addressed in very human ways especially given that students of architecture create space in a way that is abstract from our actual experience of it. This is a commentary

regarding the nature of working in abstract architectural scales, and now within the past twenty years, conceiving architecture in a digital reality, where scale loses all sense of physical weight and presence. In this new digital world of architectural creation we run the risk of losing touch with the reality of architecture, in regards to its gravity, materiality and experiential properties, potentially bringing education back to a moment resembling the autonomous, sterile and inhumane construction of architectural space. Architecture schools should embrace the opportunities which digital technology provides, but use and teach it as a tool which can help articulate ideas rather than generate them entirely. Just as there has always been a back and forth between drawing, modeling and actual architectural construction, there needs to be a similar oscillation between the digital and the highly didactic material realm, so that students can understand the gravitational, material and experiential qualities of their ideas through all of their senses. Architecture was founded and essentially understood through the act of building. It is an integral and foundational characteristic of the profession that cannot be cast aside in place of a reality which doesn't truly have meaning. We must maintain our connection to the act of construction, just as we must always be aware of the importance and relevance of our physical and psychological connection to architecture as a lived and embodied *experience.*

> "As soon as architecture stops insisting on [being physically experienced], it will exist only and entirely as an abstract concept, uprooted from its physicality and associated sensory values. It then becomes only another manipulable idea and abandons all of its inherent resistance to political and corporate subsumation."[117] - Mark Foster Gage

Looking ahead I think that architectural education, especially in the formative years, should consider the three characteristics which the Columbia projects employed: one, the site of architectural exploration should consider and be measured by the scale of the human body. Ideas that the body is meant to inhabit and construct within the site should be a central conceptual element involved in studio projects; two, the spatial and haptic qualities of materiality and construction should be dealt with physically and not simply isolated to the digital or two-dimensional realm. Students should have to constantly move between modes of representation, between drawing (by hand or the computer) and building, as to constantly maintain the didactic connection between the two; and three, the conceptual fabric of architectural thought must be stimulated and bound by limitations both explicitly defined by the project brief and also through the conceptual constraints that allow students to personalize and editorialize their work. This last point also considers the inclusion and construction of program within a project brief. The Columbia projects introduced one simple programmatic idea which helped drive each project, movement. It was movement through space across a landscape from one point to another point which created the programmatic fabric for the projects. Any supporting program reflected movements counterpoint, inaction. These two simple ideas bound by site, circumstance, materiality and idea helped construct rich experiences which intellectually challenged a diverse group of students to formulate ideas about architecture.

Architectural education is headed in a direction full of possibility. A digital renaissance has been developing and rapidly changing the way we conceive and construct our ideas. It has accelerated certain processes and has allowed students to

produce ideas faster, enabling them to design highly sophisticated and complicated structures not easily possible before. With this speed, and with the abstraction inherent within the digital environment, design pedagogy should take into consideration the possible consequences that could result from these technological advancements. If history is to always repeat itself then the digital movement, the abstraction of space within the computer, along with the advancement of technological processes sounds reminiscent of the industrial revolution and its impact on architecture. While these technologies helped advance architecture professionally and academically it ultimately resulted in architecture which became more concerned with itself and less concerned with the importance of the essential primitive human condition. The projects at Columbia in the mid-1980's represented a return to the total human experience which was lacking as a result of the tunnel vision induced by a rapidly changing culture. We find ourselves again in such a moment, and it would seem important to learn from the lessons of the twentieth century. As architectural education continues in this new era, it must not forget about the comprehensive human experience of space. Schools must consider that architecture is a physical construct with tangible and intangible experiences, as well as a social, psychological, cultural, economical and political construct which cumulatively unites to construct the total human experience. Architecture must always be representative of these conditions; it must always represent and embody the unconditional human experience.

Endnotes

[1] Alex Caragonne. *The Texas Rangers: Notes From The Architectural Underground.* Cambridge, Mass.: MIT Press, 1995. 77.

[2] Alex Caragonne. *The Texas Rangers: Notes From The Architectural Underground.* Cambridge, Mass.: MIT Press, 1995. 143.

[3] Alex Caragonne*. The Texas Rangers: Notes From The Architectural Underground. Cambridge*, Mass.: MIT Press, 1995. 19.

[4] Joan Ockman. "Introduction: The Turn of Education," in Joan Ockman ed., *Architecture School: Three Centuries of Educating Architects in North America.* Cambridge, Mass.: MIT Press; Washington, D.C.: Association of Collegiate Schools of Architecture, 2012. 20.

[5] Joan Ockman. "Introduction: The Turn of Education," in Joan Ockman ed., *Architecture School: Three Centuries of Educating Architects in North America*. Cambridge, Mass.: MIT Press; Washington, D.C.: Association of Collegiate Schools of Architecture, 2012. 20.

[6] Alex Caragonne. *The Texas Rangers: Notes From The Architectural Underground.* Cambridge, Mass.: MIT Press, 1995. 143.

[7] "In short, the building becomes a haphazard record of such random events as program, legal restrictions or inducements, materials, plastic expression, building process, and icon quality rather than a manifestation of their considered coexistence, or better, their resolution into a coherent whole." See Klaus Herdeg. *The Decorated Diagram: Harvard Architecture and the Failure of the Bauhaus Legacy.* Cambridge, Mass.: MIT Press 1983. 2.

[8] Klaus Herdeg. *The Decorated Diagram: Harvard Architecture and the Failure of the Bauhaus Legacy.* Cambridge, Mass.: MIT Press 1983. 2.

[9] Klaus Herdeg. *The Decorated Diagram: Harvard Architecture and the Failure of the Bauhaus Legacy.* Cambridge, Mass.: MIT Press 1983. 92.

[10] Klaus Herdeg. *The Decorated Diagram: Harvard Architecture and the Failure of the Bauhaus Legacy.* Cambridge, Mass.: MIT Press 1983. 94.

[11] Klaus Herdeg. *The Decorated Diagram: Harvard Architecture and the Failure of the Bauhaus Legacy.* Cambridge, Mass.: MIT Press 1983. 95.

[12] Alex Caragonne. *The Texas Rangers: Notes From The Architectural Underground.* Cambridge, Mass.: MIT Press, 1995. 144.

[13] Joan Ockman. "Introduction: The Turn of Education," in Joan Ockman ed., *Architecture School: Three Centuries of Educating Architects in North America*. Cambridge, Mass.: MIT Press; Washington, D.C.: Association of Collegiate Schools of Architecture, 2012. 22.

[14] "The movement that brought about the Texas Rangers began with the appointment of Harwell Hamilton Harris as the first director of the school in 1951. Harris, impressed by a new approach to design championed by the former Bauhaus member, Josef Albers, began recruiting architects to teach at his school whose approach to design and architecture were similar to Albers'. Among the architects Harris succeeded in attracting to the Texas School of Architecture were Colin Rowe, John Hejduk, Robert Slutzky, Werner Seligmann, Lee Hirsche, Bernhard Hoesli, Lee Hodgden, Jerry Wells, and John Shaw." (http://en.wikipedia.org/wiki/Texas_Rangers_(architects))

[15] Joan Ockman; Avibail Sachs. "Modernism Takes Command 1940-1968," in Joan Ockman ed., *Architecture School: Three Centuries of Educating Architects in North America.* Cambridge, Mass.: MIT Press; Washington, D.C.: Association of Collegiate Schools of Architecture, 2012. 138.

[16] Alex Caragonne. *The Texas Rangers: Notes From The Architectural Underground.* Cambridge, Mass.: MIT Press, 1995. 33.

[17] Alex Caragonne. *The Texas Rangers: Notes From The Architectural Underground.* Cambridge, Mass.: MIT Press, 1995. 33.

[18] Alex Caragonne. *The Texas Rangers: Notes From The Architectural Underground.* Cambridge, Mass.: MIT Press, 1995.

[19] "Hoesli concluded that the 'main key to improving teaching' is not to become so preoccupied with 'the subject matter' that one loses sight of 'the student, his capacity to learn, his possibilities to learn, his method,' indeed, 'the methods of the human mind to learn' (he emphases). Hoesli insists that the question 'How does one learn?' ought to be the primary focus rather than 'What is necessary to be learned?'" See Alex Caragonne. *The Texas Rangers: Notes From The Architectural Underground.* Cambridge, Mass.: MIT Press, 1995. 81.

[20] Alex Caragonne. *The Texas Rangers: Notes From The Architectural Underground.* Cambridge, Mass.: MIT Press, 1995. 143.

[21] Ken Boone, former UT Austin graduate explains that, "The idea of an architectural design is that spirit which is felt throughout the design, the spiritual part of the Building...It is the thought in the designer's mind that guides him in every decision and ultimately results in the continuity of the whole design...It must have the power to stimulate the human emotionally, if only subconsciously." See Alex Caragonne. *The Texas Rangers: Notes From The Architectural Underground.* Cambridge, Mass.: MIT Press, 1995. 262.

[22] Alex Caragonne. *The Texas Rangers: Notes From The Architectural Underground.* Cambridge, Mass.: MIT Press, 1995. 264.

[23] "Here, from out of one's direct experience, intuition, research into architectural history ('historical precedent' in the lexicon of the school), and the rational analysis of program facts, the architectural idea would arise. The choice of an architectural idea was always a personal, individual one and needed no justification in itself. Nonetheless, the propriety or usefulness of one's ideas would inevitably come into question. In a typical studio situation, the search for an appropriate vehicle would always involve the testing of promising concepts against the program and site. Different ideas might emerge emphasizing different facets of the problem- functional, spatial, structural, or any two or all of these in combination, depending upon the predilection and the sophistication of individual students." See Alex Caragonne. *The Texas Rangers: Notes From The Architectural Underground.* Cambridge, Mass.: MIT Press, 1995. 264.

[24] Alex Caragonne. *The Texas Rangers: Notes From The Architectural Underground.* Cambridge, Mass.: MIT Press, 1995. xix.

[25] "Particularly noteworthy was Hudnut's approach to the teaching of architectural history. While he considered it essential to the general education of the designer, he felt it should be studied in the undergraduate years." See Anthony Alofsin. "American Modernism's Challenge to the Beaux-Arts 1920-1940," in Joan Ockman ed., *Architecture School: Three Centuries of Educating Architects in North America.* Cambridge, Mass.: MIT Press; Washington, D.C.: Association of Collegiate Schools of Architecture, 2012. 103.

[26] Alex Caragonne. *The Texas Rangers: Notes From The Architectural Underground.* Cambridge, Mass.: MIT Press, 1995. 270-271.

[27] Alex Caragonne. *The Texas Rangers: Notes From The Architectural Underground.* Cambridge, Mass.: MIT Press, 1995. 83.

[28] From Colin Rowe; Robert Slutzky "Transparency: Literal and Phenomenal" *Perspecta, Vol. 8.* (1963), pp. 45-54. but quoted from Robert McCarter. "The Transparency of Space Colin Rowe and the Cubists," in *Constructions: University of Florida.* Department of Architecture, University of Florida, 1993. 85.

[29] "A look at the work of the Cooper school produces compelling evidence that this unique situation is not an inexplicable accident, but rather a situation engineered by a group of committed architect-theoreticians amply reinforced by the hard work of student architects. The concept of the curriculum structure at Cooper Union is twofold. First, the formative years of the students are devoted to a series of exercises, severely limited in scope,

channeling the fledgling architect's development to in-depth explorations of fundamental problems of structure and space manipulation. Second, the shape of the exercises is based on the visual discoveries of Cubism and Neoplasticism, the very discoveries from which Le Corbusier and the other Paris-oriented early masters constructed their plastic and spatial language... The student then is immediately engaged in the concrete task of fitting and sizing materials while addressing himself to visual discoveries that lie at the foundation of modern architecture. It is clear from the unique projects that are eventually produced that the student has acquired an understanding and love for the process of building while comprehending historical sources that nourish his first attempts at plastic and spatial creation... This reawakened interest in the possibility of new connections between eye and mind is, of course, wholly rejected by the new conservatism in architecture as exemplified by Vincent Scully and others who are exhorting us toward reconciliation with an existing world." See Ulrich Franzen. "Introduction," in *The Education of an Architect: A Point of View The Cooper Union School of Art & Architecture*, ed. Franzen, Ulrich; Perez-Gomez, Alberto; Shkapich, Kim. New York: Monacelli Press, 1999. 12.

[30] Gomez, Alberto-Perez. "Education of an Architect: Unraveling a Point of View," in *The Education of an Architect: A Point of View The Cooper Union School of Art & Architecture*, ed. Franzen, Ulrich; Perez-Gomez, Alberto; Shkapich, Kim. New York: Monacelli Press, 1999. 15.

[31] "The proposition was to design a residence in the intention of Juan Gris. The idea was to translate the notions of a specific Cubist painter into a controlled three-dimensional envelope of space. This involved an analysis and reevaluation of what Cubism was in painting, sculpture, and architecture. Since Gris was primarily a painter, the problem of translation from the implied in painting to its abstraction in architectonic terms was obvious. The objective was to synthesize a program and design simultaneously. The program was to be real and workable, and the design was to unify the program in context with the formal intention. The mainstream of inspiration came from Gris' earlier work. My primary concern was spatial, where the layering or superimposition of ambiguous spaces was to yield an explicit composition. One could call it polyspatial. The shapes of these spaces are programmatic, and the repetition of their theme is meant to imply unity. The Cubist notion of centrality resides in the central spine. This operates in one instance as an elongated slot of circulation space and in another as a retaining wall reaching out to tie back an extension. The organization of the structure exists along and at right angles to this spine, warping from level to level but always tightly compressed into it. Tension is produced as a result of these extensions and compressions, which become apparent in the elevations as one circles around the structure and in the comparison of longitudinal versus transverse sections. Thematic unity eases this tension and therefore the composition becomes dynamically stable." See Michael Dolinski. "Gris House," in *The Education of an Architect: A Point of View The Cooper Union School of Art & Architecture*, ed. Franzen, Ulrich; Perez-Gomez, Alberto; Shkapich, Kim. New York: Monacelli Press, 1999. 228.

[32] Vincent Mulcahy; John Zissovici. "Elementary Investigations in the Third Dimension," in *The Cornell Journal of Architecture*. Ithaca, NY: Cornell University, Dept. of Architecture 1981. 96.

[33] Mary McLeod. "The End of Innocence: From Political Activism to Postmodernism 1968-1990," in Joan Ockman ed., *Architecture School: Three Centuries of Educating Architects in North America*. Cambridge, Mass.: MIT Press; Washington, D.C.: Association of Collegiate Schools of Architecture, 2012. 162.

[34] Beatriz Colomina; Esther Choi; Ignacio Gonzalez Galan; Anna-Maria Meister. "Radical Pedagogies in Architectural Education." *The Architectural Review*. September 28, 2012. http://www.architectural-review.com/essays/radical-pedagogies-in-architectural-education/8636066.article (accessed April 17, 2013).

[35] Mary McLeod. "The End of Innocence: From Political Activism to Postmodernism 1968-1990," in Joan Ockman ed., *Architecture School: Three Centuries of Educating Architects in North America.* Cambridge, Mass.: MIT Press; Washington, D.C.: Association of Collegiate Schools of Architecture, 2012. 163.

[36] Mary McLeod. "The End of Innocence: From Political Activism to Postmodernism 1968-1990," in Joan Ockman ed., *Architecture School: Three Centuries of Educating Architects in North America*. Cambridge, Mass.: MIT Press; Washington, D.C.: Association of Collegiate Schools of Architecture, 2012. 168.

[37] James Sanders. "In Search of a School," in *The Journal of The Columbia Graduate School of Architecture, Planning, and Preservation. Precis 1.* New York, NY: Rizzoli International Publications, 1979. 31.

[38] Kenneth Frampton. "Columbia in Retrospect: Student Work 1983-84," in *The Journal of The Columbia Graduate School of Architecture, Planning, and Preservation. Precis 6*. New York, NY: Rizzoli International Publications, 1987. 194.

[39] Klaus Herdeg; Michael Schwarting. "First Year Studios," in *The Journal of The Columbia Graduate School of Architecture, Planning, and Preservation. Precis 2*. New York, NY: Rizzoli International Publications, 1980. 6.

[40] "The Division of Architecture tends to stress five interrelated factors in its approach to the teaching of the theory and practice of architectural design: 1. It assumes a typological and anthropological approach towards the generation of architectural form; that is to say it places an emphasis on the derivation of architectural form from a typological point of departure. At the same time it stresses the need to transform these received types in the light of the complex of circumstances which attend any given task. It tends to give these types an anthropological interpretation and to not allow the notion of type to degenerate into a mechanistic device. 2. As an extension of this concept of transformation at a small scale, a stress will be placed upon the impact of construction on architectural form; thereby favoring an expression predicated upon the concept of tectonic form; that is to say upon a poetics of revealed construction 3. An emphasis will be placed upon the qualifications of both type and tectonic form by considerations deriving from topography in the broadest sense, that is from the specifics of the given topos. It is important in this regard to recognize that every building commission has its temporal and physical limits and that the work, while remaining open to future transformations to be made by others, must, at the same time, assert and establish its own sense of unity with the particular site. 4. An emphasis will be placed on the need to differentiate between the public and private aspects of built form and hence to discriminate between the socio-cultural status of different institutions and even between different parts of the same institution. 5. As far as complementary theoretical and historical studies are concerned, the Division tends to take a critical approach to the art and craft of architecture tending to emphasize its close connection with technology, politics and socio-political ideology. In the "threshold" courses and in the advanced theory seminars in particular a stress is placed upon the influence of techno-economic conditions, while at the same time taking into consideration the impact of philosophical and psychological concepts. All in all, an effort is made to indicate how both individual and collective identities are equally affected by systems of architectural order and by different modes of representation, etc. As far as the teaching of technology is concerned, an emphasis is placed upon a studio, casestudy method of instruction; a method oriented towards the enrichment of both theory and practice through a " hands-on" approach to both the construction and the servicing of built form." See Kenneth Frampton. "Introduction," in *Columbia University Graduate School of Architecture, Planning, and Preservation. Abstract 87-88*. New York, NY: Graduate School of Architecture, Planning, and Preservation of Columbia University, 1988. 5.

[41] Hannah Arendt. *The Human Condition*. Chicago: University of Chicago Press, 1958.

[42] Hanrahan, Tom. "Core Architecture Studios: Studio 1," *Columbia University Graduate School of Architecture, Planning, and Preservation. Abstract 90-91*. New York, NY: Graduate School of Architecture, Planning, and Preservation of Columbia University, 1991. 8.

[43] Kenneth Frampton. "Rappel a L'orde, The Case for the Tectonic." in *Labour, Work and Architecture: Collected Essays on Architecture and Design.* New York, NY: Phaidon Press Limited, 2002.

[44] Gottfried Semper. *The four elements of architecture and other writings*. Cambridge, England: Cambridge University Press, 1989.

[45] Kenneth Frampton. "Rappel a L'orde, The Case for the Tectonic." in *Labour, Work and Architecture: Collected Essays on Architecture and Design.* New York, NY: Phaidon Press Limited, 2002. 96-97.

[46] Kenneth Frampton. "Rappel a L'orde, The Case for the Tectonic." in *Labour, Work and Architecture: Collected Essays on Architecture and Design.* New York, NY: Phaidon Press Limited, 2002. 97.

[47] Kenneth Frampton. "Rappel a L'orde, The Case for the Tectonic." in *Labour, Work and Architecture: Collected Essays on Architecture and Design.* New York, NY: Phaidon Press Limited, 2002. 95.

[48] Kenneth Frampton. "Rappel a L'orde, The Case for the Tectonic." *in Labour, Work and Architecture: Collected Essays on Architecture and Design.* New York, NY: Phaidon Press Limited, 2002. 95.

[49] "Phenomenology (architecture) - Wikipedia, the free encylopedia." Wikipedia, the free encyclopedia. http://en.wikipedia.org/wiki/Phenomenology_(architecture) (accessed April 17, 2013).

[50] Carman, Taylor. "Forward," in *Phenomenology of Perception*, by Maurice Merleau-Ponty, New York: Humanities Press, 1962. viii

[51] Steven Holl. "Phenomenon and Idea," in *Columbia University: Graduate School of Architecture, Planning, and Preservation. Newsline 5. 4* (March 1993): 2.

[52] From Colin Rowe; Robert Slutzky "Transparency: Literal and Phenomenal" *Perspecta, Vol. 8.* (1963), pp. 45-54. but quoted from Robert McCarter. "The Transparency of Space Colin Rowe and the Cubists," in *Constructions: University of Florida.* Department of Architecture, University of Florida, 1993. 84.

[53] Steven Holl. *Anchoring: selected projects, 1975-1988*. New York, NY: Princeton Architectural Press, 1989. 9.

[54] Steven Holl. *Intertwining: selected projects 1989-1995*. New York, NY: Princeton Architectural Press, 1998. 16.

[55] Steven Holl. *Intertwining: selected projects 1989-1995*. New York, NY: Princeton Architectural Press, 1998. 15.

[56] Robert McCarter. "The moving line Steven Holl and Paul Klee," in *Constructions: University of Florida. Department of Architecture*, University of Florida, 1993. 86.

[57] From Paul Klee; Jurg Spiller. Paul Klee: the thinking eye; the notebooks of Paul Klee. New York: G. Wittenborn, 1961. but quoted from Robert McCarter. "The moving line Steven Holl and Paul Klee," in *Constructions: University of Florida.* Department of Architecture, University of Florida, 1993. 86.

[58] Kenneth Frampton. "Rappel a L'orde, The Case for the Tectonic." in *Labour, Work and Architecture: Collected Essays on Architecture and Design.* New York, NY: Phaidon Press Limited, 2002. 91.

[59] Tom Hanrahan. "Core Architecture Studios: Studio 1," *Columbia University Graduate School of Architecture, Planning, and Preservation. Abstract 90-91.* New York, NY: Graduate School of Architecture, Planning, and Preservation of Columbia University, 1991. 8.

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[68] Problem #2: Gate/Garden/Basin. *Columbia University Graduate School of Architecture, Planning, and Preservation. Handout*, Fall 1989.

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[73] Robert McCarter. "The moving line Steven Holl and Paul Klee," in *Constructions: University of Florida.* Department of Architecture, University of Florida, 1993. 86.

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[78] John Stuart. Interview by author. Skype interview. St. Louis, MO/Miami, FL. March 5, 2013.

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[84] Problem #3: Courtyard/Hearth. *Columbia University Graduate School of Architecture, Planning, and Preservation. Handout*, Fall 1989.

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[93] Problem #4: Tower/House/Observatory. *Columbia University Graduate School of Architecture, Planning, and Preservation. Handout*, Fall 1989.

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[107] Kenneth Frampton. Interview by author. Personal interview. New York City, NY, March 1, 2013.
[108] Tom Hanrahan. *Columbia University Graduate School of Architecture, Planning, and Preservation. Abstract 89-90*. New York, NY: Graduate School of Architecture, Planning, and Preservation of Columbia University, 1991. 6.
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[112] Robert McCarter. *Columbia University Graduate School of Architecture, Planning, and Preservation. Abstract 87-88*. New York, NY: Graduate School of Architecture, Planning, and Preservation of Columbia University, 1988. 13.
[113] Tom Hanrahan. Interview by author. Personal interview. New York City, NY, February 28, 2013.
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[117] Mark Cage. *Aesthetic Theory: essential texts for architecture and design*. New York: W.W. Norton & Co., 2011. 22.

Figures

Figure 1

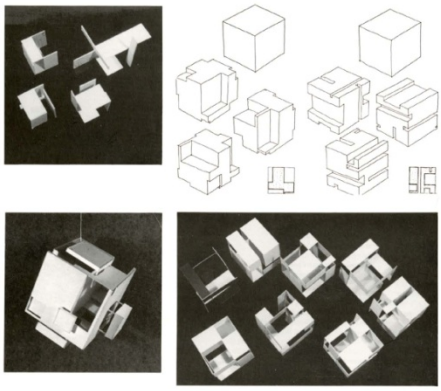


Figure 2

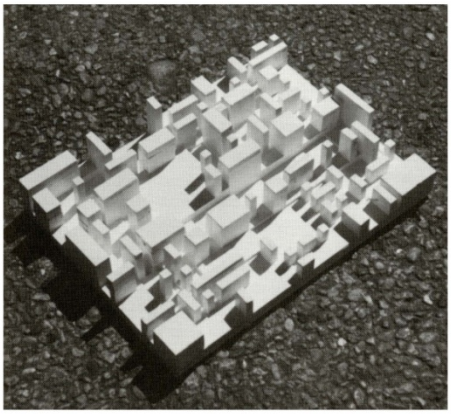


Figure 3

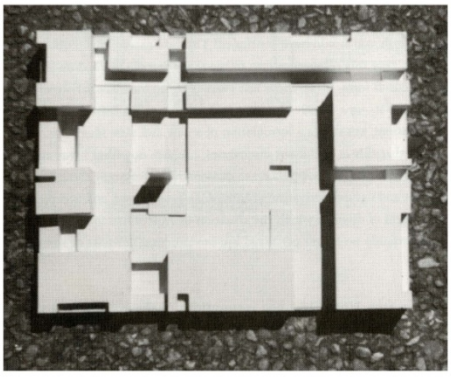
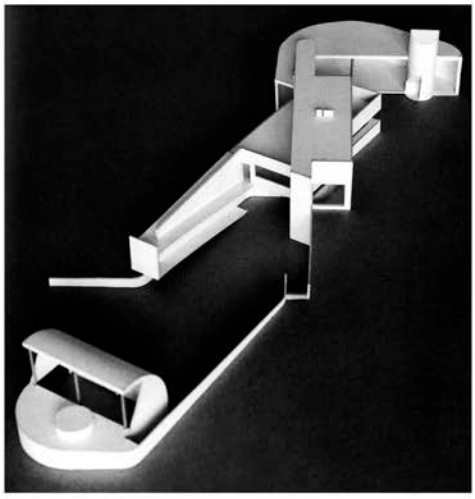


Figure 3



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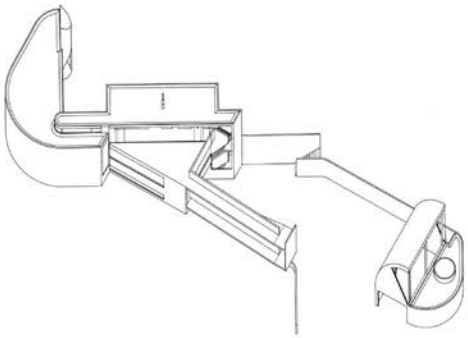

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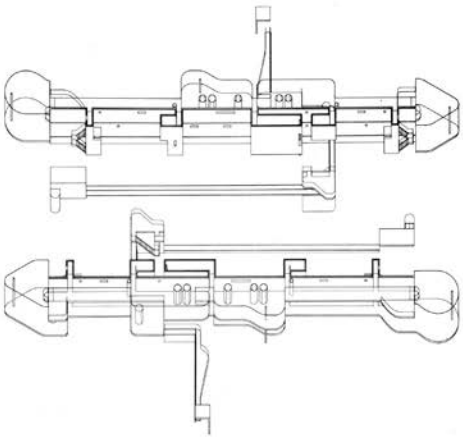

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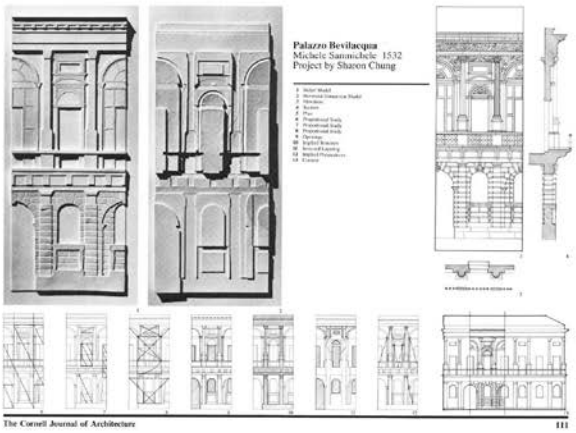

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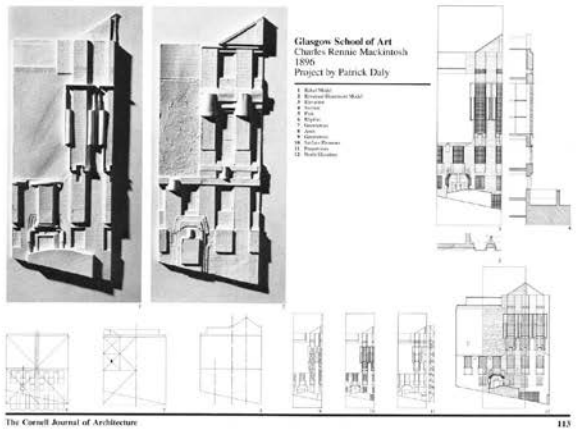

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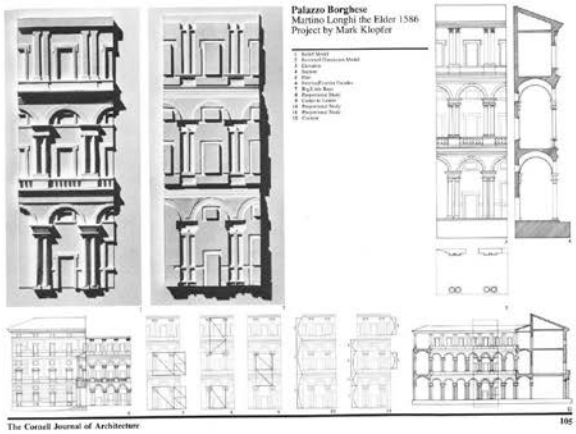

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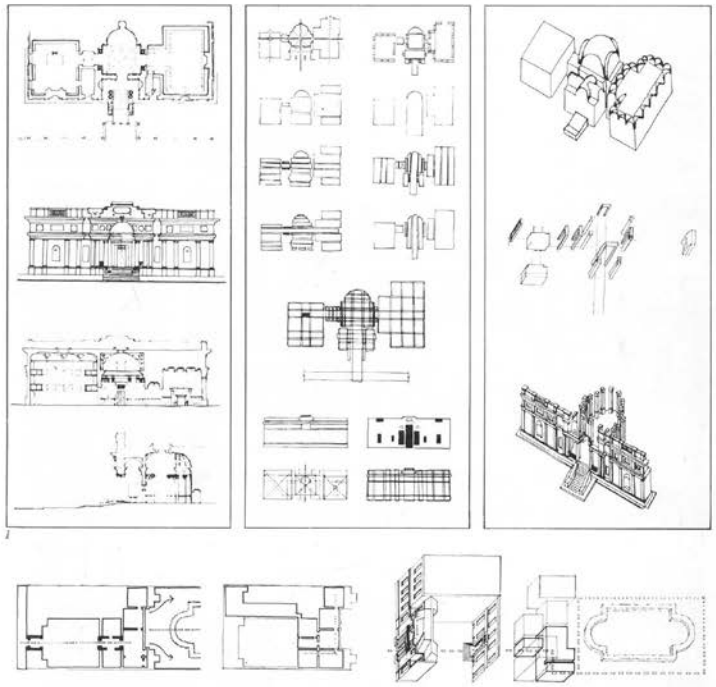

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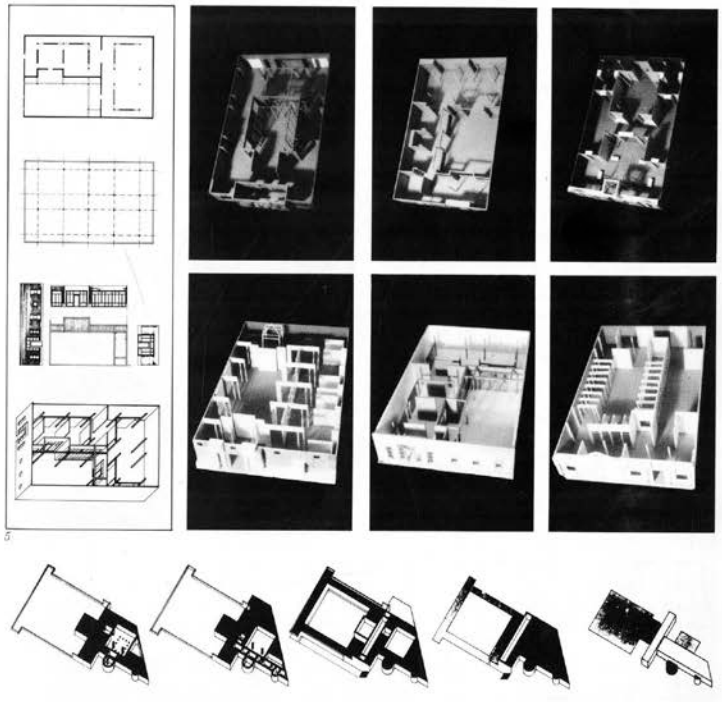

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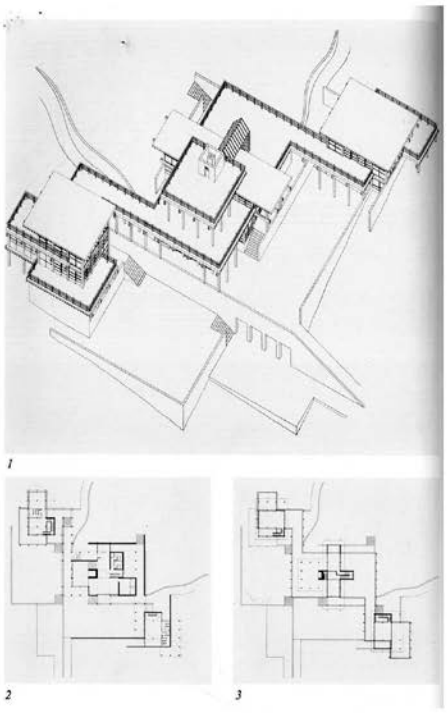

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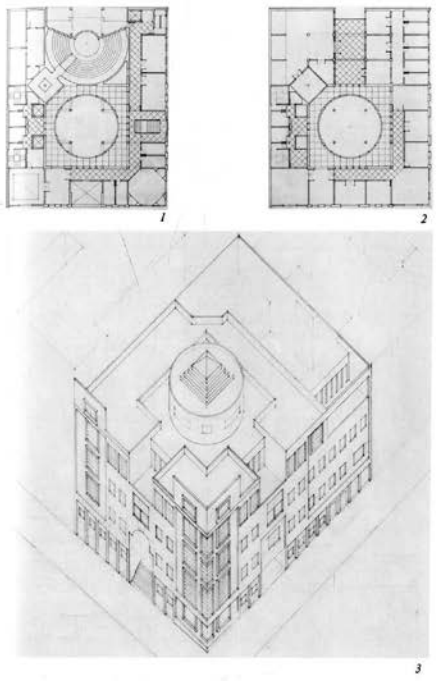

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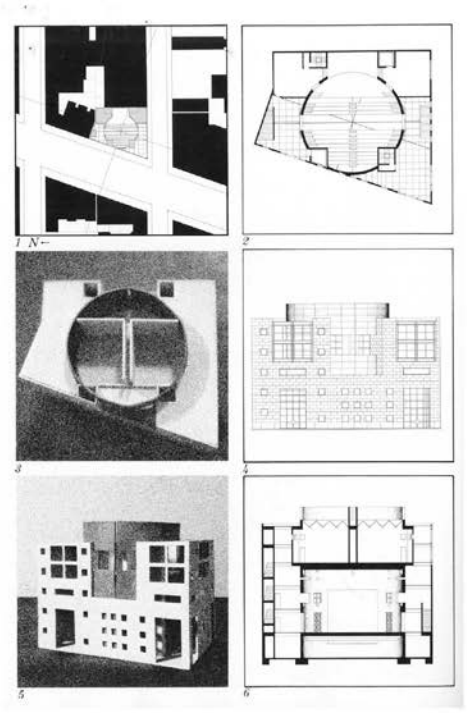

Figure 14

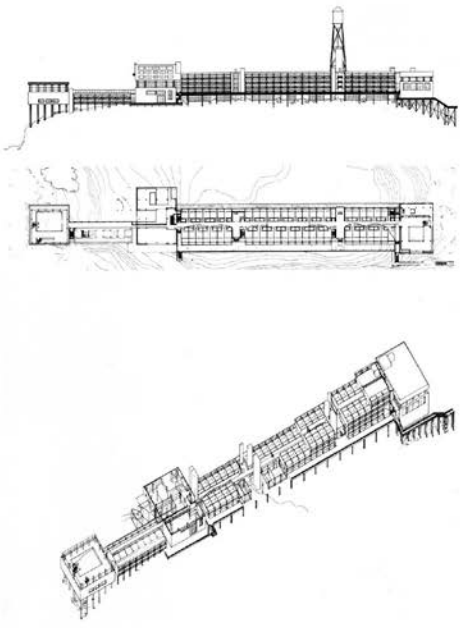

Figure 15

COLUMBIA UNIVERSITY
GRADUATE SCHOOL OF ARCHITECTURE, PLANNING AND PRESERVATION

CORE CURRICULUM: A4001x Comprehensive Studio I : Fall 1989

CRITICS: Ken Kaplan, Coordinator
Tom Hanrahan, Paola Iacucci, Alvaro Malo,
Robert Marino, James Tice.

T.A.: Kent Hikida

PROBLEM #0: Dwelling for a Poet/Riveter
(rivets in the daylight, writes in the dark)

Issued: Friday, September 8.

Due: Monday, September 11.

Program: Three Rooms: 1. Eating.
2. Working/Living.
3. Sleeping/Washing.

Site: Brooklyn waterfront, at the foot of a bridge.
Not required to visit site, use imagination
or memory.

Format: 30"x22" watercolor paper or vellum.
Plans, section, perspective, axonometric.

Figure 16

COLUMBIA UNIVERSITY
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Robert Marino, James Tice.

T.A.: Kent Hikida

PROBLEM A: OBSERVATION/DOCUMENTATION/ANALYSIS

ISSUED: Monday, September 11

DUE: Monday, September 18

OBJECTIVE: "...One sees with one's eyes, and one draws in order to take inside, into one's own history the things one sees...Once things have interiorized through the work of the pencil, they remain within for the rest of one's life; they are written there, inscribed. To draw oneself, to follow outlines, to fill up spaces, to explore volumes...is first of all to see..."

-Le Corbusier

PART I: OBSERVATION/DOCUMENTATION

Observe and document one of the New York City buildings assigned. Observation should take the form of **freehand** sketches including perspectives, plans (floor and ceiling), sections, and elevations (interior and exterior). Sketches need not be to exact scale, but should be easily understood relative to each other and to the size of the human figure.

Documentation should take the form of **hardline drawings**, including a site plan, first floor plan, a building section and at least one significant elevation, drawn to a consistent scale (to be determined by your critic). Plans and sections should clearly indicate the "cuts" through the buildings as well as the locations where a section is taken. Architectural details should be represented such as structure, walls, stairs, elevators, doorways, windows and significant materials. On elevations shadows should be cast. On plans, all major spaces should be labeled and scale of drawing should be indicated.

PART II: ANALYSIS:

OBJECTIVE: Analyse, ie. dissect the architecture into its elements, look closely at the relation of the whole to its parts, investigate, explore parallel abstractions.

Analyse the assigned buildings for the following:

-Spatial components (zones, axis, rhythms, divisions, directions, hierarchies, proportions, etc.)

- Activities and circulation (public vs. private).

-Light, texture, color.

-Time (rush hour, day vs. night).

-Verticality vs. horizontality, internal vs. external spaces, metaphor or abstract references.

-Experimental analysis.

FORMAT:

Each student will be responsible for six (minimum) 11"x17" sheets to be arranged consciously with thought to both compositional and conceptual ideas about the building.

Draw boldly with ink or pencil.

Figure 17

COLUMBIA UNIVERSITY
GRADUATE SCHOOL OF ARCHITECTURE, PLANNING AND PRESERVATION

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Robert Marino, James Tice.

T.A.: Kent Hikida

DESIGN #1 GATE/GARDEN/BASIN: LINEAR CONSTRUCTION AND COMPOSITION

ISSUED: Monday, September 18
DUE: Wednesday, October 4

"What am I doing here?" -Rimbaud writing home from Ethiopia

"I walk the line." -Johnny Cash

SITE: 64'x64' flat, arid and windy.

MATERIALS: Wood or steel, earth and water.

OBJECTIVE:
1) Inscribe the site with furrows 4'-0" O.C. parallel to the edge.
2) Conceive a path with spatial events across the site from a point of entry to a source of water by means of linear elements only. **Maximum** height restriction over the entire site is **15 feet.**

ISSUES:
1) Develop correspondence between furrow pattern and the placement of linear members.
2) Develop a perceptible spatial configuration.
3) Pay attention to structural integrity.

DRAWINGS: ½"=1'-0", ink and pencil, 20"x30" format.
1) Concept
2) Plan
3) Elevations
4) Perspectives (2) properly constructed interior views of the sequence.

MODEL: ½"=1'-0" in basswood on plywood base. Furrows indicated by panels applied to the base.

CONTENT: Self-induced inspiration (other-induced inspirations usually conventional but acceptible).
Draw from primary architectural stimuli such as movement, frames, spans, light, proportion, extruded steel shapes, screens or from the psycho-astro-socio-bio-aerobic conditions of our time.
Or both. **You** choose.

Figure 18

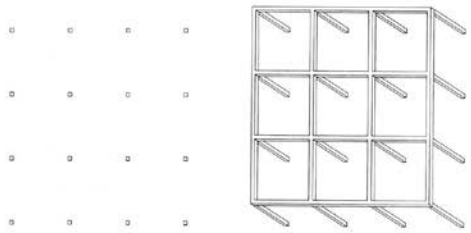


Figure 19

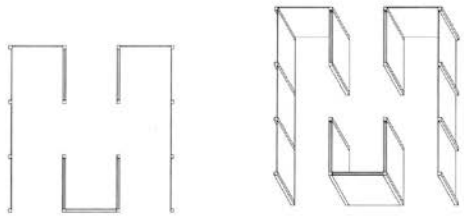
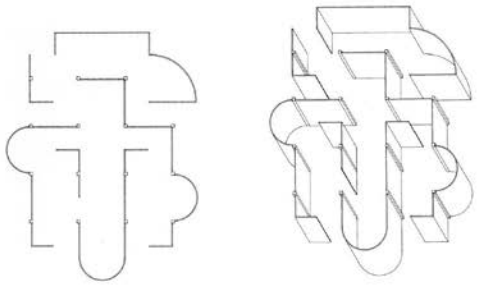


Figure 20



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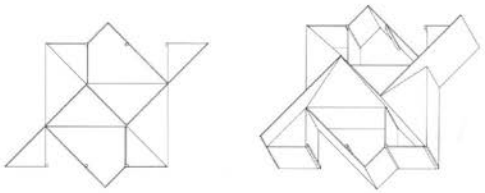

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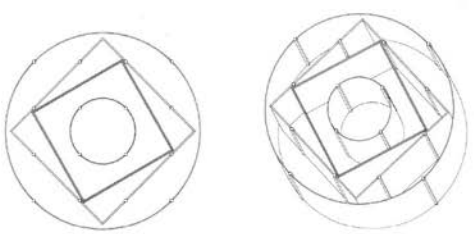

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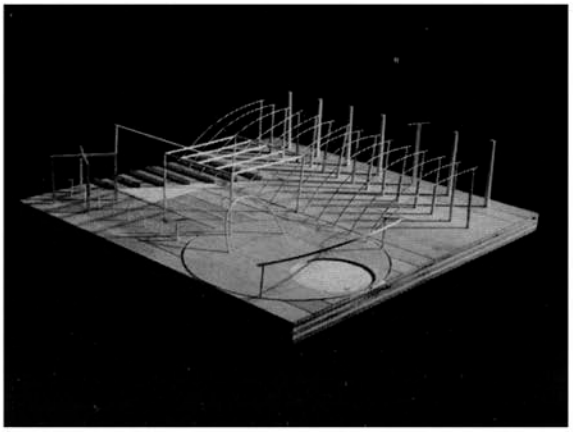

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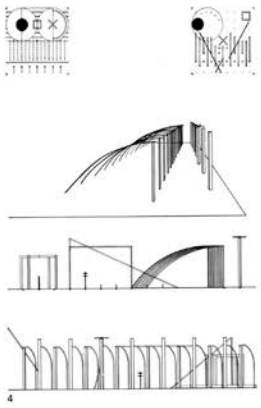

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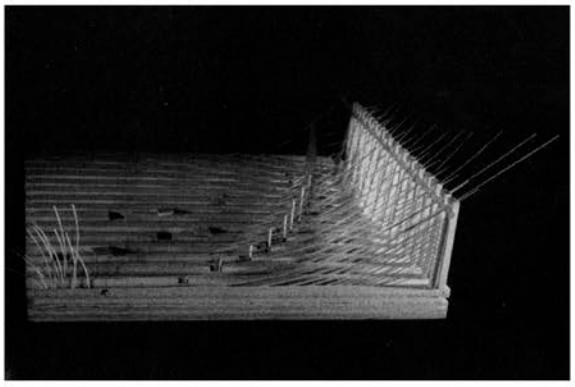

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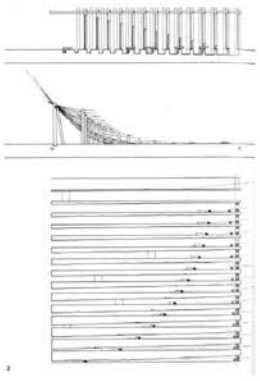

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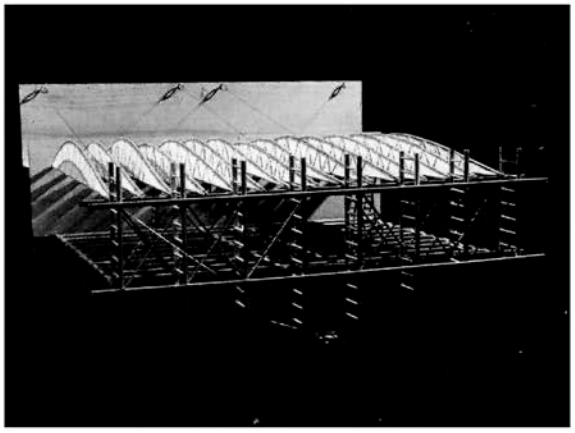

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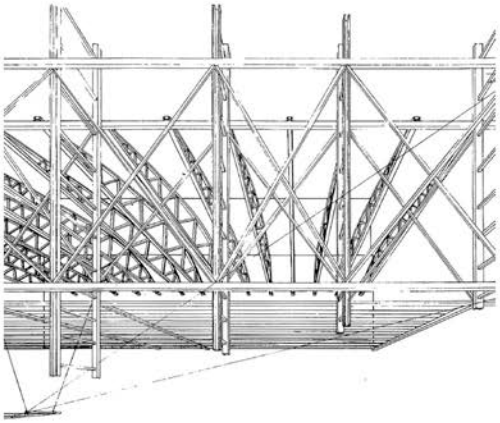

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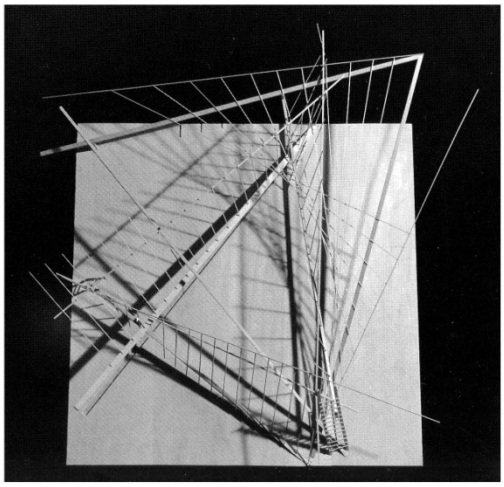

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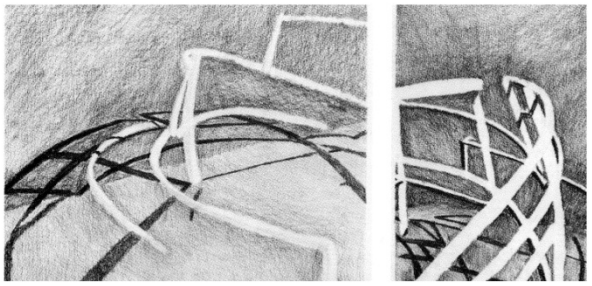

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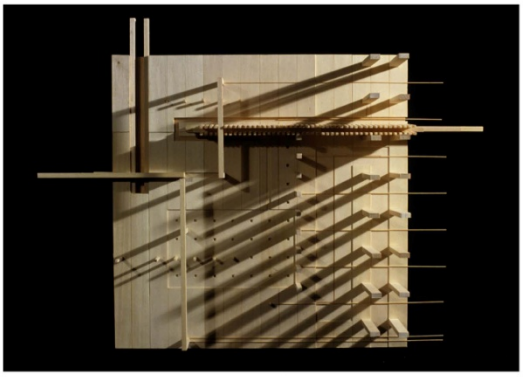

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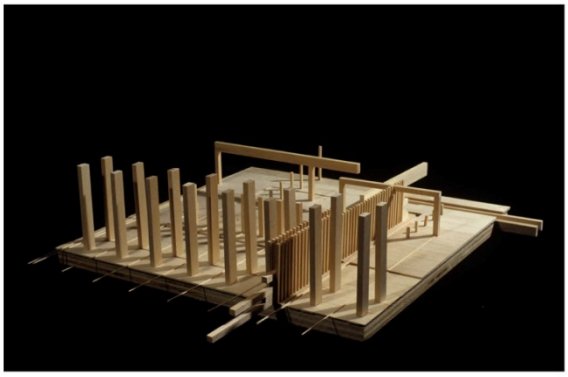

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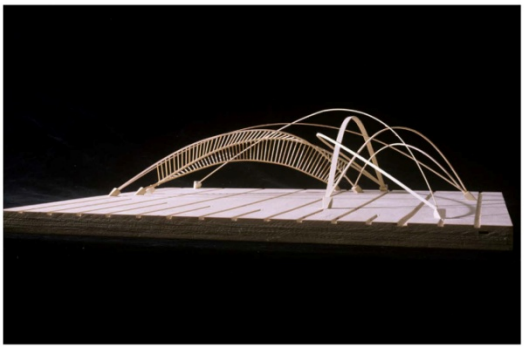


Figure 34

Figure 35

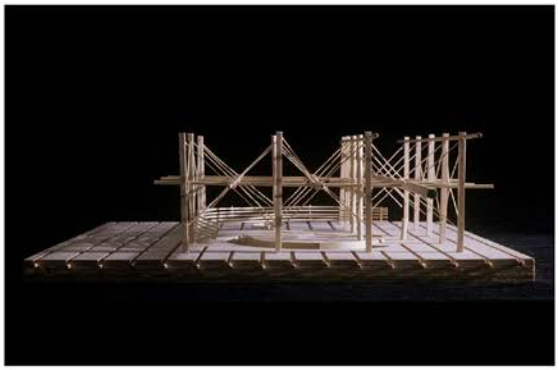
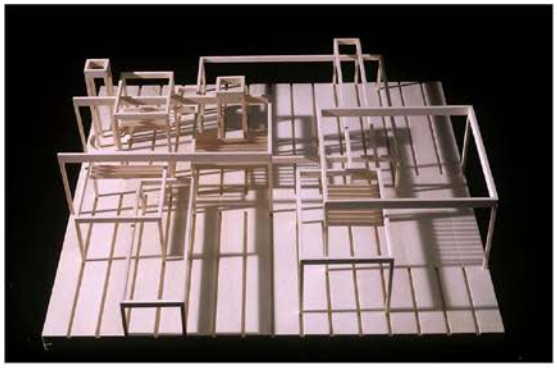


Figure 36

Figure 37



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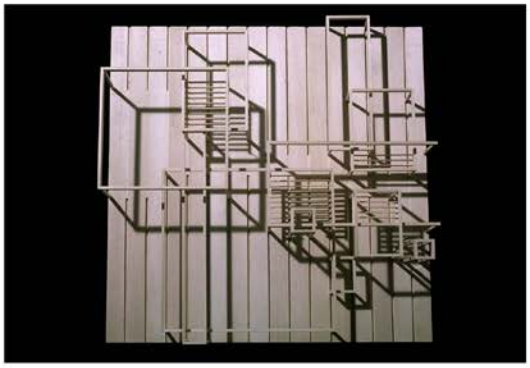

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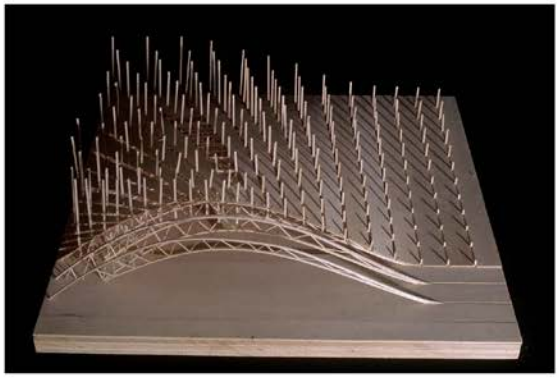

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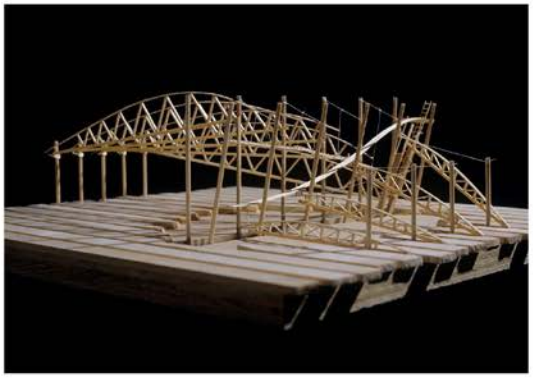

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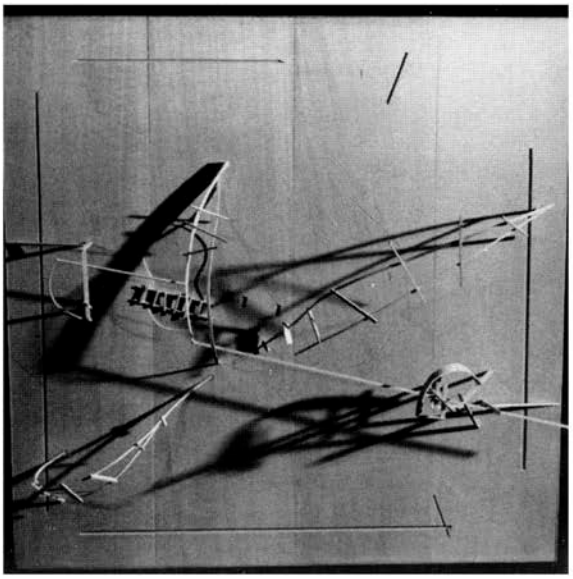

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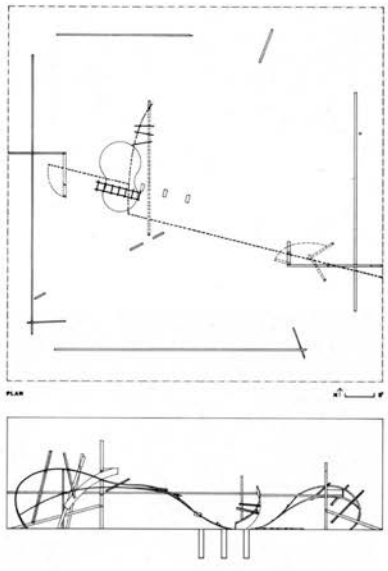

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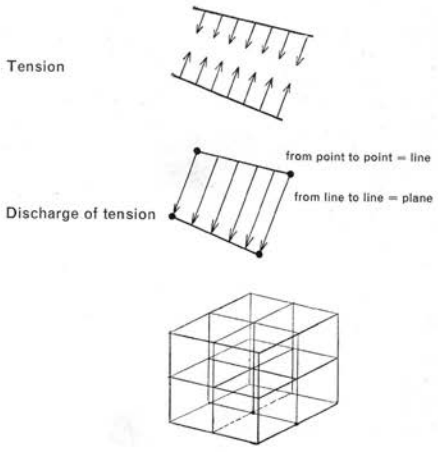


Figure 44

COLUMBIA UNIVERSITY
GRADUATE SCHOOL OF ARCHITECTURE, PLANNING AND PRESERVATION

CORE CURRICULUM: A4001x Comprehensive Studio I Fall 1989

CRITICS: Ken Kaplan, Coordinator
Tom Hanrahan, Paola Iacucci, Alvaro Malo,
Robert Marino, James Tice.

T.A.: Kent Hikida

DESIGN #2 COURTYARD WITH HEAT SOURCE: PLANAR CONSTRUCTION AND COMPOSITION

ISSUED: Wednesday, October 4, 1989
DUE: Friday, October 27, 1989

I tell it stories now and then
and feed it images like honey
I will not speculate today
with poems that think their money.
-Anne Sexton

When, after groping your way lengthily up the gloomy spiral staircase, which rises vertically up through the thick wall of the bell-towers, you abruptly emerged at last on to one of the two lofty platforms, flooded with air and daylight...

-Victor Hugo

SITE: 64'x64' flat, arid and windy, with a 9 foot vertical shift running North-South at mid-point. The construction limit is 18 feet above the upper surface of the plywood plane.

MATERIALS: Masonry units or poured concrete. (This implies the potential of both vertical and horizontal planes).

OBJECTIVE: 1) Define an hierarchy of spaces with a path from an entrance on the low eastern side of the site to a heat source in the western area.

DRAWINGS: 1/4"=1'-0", in and pencil 20"x30" format.
1) Concept
2) Plan
3) Elevations (2) clearly showing materials
4) Interior perspectives (3) with properly constructed shadows cast.

MODEL: 1/4"=1'-0" in basswood on plywood base. Construct 9 foot site shift in whatever manner that is suggested by prior design.

NOTE: Path begins on East edge and ends on West edge of site.

Figure 45

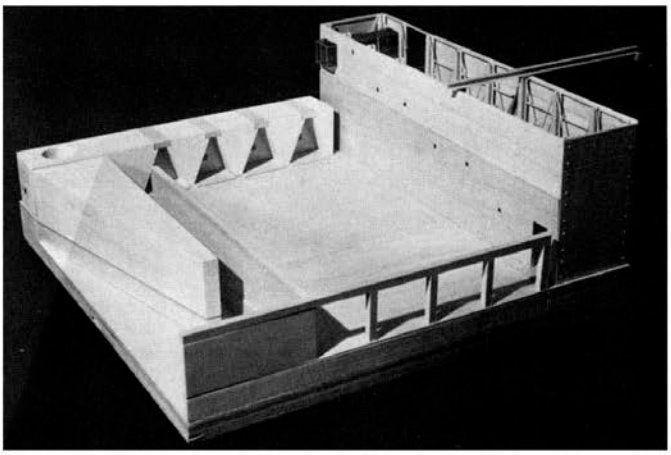


Figure 46

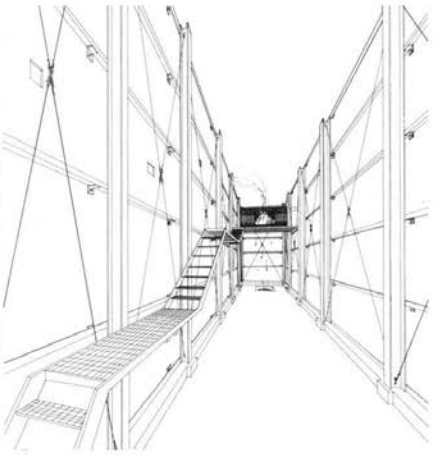
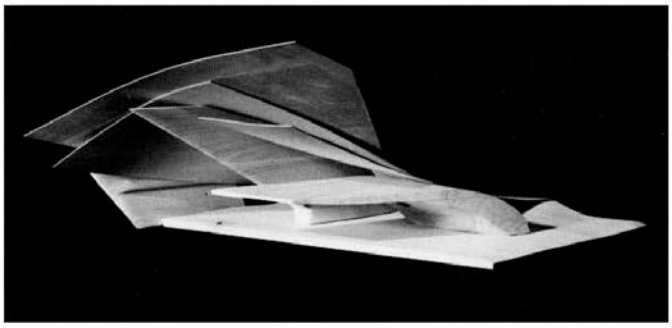


Figure 47



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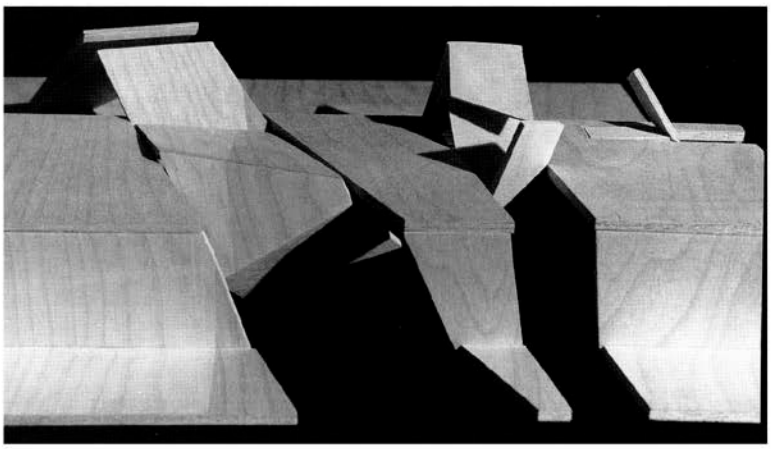

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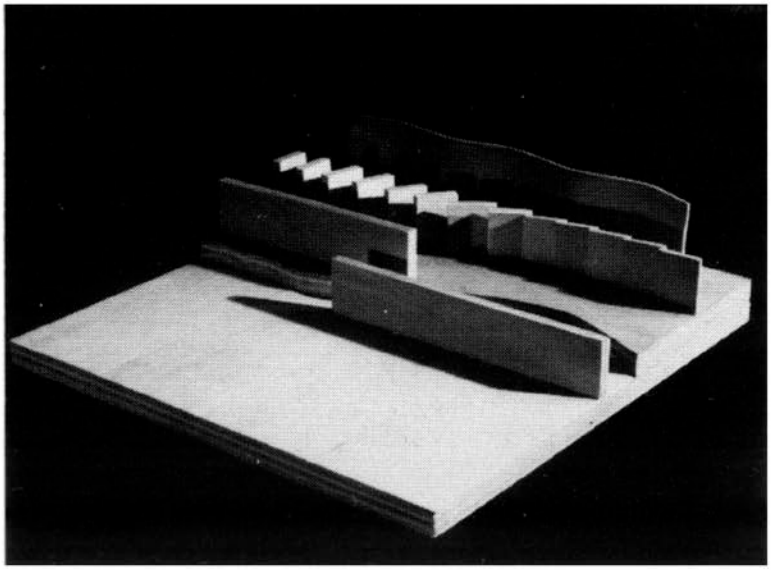


Figure 50

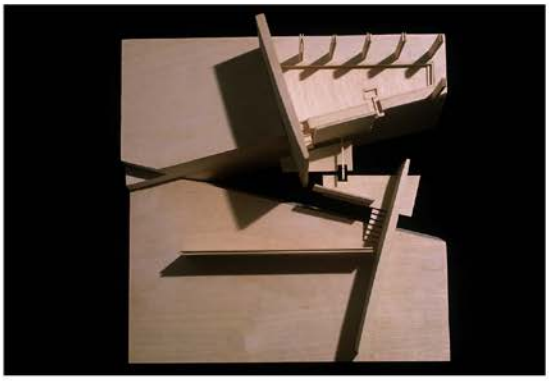


Figure 51

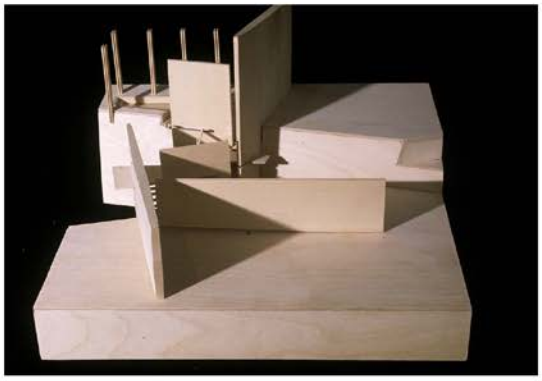


Figure 52

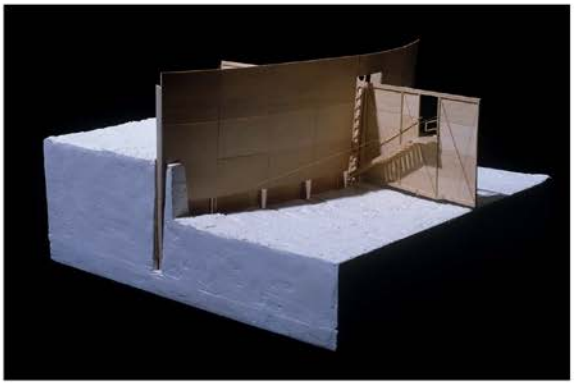
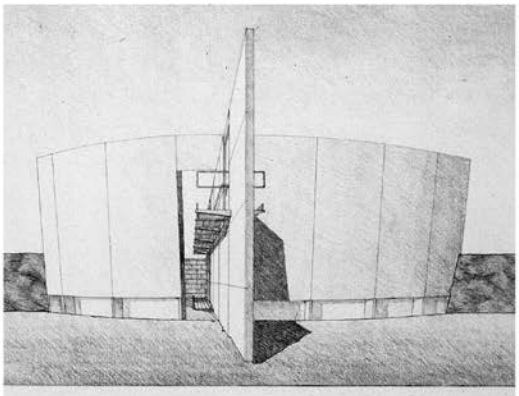


Figure 53



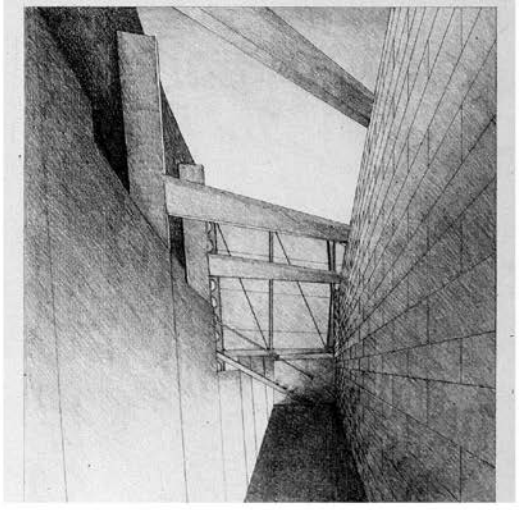


Figure 54

Figure 55

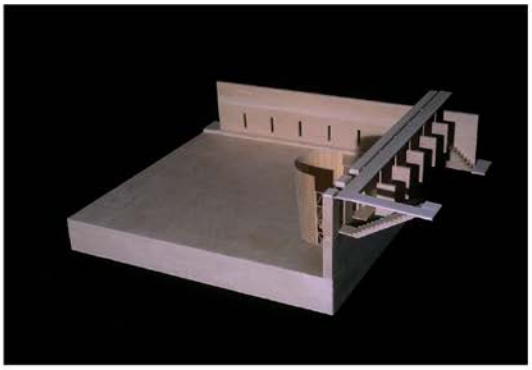
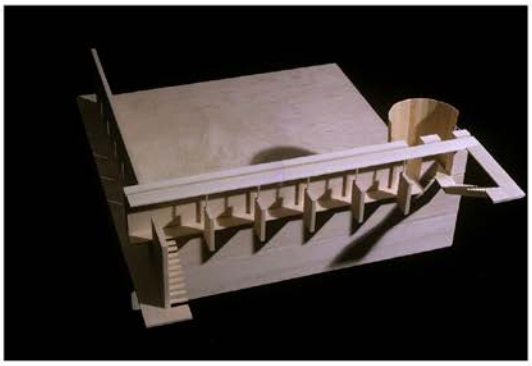


Figure 56



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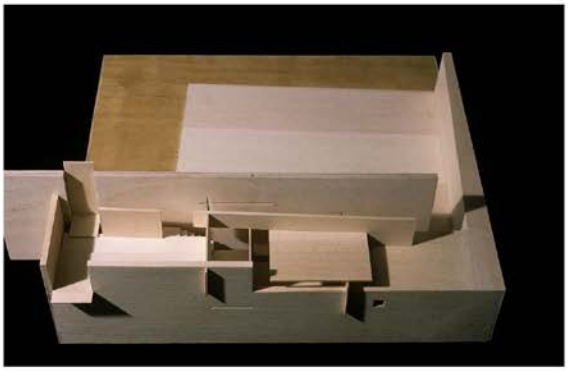

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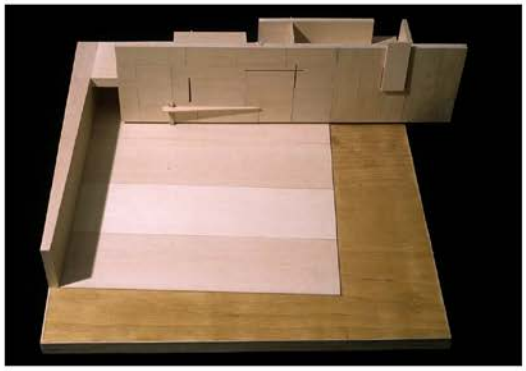


Figure 59

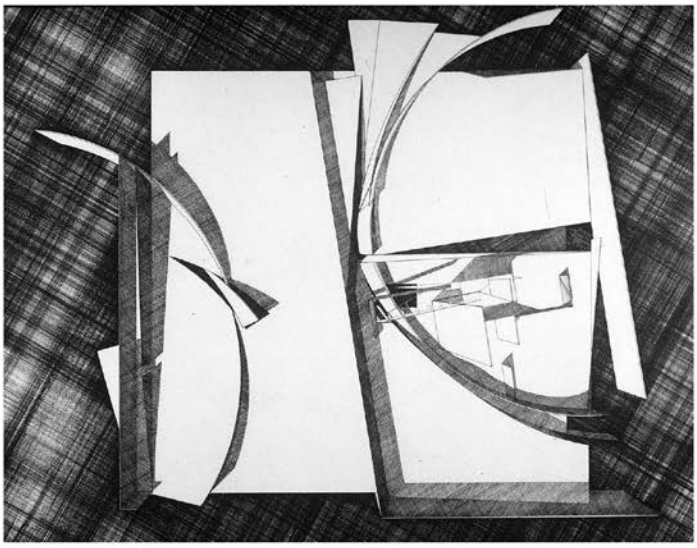


Figure 60

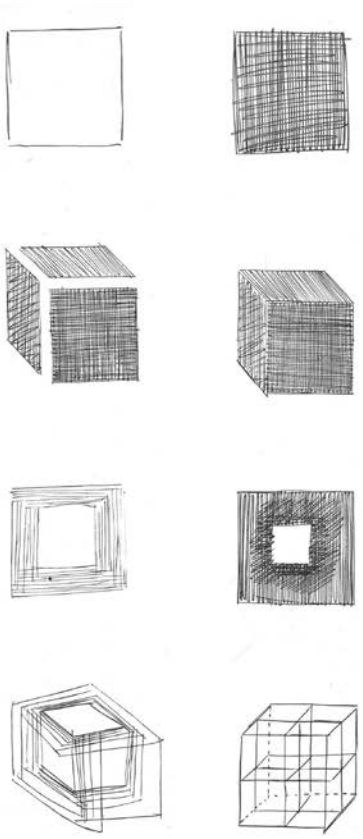


Figure 61

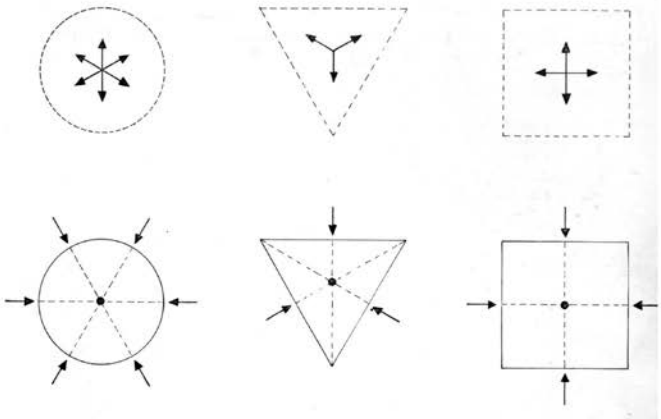


Figure 62

COLUMBIA UNIVERSITY **FALL, 1989**
GRADUATE SCHOOL OF ARCHITECTURE, PLANNING, AND PRESERVATION

CORE CURRICULUM
A4001x Comprehensive Studio I

CRITICS: KEN KAPLAN, COORDINATOR
TOM HANRAHAN, PAOLA IACUCCI, ALVARO MALO, ROBERT MARINO, JAMES TICE
T.A.: KENT HAKIDA

ISSUED: Friday, November 3, 1989

DUE: Monday, December 11, 1989

DESIGN #4: Tower-House/Observatory

SITE:
64' X 64' flat, arid and windy, with a 20 degree east facing slope.

MATERIALS:
Masonry, concrete, wood frame or metal frame

OBJECTIVE:
1) Design two towers 32' high

2) One tower is to serve as a rudimentary dwelling with cooking area, sleeping, living and rooftop exercise area. This tower is to be heavy, i.e. masonry construction. The house tower could have four levels(stair will be a primary factor in room configuration).

3) The second tower, of lightweight consruction, could be an observatory of specific phenomenon. It could be a star observatory, a wind or solar device or an invention of your own hypothesis. Both house and observatory are potentially occupiable.

DRAWINGS:
1/4" = 1'-0" Pencil or ink on 20" x 30" vellum

-Plans
-Elevations
-Sections
-Perspectives
-Interior Perspectives (2) with shadows cast.
-Details (2 or more) @ 1" = 1"-0"

MODEL:
1/4" = 1'-0" in basswood on plywood base or built-up cardboard covered in white plaster. Houses and observatories to be basswood.

Figure 63

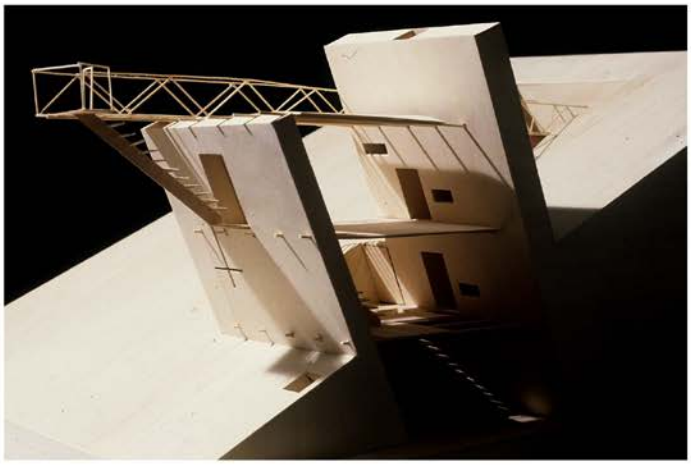


Figure 64

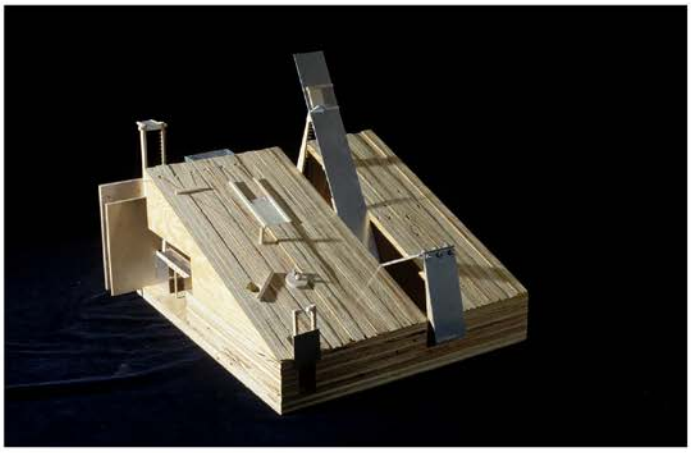


Figure 65

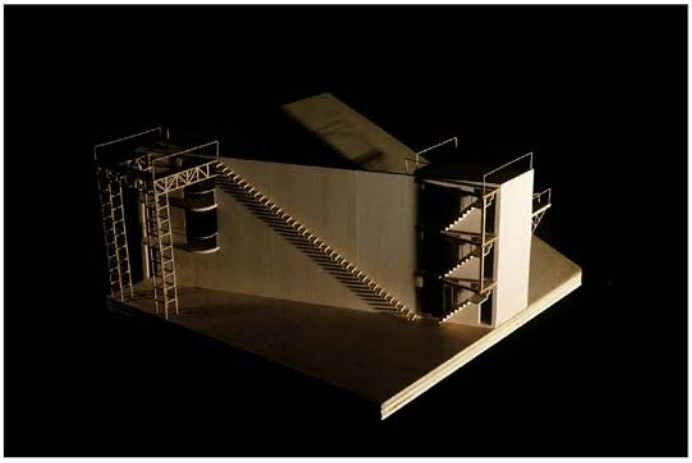


Figure 66

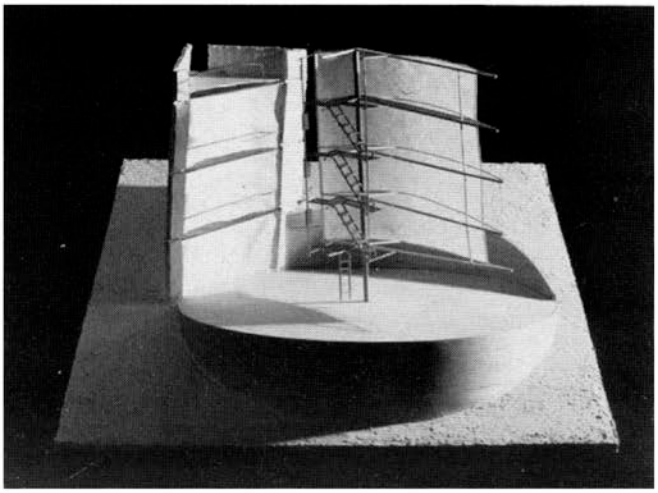


Figure 67

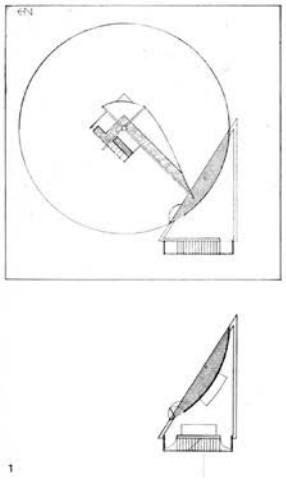


Figure 68

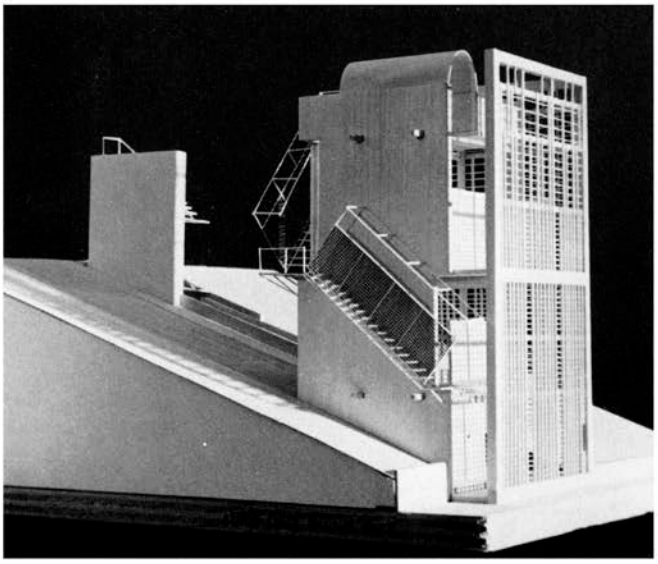


Figure 69

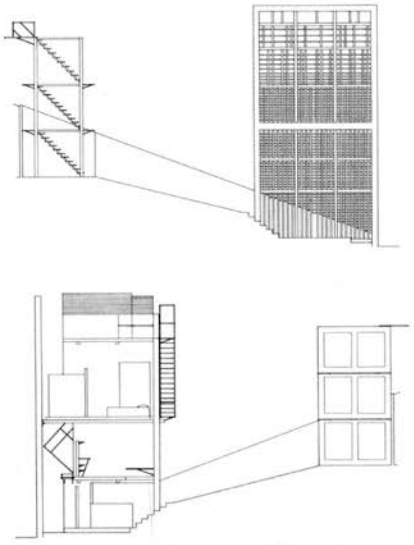


Figure 70

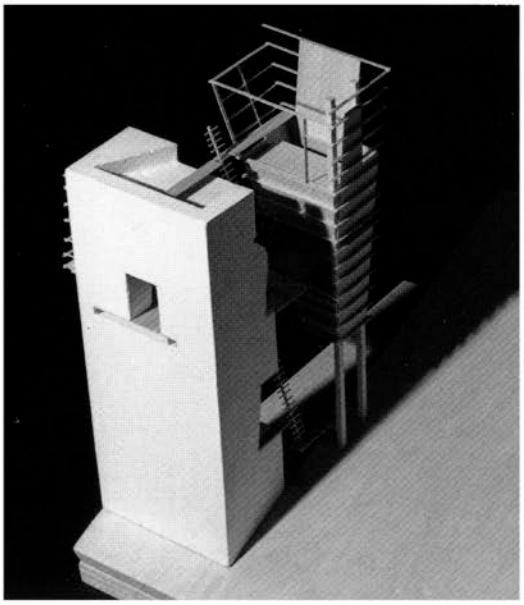


Figure 71

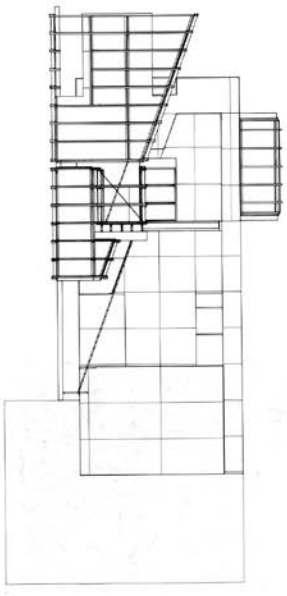
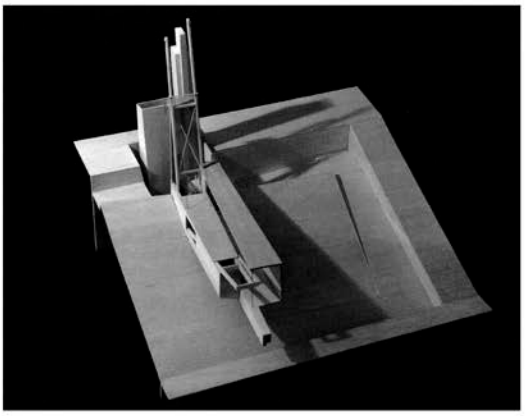


Figure 72



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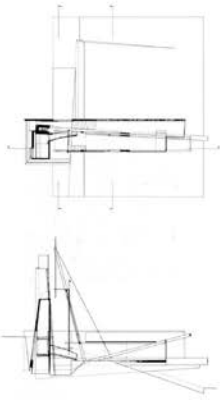

Figure 74

Figure 75

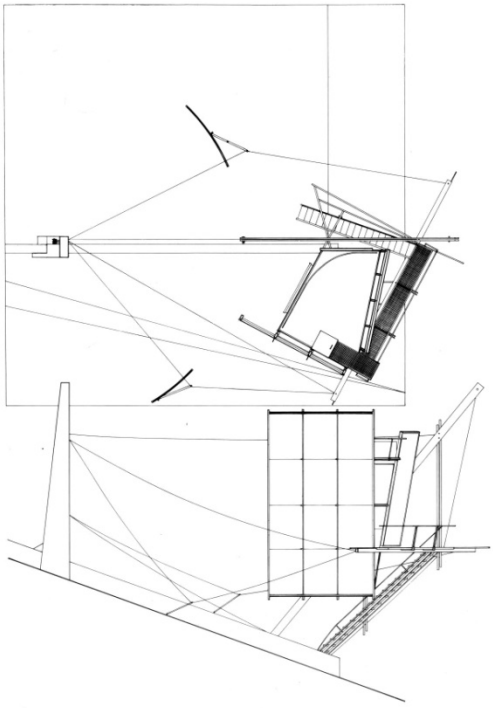

Figure 76

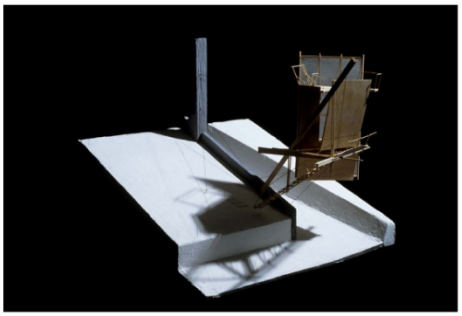

Figure 77

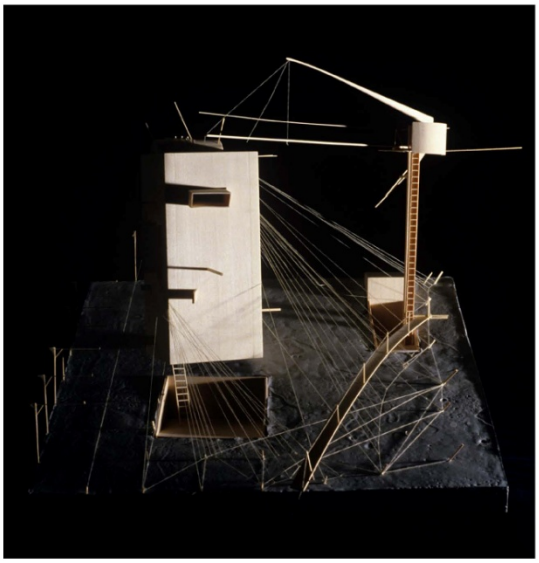

Figure 78

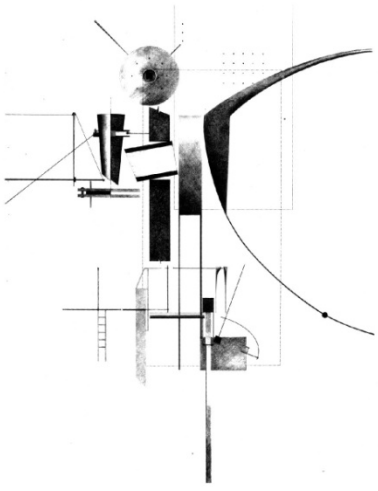

Figure 79

Figure 80

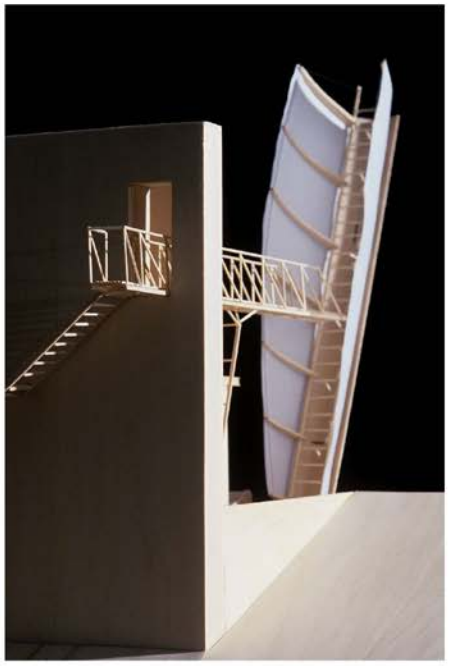

Figure 81

Figure 82

Figure 83

Figure 84

Figure 85

Figure 86

Figure 87

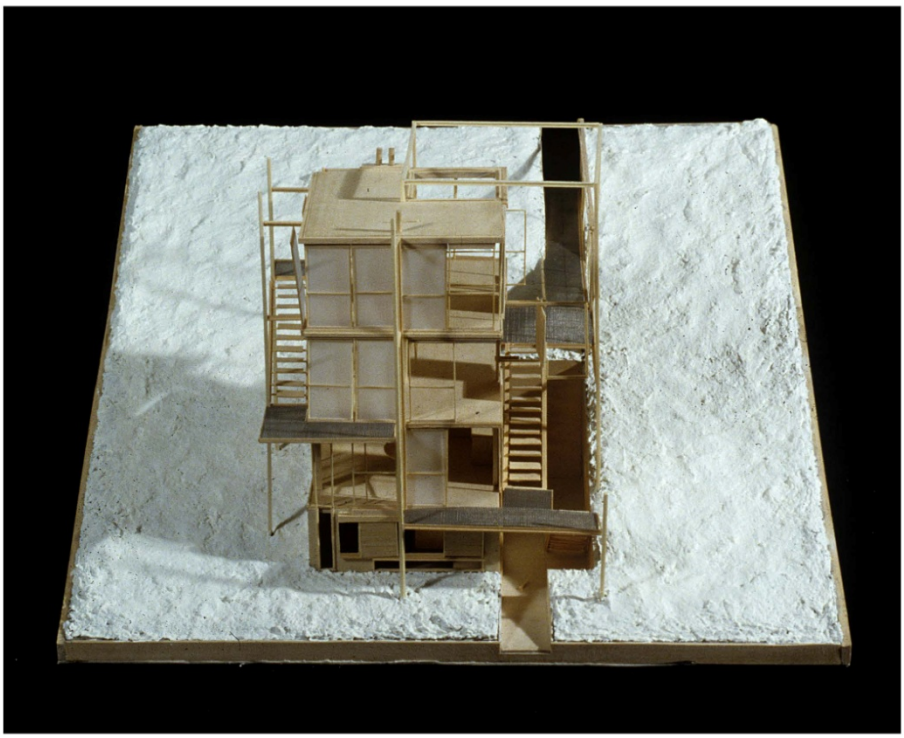

Figure 88

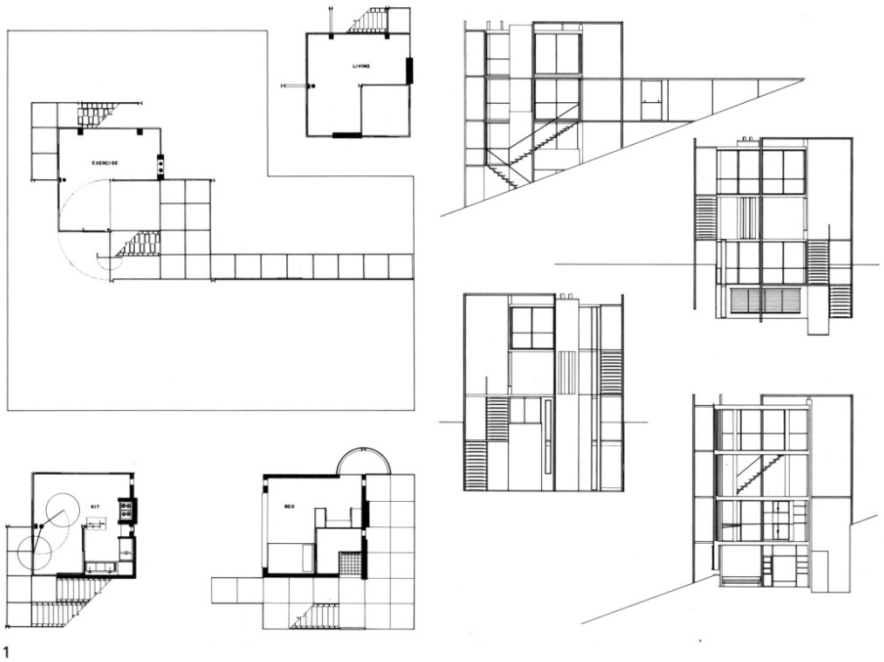

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Figure 89

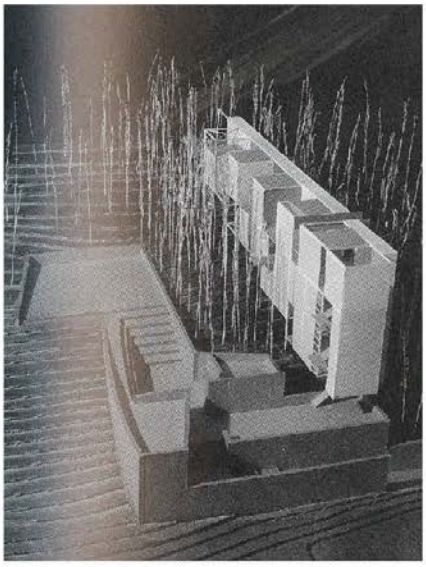


Figure 90

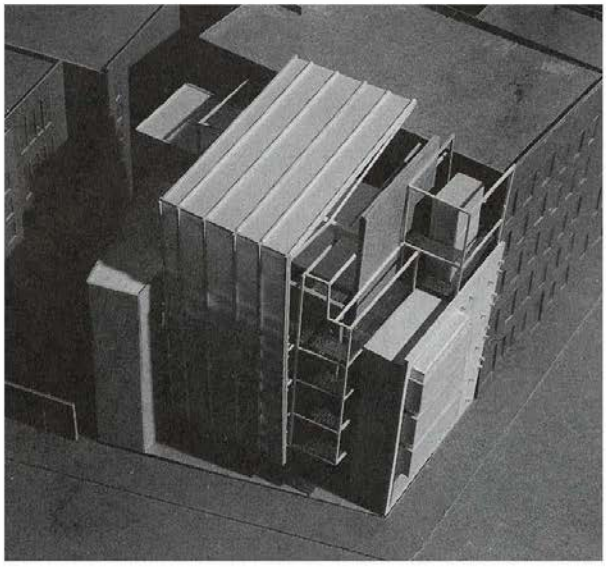


Figure 91

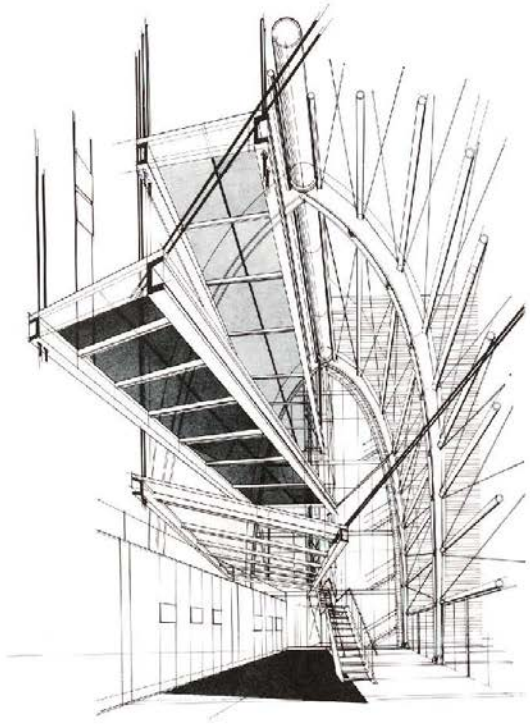
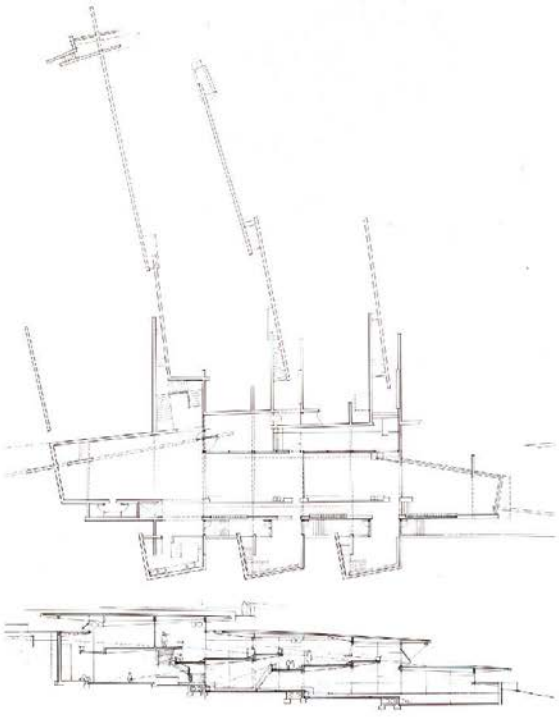


Figure 92



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Appendix: Interviews

All "Personal" and "Skype" interviews were recorded and professionally transcribed by Rev Transcription, http://www.rev.com/transcription. All interviews have been partially edited.

Robert McCarter

Personal Interview

St. Louis, MO

January 30, 2013

Johnson: Can you briefly discuss how and when you became involved at Columbia?

McCarter: When you take time with it but I was a student came to Columbia in 1981, fall. Think that was the first year that Steven Hall taught there. First year that Mary McLeod taught there. He was there in the first year studio so that's where but I actually met him before that because he's a friend of Bill Stout and I went by his office during the summer before school started because I had just gotten back from traveling in Europe for a year to show him some slides of work and we had quite an interesting conversation about Paula Bertagase and other things. And um, he was in this Cold Water Law at that point. And, uh, and then I was at Columbia actually for four years because i had to take a year off because I went to Skidmore so I didn't technically graduate until '85 to teach North Carolina State. Ken Frampton asked me to come back to be his assistant fall of '86 and that's when we started the first year program because that's when Steve was put in charge of the first year. Curriculum with myself and others as the team and uh, he's taught the program until I left in '91, though I wasn't always teaching in there but that program was used until '91 and after I left in '91, they rejiggered things. Steve, I think, was no longer involved in first year, he got moved to somewhere else, and, um, and so that program got began to start changing as you can tell if you look at the approaches.

Johnson: So, speaking of that change, how would you describe the student work at Columbia prior to 1986 when this began?

McCarter: Uh, very inspired by, um, Cornell. Um, models coming out of Cornell. A lot of the teachers were from Cornell, like Herdeg, like Jim Tice, others who were trained there. Um, I mean one of the reasons I … You know, you should definitively read the spatial speculations, the whole thing because in fact, I intentionally lead out to the discussion of Steve Holl and play with this, the discussion of Rowe because from, well, many good things came I think from Rowe and Slutzky's studies, their second study was quite, um, revealing. They finished with a statement. This is Rowe and Slutzky in transparency number two. "But for the present, we're concerned neither with function nor structure as it's generally understood nor with social context. The technology, economics, nor content but simply with the manifestations that reveal themselves to the eye"

And, uh, I start the Steven Holl by saying, "Is this disengagement of design method from the phenomena of inhabitation which results from privilege of the

individual over the tactile and haptic that architects such as Steven Hall have rejected and I think not only in his work but also in his teaching."

So, formally, maybe people can't see such a great difference. It starts, both programs started because I was a student in the previous program starts with a horizontal project as a kind of a garden that you had to organize in that case, uh, it was a kind of a riff on the nine square problem. You had sometimes nine poles and you had nine pieces of board that you could organize. When I was a student, it started getting more sort of flourishy because it was a lot of postmodern stuff flipping through the studio and at that time Colin Rowe was seen as an exponent of classicism. He had done a little reversion. He sort of backed away from Corbusier a little bit and was, you know, speaking a lot more about renaissance palaces and about facades and other things that wouldn't really have cut the mustard in earlier years.

So, and if you look at the, um, Cornell journals that come out right in that period, right in the early 80's when I was a student at Columbia, you can see this kind of shift away. Even his pupils like Shumacher started moving away a little bit from Tauranian and started looking more at renaissance palaces and other things and I think was really Colin's influence. That's the same period that he was approached to write a new article on Frank Lloyd Wright because he hadn't written about Frank Lloyd Wright since the Chicago frame article which is still, I published it again, it's still one of the best. And he refused, he said, "I don't like Frank Lloyd Wright" which is not entirely true but Frank Lloyd Wright is not a system he wishes to teach in classicism was a system he could teach and Carbusiah was a system he could teach, so superficially they weren't so different.

The second semester was always a public building, I did some kind of a, I don't remember what it was, some kind of museum on the far upper Manhattan...so and the square footages were a bit more. There was a huge emphasis on elevations and on, um, you know, creating various kinds of figures in your elevation, when I was a student and that just completely went away and it became sort of well, you could say more classically modern in the sense that even in the buildings in the second semester that are the small institutional buildings, it's really about expression a program volumetrically if there is an elevation, it's really a kind of expression of the material and the volume of the building, not some figural thing and, uh, obviously, you know, the number of the projects were quite specifically, there was a project where you were encouraged to do a kind of pitched roof under the old program and of course, Steve tried his best to eliminate the pitched roof, um, as an option for the tower project.

Johnson: Was there a reason why?

McCarter: Again, it's purely … It's you have to realize this Bob Stern was very powerful as a figure in the school and as a figure outside the school. Inside the school, he was really unpopular. I do remember particularly one semester where it was the second year, it might have been the semester when I came back from my travels, I had to take my second year off and so I came back and I was in another class, I think.

Or maybe it was beginning of the third year. I can't remember. No, it was the second year before I left to do this Skidmore but he stood up on the stool because Bob's not a big guy and he announced that everyone in his studio was going to do a classical project. And you know, he's announcing it to a group of people, the vast majority of whom came to that school to work with Ken Frampton, and, you know, were totally uninterested.

But, uh, I think 12 people, even the people who were wanting to do classical didn't want to be told to do classical and so he ended up with 12 last place students. And some of them were my really good friends so I used to try to help them and I remember explaining to him one day, explaining to this woman. She went to use the Campidoglio and I was trying to show her how the idea of the giant order works, the giant order in the ... And I was sort of diagraming the Campidoglio and I realized there was this presence behind me. (laughs) I turned around and it was Stern. He's like, "You're pretty good at that, McCarter. You should do that." I said, "Aw, Bob, It's too easy" but also it's like, I'm going to say to him but...

Johnson: Sure.

McCarter: So, so, you know, Steven was also in the middle of working these things out in his work. I think the relationship which as we were just looking with the students at some of their earlier projects they were going to present. I think it's going to be a lot of parallel between the projects that he constructed at Columbia and what he was trying to work out in his own work, he's sort of subjecting himself to the same rules, like at he said he totally couldn't do this which he's perfectly happy.

I mean, he was totally had to do this which he was perfectly happy to subvert it by turning it to a barrel vault and then putting a little thing-a-ma-jiggies on the roof, you know, which came straight out of the first year projects on Columbia.

And so, you know, to an outsider, I'm not sure it was a huge change, that the students really immediately understood, the students who were in the program straight through understood it.

Students who had started under the previous one and finished or like me, you know, but I came back so fast there were people who were still students when I showed up as a teacher which was a strange thing, you know, who had been my fellow students or had been a couple years behind me, right, because I was only away for a year … um, teaching at another school before Ken pulled me back and um, and I was still practicing, living in New York so um, uh. And I don't remember as much. I remember my own second and third project. I just don't remember the given project but I do know I started in a way and I think that's part of what Steve was up to was the first project at least on the surface looks strikingly like it.

But the idea of the furrows and the idea of the sort of anthropological notion of the fire and the second one, you know, the sort of stopping and the idea that there were tied at different times of the day, you'd move, you know, you would arrive to the fire in the evening and then the, then the sort of obviously the sort of towers as a sort of ultimate destination where you'd spend more time but this sort of, um, idea that they're tied to specific, uh, activities, farming maybe, getting water in the first project because it was always a water source.

Johnson: Well, what lead to these changes do you think?

McCarter: Well, it was, it was ... I mean, the driving force was Frampton's desire to, to, to a little bit get away from this. Frampton never imparted that Cornell culture and has always been interested in a more straight forward monitors and based more on how things are made and those projects are in a way that you'd never recognize it if you went to Columbia now built they are, they were absolutely driven by the way they're made.

You were given a very specific set of things that you could make. The students became increasingly inventive about how they used them and of course later on, we, we loosened up a little bit to let them bring other things but the thread and how one guy's project got things like that.

But, you know, the first one was, was linear pieces of wood and furrows in the ground and presumably some way of organizing the water but that was it. And um, the second one had the concrete block. What can you do but it's just stairs and slight changes of level and kind of made out of repetitive mason units, whether they're block or stone or whatever. It doesn't really matter. Um, and you know if you curve it you have to think seriously about how do you do it with a concrete block, what kind of wall comes out of that, you know? Because you can't just make it slightly curve and say. "Well, the blocks can be curved."

Um, and then the third project, um, material wasn't quite so critical. It was just, it was a dialogue between the heavy and the light. And you had some flexibility though some students initially took the same materials from the first two projects and brought them into the last project and then later on, become things that are clearly steel or the other things that are not necessarily just the wood from the first project. And then concrete is of course pretty prevalent in the final project. Cast concrete as opposed to …

But again, the first two were meant to sort of really, um, um, give you a very short period of time. At Columbia three weeks is a really short period of time because people don't have good attention spans and get too distracted but unfortunately the semester's only 12 weeks long and so two-three week projects, the final project is only six weeks which is not a very long project in many schools but that's what you have to work with at Columbia so ...

Um, I think that the, it's the anthropological thrust which I think Frampton and Holl were preeminent about and this kind of phenomenological thing that Steven was already interested in but not as articulate as he was about in a few years. And I think the teaching in Columbia really helped him focus his ideas which is also an interesting back and forth, so in a class even through you're going first thing is could we keep bringing up the issues that you can see in this, in the schoolwork, in the discussions of the buildings because I think you're going to see a lot like I do.

And I can't see Steve just as an architect. When I think about him, I always have to always have to think about him as a guy who was in the studio with me and I always see these little shapes that show up in his work.

And you know, it's the same as Corbu. Corbu did his paintings and then things would show up in the work and people were "Where'd that show up?" but you could find it in the painting and in that case self-generated but he never really was a teacher except in the studio or as Steve, at least initially, his teaching was really critical to him. I don't think he could have survived in New York without it and then you know. And now, he's not really a teacher now.

But, ah, I think Amy Anderson probably, I have a memory that Amy was a big exponent, always was in her own teaching of this kind of anthropological approach. And I think if you were talking to someone like Ken, he'd probably give credit to her, maybe more than she's due. And nonetheless, maybe she's clearly a voice for that because Amy didn't come from the Cornell group either, had a different kind of background. I actually don't remember. You can check into what her bio is but um, the team that was assembled, at least initially from Hanrahan and myself, Bill McDonald, an Italian, Laurie Venturelli but she generally taught second year. Um, Ken Kaplan floated in and out sometimes depending … Alvaro Marlo taught in there for a while but I don't know if he taught the first semester one, I'm not so sure but you can tell from the names in the... In the ... because you've only got the four years and they have a pretty complete list of the faculty, um, but the core team is the key one is the first semester which is the one you want to look at very carefully and the very first Abstract ... But actually, that's doesn't cover the very first year we did it. Very first year, which you have some slides of. The very first year was, um, '86-'87, but you know I have a feeling, I have this memory that Bernard and I... We should look on the dates of the images in the very first issue of Abstract. I had a feeling we, because we did it in the Spring of '88 with like no planning. I think we may have reached back and we may have taken some work from that first year. Check the dates because we really didn't have a kind of archiving thing initiated. He really set that in motion when he showed up in the spring of '88. Yeah, a real formal archives. We had an archives but it wasn't particularly formal and he really pushed it much further so because he didn't just want it for, uh, accreditation, he wanted it for publication so because he's a huge, well he really, really believes in publications, Tschumi did.

So, he didn't really change that studio very much. Actually he uh, was, um, I think the happy with it because it was a huge energy level. You know, to get

people coming from these, like, English background, architecture background, really strong architectural background. Even people like me that had been practicing for five years before I went back to school, to be able to figure out a studio, you can put those guys in there and they can all feel equally challenged and have a kind of camaraderie.

And frankly often, some of the projects from the non-architects were much more inventive. You know. the architects, particularly, people from like myself, who've been out practicing but also people from places like Virginia and other that often, you know, they'd just ... they weren't ... They had ... Their habits were so engrained, you know, like a really strong Florida student coming out here, it's difficult to break out of that habit if you want to, you don't have to but if you wanted to try, like Mario Gooden, we admitted him when he was in that, in those studios and he had this portfolios, looked like Richard Meier was so beautiful, everything was perfect Richard Meier. And then immediately he got there and starts making the curvy shapes that he's known for today, so and he was looking for a change but the ...

But that's what the projects allowed which was very important for us that it could allow people without background to, to be comfortably engage them. There's not that complicated. You do learn some things about how do you put some things together and you learn some fundamental things about the way that architecture relates to the ground, that's one of Frampton's on, I mean, he's only now writing a book on it I think but he never, never stops talking about the relationship of the, of that first step and the Semper's four points. Marking the ground and so the first project is a marking of the ground if it's hardly anything else, a bunch of sticks and marking the ground. But the most powerful thing in a lot of those first projects were those furrows because there's a plane that's marked and like, like Paul Klee says if you mark a plane, the plane is going to blow any kind of line off of it because now the plane has become the spatial, it's not just a surface, it's got a thickness to it. You can read the thickness of the layers and so you're engaged, you suddenly are engaging the whole ground plane which is always an ambiguous depth whereas lines are very, you know, you can sort of see how they're circumscribed.

And so that, I think, I've always felt, well, the kids have the most fun with the final one … that way and we had the most fun with the final one because if you had more freedom and you know, we kind of, the whole issue of heavy and light and because you know, architecture is very complex. It's not a simple relationship between light and heavy. The whole culture is like Egyptian. They're all heavy. Whole cultures like the Japanese that are all light so you...

Um, and then there's a lot of cultures that are in between but 50/50 is an extremely rare case and we had basically gave him 50/50. We told him, one tower is light and one tower is heavy. And so they immediately began to mess around, bring heavy things to the light towers, light things to the heavy tower which you need. You have a stair; it doesn't have to be heavy. It could be, but it could also be light and the light tower used to be anchored or it would fly way, you know, so it's going to have something heavy and then people got the idea they would anchor the light tower to the

heavy tower so they wouldn't have to have a real foundation. They could just anchor it on to the, which we hadn't thought about but it's pretty clever.

And so, in some ways, they sort of worked it out but I had a feeling that first project really sets the table. The first thing you do at Columbia is the first thing everybody sees is a beautiful quarter inch model made of bass wood, I mean, we actually cut the bases, the plywood bases were cut by, by Larry Davis, the first year, cut you know, however many students we had, I can't remember, 50 or 60 or 70 or something but we have cut everybody got exactly the same plywood base so.

And they all had to use the same bass wood so there was no, wasn't any personality about it when you did it. I don't even think, I don't remember any kind of staining or that kind of stuff. I mean, if they would have been Florida students say they probably would have but they, I don't remember any staining or anything particular. I do remember occasionally, people would try to represent the water you know, with some kind of reflective thing, uh, but I think we discouraged that. I don't really remember that. I mean, even the furrows were done really straightforwardly, not fussy. And then people were allowed to think about the layering of the plywood implies and that kind of thing. I think that first project really set the table and it's so fundamental and so basic, uh.

And it's true that the non-architecture students often would make a really interesting first project because they didn't know any better. Like, the architects would … I mean, like it seems so simple, you just make something but you're so constrained by the fact that you want to make a building.

Johnson: Of course.

McCarter: And then you can only make with these sticks and furrows. And these other guys are like, "Oh, man, this is cool." You know, it's like they never thought about space this way. I mean, they always thought about a house as an, you know, an architecture is a house and here they get this, get some lines in the ground and some sticks and shadows. Pretty cool. And you know, they would do things and you go like this one woman kind of fueled up the whole ground plain of the furrows and let it float and you're like, "Okay." I mean, you know, I can't remember whose section that was in. I think it was Bob Marino's who was a structural engineer. He sometimes taught with us and like "Okay. That's an interesting take." But you know, maybe there's an argument for it.

But hey, you know we said the furrows were separate from the ground because you have to glue them down to the ground, right. You weren't ... You didn't cut into the plywood, you would glue things onto the plywood and so why not? It's a hard surface. Not really the earth actually. If you build it that way, you can't say it's the Earth because that's not the way the Earth gets made, right? It's not literally sort of layered down. Top soil to flies or something. Anyway ...

Johnson: So, in abstract, Steven Holl mentions five themes which are emphasized in the course studios. These are limits, proportion, composition, materiality, space and light. Stevens states that “Composition, proportion and clear conceptual understanding are integral to thinking while models and material understanding stress making."

Can you expand them how these principals were facilitated, explored throughout the course elements of the first semester?

McCarter: Um, I don't know. That's pretty succinct. Not sure I can go much further than that. I mean those are Steve's prejudices which we all were more than happy to accept.

And some people in there, Tom at that point. For instance, Tom's work. Tom Hanrahan's work was so influenced by Steve that it was actually got to be a little bit of a problem. I mean, his work was looking more and more like Steve’s work and he was having a really hard time breaking away and I think he didn't actually break away until he went to Pratt.

Yeah, Steve was very influential for a guy who hadn’t built a damn thing but he was … But he had the Pamphlet which is very powerful for my generation and for a lot of people. And so, he was a leader but not necessarily yet through building, though by the time we started teaching at least the Seaside Building was in designing. It wasn't in construction yet but he hadn't entered the, you know, he really came to Columbia in '81 with that one, um, um, pool house and studio. I think that's the only thing he built and then somewhere along the way in the mid '80s, maybe he built the Martha Vineyard’s house.

But I think a lot of that happened during the time he was teaching in the studio between '86 and '91. But that, it's very experimental period in his work but he was very influential and frankly we, the group was more than willing, people like even though McDonald comes from a different background, I came from a different background. McDonald was much closer associated with O.M. Unger's, uh, and he did, McDonald was more interested at that time in the Cornell school or sort of become a more modernist riff on the Cornell School.

Unger is a kind of alter ego of, of Rowe, of Unger's always been much more modernist, actually sort of. So, he and Aldo Rossi are making square windows but Unger's puts a flat roof and all rustic, that's the different between the two of them at that point, so I mean, it was also the group of people mostly Unger mostly willing to follow Steve's lead and mostly not ... I mean, I was still very interested conceptually in the whole Cornell thing but I wasn't convinced about the project that have been folded up. I thought they were kind of a dead end.

At that point, I really didn't think we wanted to go back to classicism and I was struggling that with my own work. I had a very complicated first year where Steve and I butted head several times when I was a student and he occasionally would call my

project the worst project on a few of the short sketch projects and he was right, I think, because I was just completely entangled. I was trying to work out. I was living in San Francisco before I went to school and San Francisco is a very tough place to be a modernist because there's all these fantastic Victorian houses, you know. And they're very convincing in the way the simple kind of boxes with, with elegant detailing and it's difficult. And then the culture of San Francisco isn't very critical so it's hard to sort of, it's hard to work your thing out so for me the first year at Columbia was a disaster but it's great, it was fun.

So I don't know. I don't think, um, I mean the … You got to realize the things we gave them was a square. The limits that we gave them, uh, you know there were height limits on each project and uh, even the starting of the final project with the triangle, circle or square plan as a dictate, absolute limit, I think of 32 feet. I can't remember. It's probably somewhere off of the incline plane, obviously which means, if you put it on the top of the incline plane, it can be quite tall. And at least initially not messing with the incline plane too much, though people began to cut into it, um, pretty soon, uh. And that's a logical evolution of the second project which has a shift in it so there's a suggestion in cutting and filling or some kind of whether it's seen as a kind of seismic shift or a man-made shift but there has to be a shift that happens in sections somewhere before you get to the other side, so some people put it at the other end.

Johnson: A shift in the topography?

McCarter: Originally, originally, I believe we said it had to be in the middle.

Johnson: I believe that's what it said, too.

McCarter: Which is a very ambiguous plate to put it and then I think at some point after a year or two, we started letting it slide and started moving you know, closer to the front, closer to the back. And then by the last year, their projects were and in my studio, too, where people were basically making it a wall at the end, so basically, it didn't even happen until you left the site. It was like there may be three feet of space that was at the end higher end.

Originally Steve saw this as kind of a shearing so instead of one plane like you got in the first project which was a square that you got this, um, second, um, you got a second plane and you had to figure out a relationship between the two. And were they the same material because they could be different you know, like a real sort of tectonic shift that's happening in the landscape, something like that.

Um, and, and really the, the good people at Cornell which that would, they shared that, um, but unfortunately, the Cornell system had kind of played out and was being in, was being in, when I was a student anyway, was really being implemented by people who were not of Rowe's caliber. I mean, I had the pleasure of jousting with Rowe a few times when I was a young faculty member at Columbia, we can go up to juries at Cornell.

And you know, he loves a fight and he loves somebody to contradict him and was just a really good conversation so but the guys who were implementing it, these younger guys, there were nervous, they would, if you said something about Roe or you said something about the Cornell thing, they were like you were like attacking the Bible. It was ... I remember once, he wasn't even on a jury and somebody said, “If Colin Rowe were here, he'd say such and such” and I'd said “I'm not sure but who cares,” I said “he's not here” and I said, “I don't really think you're his spokesman anyway because I think he’s, you know, you can't predict what someone like Colin Rowe will say, he's a man. He’s very unpredictable.” Um, and I just found it offensive that you know, so I sat there and said, “If Ken Frampton were here, he would say all like ...” You know, I mean, it's not really getting the students their money worth at a jury at Cornell or Syracuse. Um, so you know and the good thing about Columbia is, you know, it's in New York. It has these incredible students and you just don’t have to care what's going on at the schools. I mean, actually, I think we knew nothing about what was happening. Pratt was not a particularly good school then. City College was hopeless. N.G.I.T. was getting better and New York Institute was getting better but that's because they had a bunch of sort of refugees and others and who were trying to escape the Cornell system but they were fundamentally in agreement with it but sort of Corbusians who were trying to escape this kind of turn towards classicism but effectively we … And Harvard? We didn't care about Harvard.

Johnson: Wait, so was it kind of a hermetic environment?

McCarter: No, no. I mean we were just caring about what we were trying to do the first year. The whole school obviously cared a lot.

But there was that for sure but within the first year and of course, you know, the same idea as the Texas Rangers taking over the first year at Texas, they didn't have to worry about the pieces because eventually the pieces would be theirs, too, because if you train the people the first year, um, to think a certain way or to ask certain questions, they're not going to stop doing that when they get further along. They're just going to come because … And good professors would be more than have people challenge, you know, what they're doing and why or ask questions and that sort of thing. It, it's, we don't get as many as we should any time.

Um, so, there was resistance in other parts of the school for sure and, um, but one of the things that Steve and the group thought a lot about was, we do these first two projects and then they're going to do the housing studio and that's not going to change. And we all taught in the housing studio, Steve taught it several times quite effectively. We all believed in the housing studio, I was a product of the housing studio. That’s where I did the project that really was my breakout project at Columbia finally figured out what I was doing because I was working with a really talented guy and we worked in pairs and, um, and so uh, and because the faculty were often cycling into it. So, the questions, you know, we got to make sure when we get there, we're going to,

they’re going to really actually hammer that housing project which can for an untrained student is a disaster.

I mean, it's just, it, it's a big project. It would give us a city block, I mean a city block on the upper, hump east side and kind of Spanish Harlem. You know, that's 1000+ feet, 200 feet wide, you know, five stories of housing all the way around. I mean, you know, talk about plans and sections. Yeah, and organizing the garden and it was on the step site and, I mean, it was just a huge amount of work just to make the thing, even to work it out much less make architecture out of it. And uh, and to have somebody confront and have any appreciate for it at all in the final jury.

So, because the perimeter block was his, that was his studio. I mean, there were other people did carpet housing, other people to sort of slabs but he was the, he was the big believer in permanent blocks. And New York's a good place for that.

So, that preparation was important and yet we didn't want to create a series of projects that all felt like warm ups for the housing and I think we actually succeeded. I think the three projects in the first semester are fantastic set and people can still think they're doing abstract things and they're really learning a lot about architecture.

We once tried to take two weeks out of the six weeks and make people only do a stair. We only did that once but it was a very revealing project because people thought the stair, I'll just knock this out tonight and then, you know, two weeks later, they still, they still can't get that stair, you know, because we were really pressing them to make a real stair, you know, when they look at every single material.

Every single hand off from one stair to the next. What's the difference from the top landing to the bottom landing? Where am I going from? Where am I going? Is it different when I go down from when I go up? What kind of hand rail would you have? How would the chair attach itself to the wall? I was like gah! And you know, it's a people were like, after that, they had a lot of respect for a stair but it's you know, it's a real architectural task, you know?

McCarter: And, uh, um, and then they did the second two projects which on the surface seemed to be like normal projects. A little school, a free standing school and then a kind of order, I can't remember which order we did. I think we did the urban corner building first and then the and then, um, a little school or something free standing, um, that was word? Relatively free standing campus setting or else on a hillside standing. I don’t know. We found a lot of different kind of sites and those had real sites. We visited the sites, you know, it was there was a real project, not a hypothetical one where they were inventing the site, and um, they did, I think they did very well after that and those projects actually, they're very inventive but also very responsible. I mean, I always felt the results were vindication of the first semester's work. Um.

Johnson: What about this issue of point line plane of volume? What was the importance of that in the kind of … Holl says that the bonds of composition is obviously coming from these own beliefs and Holl...

McCarter: A point line plain volume, actually I think originates from Kandinsky. Klee picks it up for sure.

McCarter: And Klee talks most specifically about the line of movement activates that and links it together which I think is very important for Holl but that idea is one of the fundamentals of early, um, modern art. Not architecture so much.

Johnson: Well, how did that move into teaching …

McCarter: So you have each point...

Johnson: … here? Did you utilize …

McCarter: Oh, yeah. Arguably, I would say the projects are it. The first project, you're giving a plane but it's a ground plane so it's not architecture and then you're giving points and playing anyway … and they become lines but they're still points and playing in section, so you have both point and a line and you have a plane but you're not really designing it. It's a kind of a, a, a surface that you operate on. I mean at a certain point, it did become a design thing but I think the original intention of the project was that the plane was like a canvas. It wasn't really there yet. It was the canvas that we're working on, so we weren't allowed to make space for the ... it's, the line could make space on it and the lines in the ground could be choreographed if you were clever with the lines in the air and of course the shadow lines so you have, you have a whole series of lines but if you cut plans to sections, which we made absolute … The drawings were as much important as the model. The models were the most compelling but the drawings were, they were serious drawings sets required for each project. And so the second project of course then is theoretically then no lines in it, except the line of movement.

Johnson: Yes, that was the...planar composition.

McCarter: Yes, everything has become a plane. You know, the ground is now two planes which is not, it's something that you can manipulate. There was a minimum distance off set that you had to negotiate through stairs or ramps or something. And you know, the end of the site was higher than the beginning of the site. And then there was a fireplace. That was the only thing was allowed to break through the height limit was the chimney of the fireplace. Every, all the walls were scripted to X height above their respective plane whichever plane they were on.

Johnson: And was that just to kind of limit their ability to make certain decisions?

McCarter: Yeah, but it was also to really, they had no more lines. They could figure out how to invent it but it's not easy to make a line with a wall because the wall's kind of grumpy about that. You cut too many big holes in it, it's not a wall any more so, so the openings tend to be really smaller or nonexistent and, um, it had to do with, you know, being able to look back from where you came and there was reasons to make little slots or view ports but, um, and the chimney would be, if you came into the site, the ideal projects is you come into the site, you see a wall and you can't tell exactly how you're going to get on the other side of the wall because the stairs are hidden somehow and the ramp is hidden and then you see the chimney with smoke coming out, so okay? So, okay, now I know what I got to do, right, so ... it was part of the idea was how do you, like in the first project, it wasn't so easy. How do you bring a guy onto the sort of whatever west or east side of the site and get him to the west side? What's, what is it, I mean, you can build a fence. I mean the first project sometimes had very, very straightforward fences. That's one way to use lines, to make a, to make a ...

Johnson: Very direct.

McCarter: Yeah. And others would make this kind of weird sort of things that, you know, I'm not really totally sure people would know exactly how to move through them but you're supposed to get to the water, but water, the water in the ground is not something that calls to you the way a chimney does. And so the second project had this vertical and this vertical lead to the towers become the sort of the destination, the habitable destination and the final project but yes for me those three projects are, I mean the point is never alone.

But I think in this sort of description that Klee does, the points not only neither because for him, a point that doesn't move isn't that interesting so the point becomes the moving line and the line … And of course, you know, this I think it's Kandinsky. It's very clear. You take a point. You pull it up. You got a line, right? You take the line and you slide it over, you have a plane, right? And then you take the plane, you push it this way, you have ...

Johnson: A line.

McCarter: … a space, right? So, it's extremely rational argument developed, moving through the three dimensions.

McCarter: But starting from a point which isn't even arguably part of any of the dimensions, it's just a point sitting there, you know, in space, with no ...

Johnson: It's how we draw, you know, with a point.

McCarter: No x-y-z, no x-y-z coordinates, yes. Well, we don't actually slide the line over the plane but it's be nice if we did but that's actually what happens to those projects is that, um, uh, because obviously we need the final project you've got lines, planes and volumes, uh, all were in fact some kind of complicated mix of all of the

above and part of the reason that we tilted the site is to give the site from the second project begins to have the site a sense of mass, I mean, you confront a sort of upward movement that you can't negotiate with downstairs … that we shifted three or four feet, I can't remember but it was enough that you couldn't comfortably go up there so you had to negotiate that.

In the second site becomes sort of an obstacle and you have to climb up it, um, but then it begins to have sections even in the site, I mean even in a big way, which was again, towards the end we started, students started playing with that idea quite aggressively.

For me, for me, it's also for that's why the, the Klee book, I mean, I just remember how often Steve consulted it and how often he could bring up things and in fact, you know, we would ask someone, you know, "Where does this triangle circle square comes from?" "All Klee."

And in fact, I went and thinking as it says three primary shapes and basically, um, so there's nothing inventive in a certain way except that it wasn't normally, it wouldn't be thought of as an architectural prescription. Um, but Steve's very smart. He, you know, all good architects know that if you put limits on things, you get a lot more out of the situation.

Johnson: Absolutely.

McCarter: An unlimited project is a recipe for disaster even for a very talented person.

Johnson: Well, give me the constraints and, I mean, it's easy to see the end results because that's what we typically get to see. Can you describe like the typical day by day week by week structure, like that facilitated the process of these projects? So, what was that like each time you met with the students? What did you give them as reading assignments to help develop their ideas?

McCarter: I don't think we did. I mean, those, those, those, uh ... First … For instance, I took similar… We did a similar set of projects at Florida. We started with the volume actually, we started with a room because we wanted to do something a little different but I believe the first time we gave it, it was a half inch model, 56 foot outside dimension with certain fixed elements that were given. I think we only gave them two weeks to work on that I would have never done if at Columbia. I had two weeks.

Anyway, now we really scripted this and that's one of the reasons that Larry Davis who is a very successful first year student was asked to do, to actually sort of do the projects in the time period allotted.

Johnson: Did you have them jump right in, did you have to jump right into model marking, drawing?

McCarter: No, they got the plane the first day. They think like ... Okay, maybe they got the plane later on but they did study models. It was small enough scale, they did drawings. Um, they weren't supposed to work on the final project at the beginning which is always something that intrigued me which is why my second sketch project that I gave like the one I gave today is always supposed to work at the final scale the whole time so the model is like this messy study model but I love it.

As opposed to the first model which I was very elegant finished thing, you know, which is built specifically for the final jury. So, but then no, they had, they wanted to work from the beginning especially from the early projects were the shadows which were so important because you would be constantly testing those and then they had to draw them in that case and hand drawing, you know, which is kind of a interesting and drawing in every concrete block and figuring out how to shade, they're learning how to draw shade, shadow and do other kinds of pencil drawings for the most part, though some people chose to do it in ink but it was whatever medium they were happy with or good at it.

I had a guy from Texas I had, and he was just a brilliant guy with ink. And he could do things with ink that I could only do with pencil which is really.

So, um, um so it was also way with the really good students who had a lot of background who really knew how to draw could by example, be teaching the students who were learning how to draw. Columbia wasn't, Columbia wasn't that good at, um, at least the beginning when we started, I thought it was pretty pathetic at helping people without background. Eventually we decided we had to do more so I helped set up the summer program that had drawing course, a design course and a history course, which I taught the history course.

Johnson: Were those were required?

McCarter: Yeah, for people without background. They had to come two weeks early and ...

Johnson: I'm sorry. It was a two week kind of seminar?

McCarter: I don’t know. It was a compact course before school started.

Johnson: Did you see marked improvement?

McCarter: I think it helped a lot. That was towards the end of the time I was there, I finally convinced Bernard we had to do that. Um, this is not easy because at, you can't ask people for more money but then Bernard had to pay somebody to do it which is usually me and he didn't pay men very much and my friends but uh, but it was, it was, you know, Frampton and I fought a lot the first two years about whether we should move the program to three and a half years for people without background, but we

couldn't even, we, we just started doing the numbers and we're like, “Who are we kidding?” you know, “We can't ask these people for another $15,000. It's absurd.” Because we don't give scholarships for non-existent, it was ... Columbia was not good for scholarships so, once you got there, if you're good, you could get a TA but it was, you weren't going to get a full scholarship or even a major scholarship.

But um, and you know so we could like, it was tight, we were packed in there. I think we averaged about 60 students and at that time, each one, you know, had, a good, uh, big work board. Bernard eventually cut them down and cut them down and cut them down until they just became computer tables. You can't work with all pieces. So, if you go to Columbia now, it's obscenely crowded because I think they have a hundred and some people packed in those same rooms …

Johnson: Oh, wow.

McCarter: … but basically they can't make models, they can't do anything. They have to go to a model shop to do models. So, they can only have their little computer screens but we didn't have computer screens at all so, um, we had a lab but that was it and um, so you know, we gave desk crits and frequently, literally, Steve and I would be butt to butt. He’s doing his row and my row, I would share a row with him and so I would be doing my row and we'd kind of be passing in the middle of the thing so we'd meet here and each other's desk crits, but I don't remember a lot of pinups. Those first projects for sure and not, I think we did have some of the second project but there just wasn’t any time, it was just like nonstop.

Johnson: Did that amount of time, do you think the time hindered people without a background?

McCarter: No. Right. You can't tell by the projects. That was one of the reasons we wanted to make them um, especially the first two, technically simple because it’s also confidence building. I mean, nobody liked to say it but my attitude always was that the three projects, you can blow one. It'll be all right. I mean, blowing two isn't a problem but you could blow one, because you know, everyone has a bad ...

Johnson: Of course.

McCarter: I, it’s something I don't tell my students that here but it's true, too, with the ... You know. it's a sketch project. But as long as you're trying, you know, because I'm also learning about people’s ability. That's the other ... At Columbia we had what's known as a handshake problem. You know, everybody shows up, we don't know who the hell we are. We never met them before. We just accepted them, right? So, they would come on I think on a Friday was always the first say. We give them a weekend project called a handshake project which is just like, "Do a house." "Do a house on a slope or something." and you know, square footage, just some little tiny project and uh, and in a Monday we’d have a pinup and okay. (laughs) Now, we know what work we got to do ...

Johnson: Sure

McCarter: ... because we've have people like Lindy Roy who did the most amazing house over the weekend and kind of Steve and I sit there with our mouths opens going "ooohhhh!" It's like, a really nice piece of work.

So, that was always the very but that gave us a little hint and then the first project, you know, it was interesting because the first project, despite that complete, you know, that was just told us what we were dealing with in each of our studios and which was really kind of riotously fun and we had to go out for drinks after the project every time but it was interesting how the first project would pull everyone together.

McCarter: Because gain, it's doable and actually sometimes the art students had more trouble with it because it's just too simple. Like they got ammunition, like big pistols, you know.

Johnson: Ready to design an awesome building.

McCarter: Yeah! And it's like, oh, “playing with lines on it, with sticks, what the am I going to do with this?” and they do all these really weird things. And you just come in and go, ”No I don't think so. Just take it all off, this is just like you made a mess.”

Johnson: Yeah, yeah, of course.

McCarter: Because you put too much stuff over here. Look at this guy over here, he's got three lines. That's pretty nice. Three lines. How can you do this? How few lines could you do this project with? For actually quit unless architectural like, "What? This guy’s only got three lines and I think I see a design there, you know.”

Johnson: Now with these projects, what do you feel were their primary strengths and where do you think that perhaps maybe they had some weaknesses if you saw any?

McCarter: I don't know, you know, um, I don't know that they wouldn't work at every school. I think Columbia has certain issues about the fact that all students were forced to go to a program at the same length despite their backgrounds.

I think it was more necessary to invent that kind of a project that would allow everyone to play on a level playing field, um, and everyone to learn something because I think it was hugely successful for the architecture students to sort of have to be retained. And that was a big thing that Steve was after. He felt that people were just making too many shapes. I mean, he liked Scarpa but in the end, you look at his work but at the end it's incredibly restrained. It's just walls with simple holes and to some degree it still is. He's one of the more restrained architects in terms of the shapes he uses and the forms.

Um, And sort of the amount of detail to the volume, he's, you know, he knows some little detail, big ball on him and so, I think it was hugely helpful. I think if you have a program that's more like the program here where everything is, you know, people are kind of parsed out and you, most of the non-architecture people kind of get extra time and uh, I'm not sure where that kind of program would fit.

Had a ... I mean, it could be, it could be used in core one here but you're not going to get that many architecture people in there so it would be a different kind of project. I think it would be totally effective but it would be a very different, you'd have to, you know, you could tweak it so it's really only about people without background but that wasn't like what it was invented for because that was a big issue in our mind because Columbia every year had some fanatic places like Virginia, Washington University, University of Florida. And you know, we had to hold those guys and keep their attention but we had to keep from losing the English major, who were bright kids with lots of money because they otherwise wouldn't have been there. And you know and a huge amount of energy and they really, really want to be architects. Who knows why but they do, so.

And so you know, I think it was unique. I think for instance other schools with similar mixes like Harvard like you know, they could have, that kind of program would have easily fit into those kind of schools. Many schools now have tried to do what we've done here and begin to make the program a bit more humane by not trying to put everybody. Everybody's always together for a certain period. In that case, it's two years. In here and in Harvard it's two years, our two and a half but whatever but the idea is, you know, but some people might come to that with a certain preparation but it depends on how you start the program.

If you structure it like the University of Florida, wherever you want, did the same programs for the three option type studios here, the three studios leading up to thesis where organized. I think the first studio could have in fact we did kind of make a variation. We made a kind of a room project and then a landscape project. We're always the first two projects and the first studio which is about how program can determine architecture. And the second studio is about tectonics so that was the theme of the two studios in Florida. But with the first studio, we actually sort of co-opted uh, a hybrid of the three projects.

At Columbia, um, for the two projects, we kind of took those two projects, added the Cooper Union Cartesian Square project. One was a room, because I'm a big fan of starting with this interior space and then the second was a kind of landscape.

And I still use the variations on those two projects here. Um, but at Florida everybody in the graduate program had background. If you were a core students, you had to go through a core and then you get to that studio, um, but we still felt there was a real benefit to, uh, suddenly saying here is project and a people were like, "That's not a building and exactly because you sure you know what a building is yet?" because that's

the question we had at Columbia that too many people would come in from architecture school sand they knew exactly what a building is. That's my problem. When I showed with four year, you know, had a good undergraduate school so I was, I got my license, I worked for four years in a corporate office. I knew exactly what architecture was. That was my problem and I had to unpack all that crap and it took the whole first year to do it, by the year. It's a good think I went for three years. They offered me the one year program and I told them I didn't want it because I didn't think it was enough time and I didn't think I couldn't even figure out the subway after a year.

At that time was two semesters; it was run by Jurgen and Frampton. it was a great program. I just didn't think it was enough time for me. I really was serious. I wanted to go back to school for a long enough time to get to know Frampton and get real engagement from the school.

And so, and it's a good thing because gain, my first year was a disaster. It wasn't until a housing studio that I kind of got traction and uh, I mean I was doing work that was interesting, people were very interesting in it but it was very confused. If I looked back at it, it was, I just didn't know exactly what I was trying to do and um, but I had to sort of unload all this stuff that had built up because I had basically spent all my nights in this for five years in the corporate office basically just reading every night, doing sketches.

Traveling to Europe on my own, you know, and so, I was just trying to figure out where I was, you know and Columbia wasn't such a good place to help me do that and at that time under the program because that program was a little confused about whether it was modern or whether it was postmodern which is what Steve changed, well Steven and Ken. Ken is the one who changed it and Steve, because you know, Ken changed the whole program, he chaired the first, the only thing that didn't change. The only thing that didn't change was the housing studio which stayed exactly the same in the same place and to some degree the other part of the second year which was instead a small institutional building. The whole third year became a structural project or structural theme, particularly the fifth semester, start up with the bridge, actually that you designed with engineers that came into the studio which is the first time that ever happened at Columbia and then you spent a long time building.

And so you know, really the changes in the other parts of the program were much more significant and um, and then the first year of course was revamped. It was still abstract but it was made, um, it was, it had all the sort of, all of the discussions that image and classical form and all that were completely taken, not, not even sublimated, just taken out so that it just never came up and if I were people would do things, you know, that had anthropomorphic ...

Actually I don't even remember it happening that much. It's not like we had to stamp it out. It's funny. It just didn't happen. I think it just reflects the interest of that student at the students have moved past that.

Back when they have moved past it, they still were caught completely in it but I think the students were more than ready to do, you know, something that didn't look like a building.

With a little encouragement and a good support because I think you know one of the things that's true, people came out of the first two projects supercharged. People were so confident and so excited and the faculty were excited.

I mean, the point was assuming yelling at a guy for breaking the rules, that was pretty exciting stuff at Columbia, you know? This new dean comes in and says, "This doesn't follow the rules and everybody's like laughing at him. You, you're Mr., Mr. Rule breaker and you, you know, and you're in like coming down on the student but you know the student was tough and he thought he was good. I mean, he just didn't just sit there looking weepy and all that. I mean, he shouldn't be. They shouldn't make people cry, they could do that on a regular basis but this guy I remember he stood up to them and you know, as my project but I knew better than to defend it because that would be ... They show me really come down. No, because he had to excerpt his authority over the faculty but he was a soft spot for students and so, um. But I really think that the Klee connection is really important.

Chris Sharples

Personal Interview

New York, NY

February 28, 2013

[Recording began after conversation had already begun.]

Sharples: So when I got there, I didn't know any history, except for that one elective that I had, and I didn't know anything about any …

Johnson: What year was this, specifically, that you were asked?

Sharples: This was before '87.

Johnson: Okay.

Sharples: So Polshek had just left the year - the semester before, and Ken Frampton was the acting sort of Dean, chair of the school. And Robert really was in charge of - he was sort of - I believe he was faced with supporting Ken and also running the whole lecture series as well.

Johnson: That's right.

Sharples: Which was really quite important to, you know, at least it was to me - because it was basically a crash course in contemporary, you know, architecture.

Johnson: Sure.

Sharples: Who is doing what. And I remember that first semester was amazing because Tadao Ando came and Peter Eisenman gave a lecture. And you know, eventually none in there was Rem, so it was very exciting to, you know, hear this first-hand knowledge and see the work. So when I came into first year studio, the line, the plane and volume project was actually not the first assignment. The first assignment was the poet's retreat.

Johnson: That's right, that's right. Like a warm-up, right?

Sharples: And I gotta tell you, it was a real eye-opener, because the first thing you do when you don't have a non-architecture background is you start thinking, "Well, how does an architect act?" And you immediately start just designing some form. And that's what I did.

Johnson: So you had, like, pre-conceived ideas.

Sharples: Yes. Well, I said, well, I guess this is what a poet's retreat would look like, it should be the small building and blah, blah, blah. And at the end of the day, um, um - I stepped back and I said, "Well, that's not driving me anywhere." I didn't feel, like um - well, a term that I use now is, you know, you know, design space, and it's just a term that's used quite a lot right now. But it wasn't my design space.

Johnson: Mm-hmm.

Sharples: I was basically pre-conceiving my idea of what it was to be an architect or think like an architect. But, ah, which was a problem. And it's funny, if I had thought more about how I made things before I got to architecture school, I was actually doing more things in terms of thinking about what architecture could be, then out of the context of that - that environment of architecture school, then it would be if I was in architecture school. So what was a blessing in disguise is when Steven Holl, who was running the first year studio, was right after the poet's retreat - we did the line project.

Johnson: Okay.

Sharples: And for me, the line project was a huge bridge for me in terms of beginning to access what my design space was. 'Cause I had done, you know, four years' worth of print making.

Johnson: Mm-hmm.

Sharples: And all you do in print making is draw lines. And on top of it, well, with art, you actually, you know, draw - I was actually a very good drawer. And I actually hated my parallel bar, you know.

Johnson: You felt it constrained your …

Sharples: I didn't have a parallel bar before, and when I got this assignment that I had to get this stuff, I actually found it as a constraint. But what I liked about it was now I was having to take these lines that I had been etching into plates and actually pulled them into space.

Johnson: Sure.

Sharples: And so one of the things - I - Bill McDonald as my critic, and he was a very good critic for me, because, um, first of all, he's patient, and second of all, he also had a good grasp of the fine arts as well.

Johnson: Now, how many students in your - that you can remember were also from non-architecture backgrounds?

Sharples: In the whole class?

Johnson: Yes, do you remember like roughly?

Sharples: I would say at least a third.

Johnson: Okay.

Sharples: It's somewhere between a third and half. I mean, my best friend in that - the first person that I got to know in that studio was Oren Safdie, Moshe Safdie's son, and he - he - I think he had a literature background.

Johnson: Oh, wow.

Sharples: So he and I got along really well. Um …

Johnson: And you had bonded …

Sharples: And then LeAnn Shelton as next to me and she had a law degree. So, um, I guess the only difference between me and then was that I actually had a fine arts background. So the drawing and the painting helped out a lot. So there were a lot of people in the studio who were struggling with this problem of what - what it meant to design. And so the line project was so elemental that you're going - and it's in the field - and you're like, well, do I - do I line my lines along the plane of the ground? Um, like furrows in a field?

Johnson: Yeah.

Sharples: Or do I stack them up like columns in space? What does this mean? And so for me, I was looking for a kinetic bridge between the space and the plane of the field.

Johnson: Okay.

Sharples: And the thing that made the connection was the shadow. And what I started thinking about was, you know, when you start using lines - and it's so funny, when you get into the digital world, you're using lines. Your wire frames, you know, how

you begin. And so I was merely going, well, I started building, you know, cubes and triangles and things, and I'm going "Well, okay, so I have this wire frame of a cube." And I'm like, "Well, that's interesting. But is there another way to experience that cubeness?" And I started breaking it apart and looking for ways that when the light hit it, it would actually project the cube onto the ground.

Johnson: Oh, nice.

Sharples: So my whole project turned into this whole idea that there were these lines floating in space, and in certain moments - and they would cast shadows, and they would move around, but at a certain moment, they all form Euclidean projected forms on the ground plane. And so for me, that was my first project. And in a way it brought back some of the paining work that I had been doing in college, and then my interest in this whole move from a volumetric condition to a flattened condition.

Sharples: Because that was what was interest me when my fine arts courses, when we used to have history of this whole idea of creating a sense of flatness. So saying, "Well, how could I really emphasize that in terms of this sort of play between lines floating in space and this projected shadow on the ground?" So that was the first project, and it merely - I just started thinking this - "I'm not going to worry about program right now."

Johnson: Did you know what program was at this point?

Sharples: I might - again, it came back to this, "Oh, it's a function."

You know? And you know, I was reading a lot of - I had read a lot of books on, you know, artists, and like - I love the one Donald Judd, because he had gone to Columbia, and he was studying philosophy, and he made a decision that he would be an artist and not an architect, because he was interested in architecture. And the true reason he said he did is because he hated working with people. And but what was interesting about all that is, you know, in his case it's materials and proportion and Euclidean form and how that all translates and changes, you know, the space that you're in, or how you perceive space and how you measure space in Terrell's work.

And so I realized, you know, this is how I'm going to get into this. I'm going to make a bridge between my background in painting and print making and the history of the visual arts, and start to understand how I could, you know, work my way into this.

Johnson: And the line project seemed - for you it seems like it was a good kind of a conduit for you to express that.

Sharples: It was practice - it's a very good - and I could see for students who had studied architecture for four years, it was the chance for them to step back and say, "Do you really understand your design space? Let's break it down and work in an abstract environment and turn off certain things that you're used to, asking for when you began a studio project program."

Johnson: Well, that's what Robert said, he said, you know, often times the people who had architecture background were being too controlled, too rigid, and the students who didn't were being more free and coming up with really interesting things. Did you find that to be the experience?

Sharples: Yes, but it was important - and this is where to Steven's, you know, I think what he was trying to do was he was trying to create some degree of structure. That there were going to be constants, and that there were going to be variables. And you know, by limiting the number of devices or tools that we would be using to develop these projects, it gave us a chance to really break out of, um, of these pre-conceived notions of what we thought architecture was. And in a way, it sort of plays into how we think about architecture at your shop, is that in a way, there's a very severe sense of sort of - these are the criteria. These are the elements you're going to be - very limited amount.

And it really gets you to start thinking, well, "How do I make space with this?" Or, "How do I tell a story? What's the narrative here?" And all these are devices or techniques that we use in developing our craft. But the key thing was how do we, as individuals, start to understand our design space? So we move from that to the plane project. Now the plane project actually then becomes much more, um - you're starting to ground it in the idea that there's a sense of scale.

Sharples: You know, because you're starting to take planes and you're tilting them up, and you're starting to place yourself in that context. Because you know, with architecture, you're always thinking - you know, you're not seeing these as one-on-one, necessarily, devices, though the line project could be.

Sharples: You're seeing it as a - and Steven gave measurements in feet for how big those fields were.

Johnson: So 64 feet by 64 feet

Sharples: Yeah. So you were scaling it. So when you got through the plane project, you actually started to think about it as I'm occupying the space now.

Johnson: Because that was the component of a hearth, which is very humane, it's kind of Semper

Sharples: Yes. And it does have a, you know, it's a very Semper, it's you know, the primitive hut, and one could argue that there's some program now. So, it's funny though, of all three projects, I thought that was the weakest one. And I think the reason is because program was injected into it.

Johnson: Well, I mean, the third project has a significant program.

Sharples: No, no, but by that time, you're already sort of building up to it.

Johnson: I see.

Sharples: And you're sort of ready - and I'll get to the third one, because the third one's my favorite.

Johnson: I have a picture of the third one.

Sharples: (Laughs) But the hearth was actually, sort of, in a way started to sort of centralize or put a nail in the board. There has to be a hearth around here somewhere. And I grew up on, you know, on a farm in a very old house and my idea of a hearth was something that was the size of this wall that you could walk under. So it wasn't like, you know, you're coming from a place where you've never had a fireplace, and like, "Well, what is a hearth?" I didn't really ask that question pretty much.

Johnson: Of course.

Sharples: So, um, but I did, um - so I thought that project actually was - it was much better than the poet's retreat, but it did definitely have this idea that was grounded in an idea that there was a destination.

And I didn't necessarily think that, it was something that - it seemed a little forced, but it was basically a series of two walls and a path that directed me to this hearth. So it was much more of a narrative, whereas the line project to me was really about discovery and understanding how things change as you move around them.

And in this case, I didn't necessarily feel - there were a lot of devices, like openings in walls and things like that. So I thought in a way it lost its plainness. And if I was to go back and do it again, I would really want to understand how I could build up that whole concept of the super flatness that you equate with this. So, um, and then we came to the volume project, and to me, what was referred to as the "Tower Project," or something?

Johnson: Yes. The "Tower House Observatory."

Sharples: Yeah. So at that point, I think, you know, I was ready to start thinking about occupation. And it helps the fact that, you know, you grow up climbing trees.

And, um, and grow up having a barn and everything. And everything was made up of frames.

And those frames would get filled up sometimes with hay, and sometimes they'd get filled up with dust and light would come through. And I just found it incredibly amazing the sense of scale that was defined by those frames, and in a way it wasn't very different from the way that you, um, looked at the line project. You know, it's defining space with a bunch of lines. And so when I started that project, it was - I'm trying to remember, there were two towers, one was sort of the light tower and the other was the heavy tower.

Johnson: Yes.

Sharples: And again, it started - once you split them apart - once you had them separated, you would immediately go, "Okay, well that's that and that's that, how do I

get from one to the other?" And I wasn't sort of excited about that, so I immediately started, like, looking at - trying to put them together.

And you know, it was interesting because, um, you know, there was this point tilting it, and you know, and Bill was like looking at it with me, Bill McDonald, and you know, it just seemed so forced, you know? And then looking at, well, what happens if it's just more of a way that you navigate the place, that there's this light frame and there's this heavy frame, and they nest into each other. And the light frame, sort of, in a way became sort of the engawa or the porch. And at that time, I knew a lot about Japanese architecture. And I liked that idea that there was this sort of space between the interior and the outside. And so that light frame felt like that would be the mediator - that would also demarcate the entrance into the whole thing, because you're coming - the other thing that was great about the project was that it was a steep slope.

Johnson: Yeah, that's right.

Sharples: You can - that was probably one of the most important things, that it was a really steep slope. And so I used the light frame as the circulation and the hard frame as the occupation. And right there, that was enough program. There was - and then I started also thinking about this whole idea of, ah, and it's sort of like the Douglas house by Meier. And the Fisher house. More so the Fisher house - it's really funny when you, um - what was funny is I didn't know the Fisher house at the time, but I did eventually visit it with a friend that Robert knows, Lynette Whitter, whose friends had commissioned Kahn to do the house, and I designed in the, in the, let's say, the heavy tower, in the tower of occupation, this four-story thickened wall, it's about three feet, where I put the bathtub in it and the kitchen and the desk, and all the things that you would need to live in the main space. And it's so funny, it's not too different from, if you've ever lived in Japan, where you put your futon away in this deep closet.

And when you go into the bathroom, the bathroom is the whole bath - you get water everywhere, you know. And I started thinking, "This is really great," but it also played into this whole idea of this sort of, ah, thickened space of program that would serve the free open space of the tower, and so you can see in this, there's that thickened space in there. And you know, I went back and, and eventually we, you know, developed another idea around this and made it even more so. But what you'll notice is that when you go into this house, you always go in on the corner, and you always traverse it on an angle. And that was sort of, like especially when you see here, you go across here. Um - is that the idea that it was all about, you know, coming in on the oblique and then moving in and then turning and then coming in on the oblique, and so it was only about re-orienting yourself.

And it's so funny, all this stuff was just sort of like, "Well, how am I going to circulate?" I didn't want to backtrack. And these all were just very - desires. And it was so funny, when you go back and you start seeing examples of this in the Japanese architecture, and just in good architecture in general, like when I went to Falling Water, my um - summer after I graduated with Mario Gooden um, that de-sequences were happening. And I thought, well, so to me, you know, you just feel like you've arrived, like.

Okay. I now understand sort of the way to begin to think about managing issues of practicality or program with the idea of, you know, a vision, an expression, an experience. And so I think at the end of the day, you know, the line and the plane and the tower project were all about finding a way to get students to begin to think about, or access their sort of design space. The way that they want to learn and be able to say, "Well, this is what I'm interested in doing, and this is how I'm going to manage this process intellectually."

Johnson: Well, it seems like, from what I've read, what all the studio critics have been saying and all the abstracts and in talking to Robert, is that, you know, there was - it seemed like there was a heavy emphasis on just the study of kind of the autonomy of the elements to themselves, and also the sites. And then kind of developing a system which kind of grew from that and then developed from each other. And then it seemed like there was a lot of discussion about proportion, and um, and composition. Do you recall, like because that's what I've been reading, it seems like it was very heavy on not style, but just composition.

Sharples: No, and there was a lot of emphasis on proportion. I still use proportion as a guiding principle in the way I deal with things here. So you know, the square root of two and the golden section - I just was reading recently, using it for something on a project we're doing here. But for me, yes, that was definitely something that I took away.

That was fundamental to the project. Composition - you know, I dealt with composition issues, you know, in fine arts, so that wasn't something that I was like - I mean, it might be a way of, again, a certain device that you would use - but I started really thinking a lot about movement. You know, how would I move through the space? What's the narrative of that? And that would inform the way that you compose things. But proportion definitely did come out of that.

And to tell you the truth, I don't think I used proportion very well in that semester. I haven't - I think throughout my three years at Columbia, I never really used, you know, really understood how proportion worked. It wasn't until I practicing that I started to really use it. But not as something that, you know, I'm going to celebrate and say, "This is the house with the golden section," or something. Again, it's something that helps me manage how I deal with scale and form and stuff.

Johnson: Sure. Now, in regards to - and you've kind of already touched on this - the kind of challenge for you of these projects. Did you find them challenging, or were they pre-accessible? Or was it …

Sharples: Oh, they were challenging. And this one - this one was, I think the line project was challenging being that it was the "ta-da" moment when I said, "Oh, I don't want to make these things up in space, I want them to change and form themselves and reconfigure." So for me it was very dynamic, and so that to me - once I got that idea in my head, then it was just a game. The plane project really had - I was thinking too hard about how to make this hearth. So it was like having a block.

Johnson: You mean the hearth was a hindrance? You'd remove the hearth from the program?

Sharples: Yeah, yeah, I would.

I think leave the program for the very last one. Which then, at the end of the day, was almost like going, "Okay, now we're going to let you do your poet's retreat." And um, so you had two projects where you weren't worrying about it, and then your third project you get to worry about it. And I - to be honest with you, you know, I don't want to say I'm getting old for my age, where I'm like, "Oh, yes, I remember the good old days," but I really think, you know, when you have students who come in to architecture that the first thing they do is not deal with program.

So it's just like when I was teaching drawing at Columbia. I said, you know, if you can't draw, the software's going to control you. You can always turn it on and look for the tools, when you really should already have an idea of what it is that you want to do. Tools are only there to help. It's not to solve the problem for you.

Johnson: Absolutely. Well, that's a big issue these days.

Sharples: Yes.

Johnson: I think it's a big issue with both students and professors, because I think the professors also don't see the value, necessarily, of what these tools can do. They just, it's like, "Oh, students are using them and they're generating these renderings and they don't mean anything." Well, that's not really what they should be used for. I don't know how we mitigate - that's a whole other conversation. It's something that's bothering me and I don't know how - I almost feel like, you know, I was thinking about this last night - I kind of feel like the old school teachers who, like, are looking at the computer thinking, "Man, hand-drafted drawings are great." I feel like I'm going to be that guy, because I was the model guy, the guy at my school, and I loved building, I loved constructing models and seeing them. And working in digital, and I see all these students now at Wash U - everything's digital, and like, you haven't touched it. You haven't seen it, you haven't felt it. Like, you don't know what the sense of gravity is. Like, it's not there - like how do you know what this is?

Sharples: Well, I said - you're absolutely right, because you know, that's how Bill and I accessed Studio early on, and that's how, you know, when Ken Frampton - when I was taking Ken's course, and he said, "You have a choice. You can either write a paper or build a model." I'm like, "I'm building a freakin' model!"

And I got to tell you, that model was one of the most elaborate models I ever built. And I learned a lot from it. And - but what was interesting about that, there were parts in that model that I had to fabricate. I just could not figure out - you know, making the Nevada glass and buying the drill bit, and finding the right pressure with the drill bit. And so you know, the jump to 3D printing and laser cutting is not - it's not disabling, or taking away from that whole manual process, it's making it much more sensitive to, you know, how we translate things from the virtual to the real with materials and tolerance issues, and to me that's just the beginning of the whole idea of how you go about

building a building. So I actually think, you know, students, if they really begin to embrace the way these tools are working or are going to start, you know, it's going to be, you know, do it yourself manufacturing. And as we're seeing a book on right now. So it's a really exciting time to be a student, to take advantage of these tools.

Johnson: So it seems like Robert, in describing what I've been reading, is - they also like for the planner construction, they talked about, you know, it had to be masonry or concrete, and so it really kind of - we're thinking about a unit and how that unit can be transformed, or about solid cores or something like that. Did that affect - do you think that was a good way of thinking? Did you utilize the actual materiality of what you were given, in order to make decisions, of what can I do with it?

Sharples: Well, in the end with the tower project, I was definitely thinking of that. You know, demonstration and you know, the mylar used for the um, for the um - for the envelope and the building, and the fact is that the building could be completely open, or it could be completely closed. So I was really thinking about scale and how you would touch it, you know, the screen, for the - I was going, well, how light is this? You know, and so, you know, the flooring was concrete, and as you got down lower there was more of it, the tub was made out of concrete. So yes, you did start to think more about what materials they were, what the tactile aspects of those materials were. I wasn't thinking about that in the line project. In the plane project, yes, I was thinking about it. But again, I think, you know, of all three, that was the weakest one, it sort of got in the way.

Johnson: Now, I'm not touching this too much in my thesis, but I kind of have to talk about the whole year, instead of just the first semester. And so the second semester was - the program's changed, but I think your year had - was it …

Sharples: Photo Studio …

Johnson: Photo Studio's at school.

Sharples: That's right.

Johnson: So transitioning from, I mean, that's pretty - it was like straight, you know, building program right there. So transitioning from this into those projects - how - can you discuss that, like, relationship?

Sharples: It was challenging. I had to help Errol Marlow, who was very interested in - really, you know, when you talk about units and starting to understand measure about how things go together, and he was teaching the drawing course. And he was sort funny, I sort of got roped into taking the drawing course, even though I didn't need to take it, but I'm glad I took it because I had no problem drawing and communicating and drawing, but the way he was talking about how you see things, how you measure space and create a sense of scale, that was something that I appreciated out of that course.

So when I had him as a critic, he incredibly philosophically had Louis Kahn as - he worked for Louis Kahn. And so he came from that very, um, you know, he was a very thoughtful person. And sometimes it's very tough for a student to appreciate that in the

beginning, because you're like, "My God, this guy's quoting all this philosophy, and you're like, "Look, I am a photo studio to do here."

And but I did use a lot of the tools that I had developed in the first semester in my photo studio, and I had a very successful photo studio project, it was very - and I still have that model. I still have this model too.

Yes, and I - and you know, again, photo studio in a way embodied this model and my line project. And then when I got the music school project, that was tough. It's funny, growing up in the country, you would think it wouldn't have been, but getting all that space and the palisades - I was like, what do you need a building for?

And if I was to do it all over again, I probably would have, you know, gee whiz, I'm not sure where I would have done it - I definitely probably would have - you know, I would have done something more with the palisades. You know, in terms of - and I probably would have made it more of a land work. It started - it was going in the direction of land work, but I was like, why would I want to touch those palisades? And I think it was probably to do with where I was coming from. So my project was like - and at the end of the day it was just - well, it didn't need to be there. And so for me, that was …

Johnson: Sort of kind of a philosophical struggle.

Sharples: Yeah, it was. It was.

Johnson: Why am I making this?

Sharples: Yeah, no, it was definitely great in the sense that it put me in a world where I'm like, "Oh, I just did all these great projects. I'm feeling pretty good about myself." And suddenly I get this challenge again of sight - of doing the photo studio, you don't really have sight, you were in a …

Johnson: Urban area.

Sharples: Yeah, you would have had a block. And so it was more like something like this. But then getting this incredible site, I was just like, gee whiz, I'm awed. I had this sublime condition. How am I going to do anything better than this? So that was tough. But I appreciate the smack in the face, don't get ahead of yourself.

Johnson: Sure. Well, so, how did - it seems like there's no bridge in between the first semester and the second semester. It's just like, it's un-poetic, in thinking about the land and abstract idea, and then bam, it's like - right into "Here's an Urban condition. Build us a photography studio." Did you - was that - I mean, thinking about all your classmates in general, did that seem like a tough transition? Or did it seem like a lot of …

Sharples: No no, I don't think it was a tough transition because you know, again, it was a photographer's studio. So you associate it with the visual arts and creativity. And

you had to have an elevator, or stairs, yeah, so there's some practical things that you had to do.

But I didn't find it as - I didn't find that a problem. I actually -that's why I really enjoyed it, because I thought of it as an extension of what we were doing in the first semester, again, adding a little more narrative to it. But the music school, getting that huge site was definitely like - oh, now we're going to really shake this up. It'll be something that's pretty heavy duty. And um, which was fine. But thought it was a nice bridge, it's funny that I just don't see how you could give students program projects in the very first semester. You sort of want to check and see where they are.

Johnson: Well, that's how Robert described that kind of the poet's retreat, it's kind of hand-shaking, saying, well, what are we dealing with here?

Sharples: Yup.

Johnson: That's really describing things, sometimes it was really good, sometimes we're like, wow, we're with some person at work here, trying to fix, you know, deal with these people.

Sharples: Yeah.

Johnson: So, yes. And so do you feel like these first assignments affected the rest of your thinking throughout your education at Columbia? Did they resonate with you, or did you always think about them?

Sharples: Well, it it -it made me, it - it did a couple of things. One is when somebody says you're going to work in a certain material, I really liked that because I was already building models and I worked in certain materials, and I was like, "Oh, so making something is really important here." So I was like, well, I'm really comfortable about that. So that's something that an architect was basically saying, it's okay to use that as one of your designs, making it a critical part of your design space. And I was like, "Wow, I've got the stamp of approval here." Because when we did the poet's retreat, it wasn't about thinking about making models.

Um, you did some drawings and you gave a presentation. It's like, you had to construct your perspective. I thought that was just - I can draw the damned thing, I don't need to construct this.

And at the end of the day, I had to continue with my paintings, I ended up doing paintings for Bill - one of theme's actually in the Avery collection. And so I was like going, oh, I'm just going to - I'll do this, but when somebody said the model's a very important device, very important tool in helping to explain your project. Absolutely. I don't need any drawings! I'm going to build every God damned detail, and you think I'm crazy? You should have seen my brother! You know? We were so detail-conscious. And that's it, so he'd look at our shop models, he'd see all the people and all the desks and stuff - that's Bill and me saying, we're modeling every God damned thing. So people can get a sense of what this place feels like when there's lots of people.

So Steven - and the other thing that I then - I really appreciated about him as that sort of the studio chief was, you know, the model, in a way, took you somewhere else. It wasn't just a representational device, it was part of the poetry. You know, so you look at it and you go, well, even if I didn't build a project, I could dwell on the project, because of the model. And some drawings do that for me, you know, you could say with - you know, any architect, if they're worth their salt, you can dwell in their drawings and their models, so, I carried that all the way through. But I was basically getting a stamp of, it's okay to use the model as your primary device to express yourself and communicate your ideas, so I thought that was great.

Johnson: The interesting - the one thing that I actually don't have any perspective on is, how to use the process of these projects. Did you guys go back and forth between drawings and like study models? Like all we see are the final drawings and the final model.

Sharples: I basically worked in model. And then I constructed my drawings at the end.

Johnson: So they didn't really require, like, have like checkpoints - okay, this week we're going to focus on how you're drawing this thing. They just kind of …

Sharples: No, well, Bill didn't, like, put you in a straight jacket that way, he said, you know, work the way that you feel the most comfortable. And he would critique you based on that, so, I appreciated that. But yeah, you had, you know, requirements at the end of the day, which was great, because at the end of the day you had to draw the elevations, you had to draw the place. Well, let's just get ready for the next semester.

Johnson: That's right.

Sharples: But a lot of this was done in sketch form, and then I basically figured it out in model.

Johnson: And then you just recorded all that in your final drafted drawings?

Sharples: Right. And so what happens these days is you would basically build a model digitally, and then you would - you could print it, you know, print out the drawings or build from those drawings, or as you can see today you basically use the printers and …

Johnson: That's the model.

Sharples: Right.

Johnson: That's good. Well, I think that pretty much covers everything.

Tom Hanrahan

Personal Interview

New York, NY

February 28, 2013

Johnson: All right, great. And so it's just basically an open discussion. I have some basic questions. I have read a lot about what you wrote in the abstracts about these projects and things like that. Um and I'm talking to several different students from that time period and so you're actually probably one of the only, uh, professors that I'm actually like be interviewing about it.

Hanrahan: Right.

Johnson: Um, so I'd be really interested to hear kind of, you know, about the pedagogical objectives, um, the expected outcomes sort of things and the common issues that you saw that students ran into. Um, so on and so forth, um, and then I guess that I have some questions that I can throw in. Kind of just an open discussion about these assignments.

Hanrahan: Okay and where do you want to me to start?

Johnson: Um, well okay let's see. Um, let's start off with kind of the overview of you know what were the objectives of these three assignments – these three core assignments. I mean I've read it, you guy have written about it, but I kind of want to get it from you again.

Hanrahan: Well, uh, it's … first year pedagogy is, you know, the uh … it's sort of endlessly in turmoil and it's simultaneously endlessly challenged. Let's just; let's sum it up. How do people treat first pedagogy in schools? They're endlessly complaining about it in that they think it's in constant crisis and not preparing the students properly for everything going forward.

It's incredibly important in that whatever they learn in the first semester transforms them or simultaneously damages them for the rest of their life. Um, it's uh, you know, it's constantly debated and I think however, the one thing that's agreed upon is that it should in some way, uh, reflect the kind of fundamental values of either the school or the group of faculty who are teaching it so therefore, uh you know, the group of faculty are always kind of put on the spot as somehow being considered as emblematic of that particular moment to the school, um, or, um and kind of simultaneously therefore that the pedagogy should be emblematic of the values of the school.

So it's like there's all these kind of impossible contradictions and pressures put on it, but the bottom line is that I think whenever anybody's kind of given the assignment to think about the pedagogy, it's never seen. You know there's another way to look at it entirely, which is just, you know uh, sort of um give them some components of architecture and

then the following year give them some more and give them some more and give them some more.

But first years never look like that.

Johnson: Yeah.

Hanrahan: It's to me first year is always as fraught as like thesis. You know, first year's got to like both give them the fundamentals and kind of sum up the universe and at the same time thesis has to kind of not only; has to sum up the universe and reflect the fundamentals and be a personal expression of students.

Johnson: Yes, yes.

Hanrahan: So first year is completely neurotic and then thesis, the poor students are completely neurotic so that's kind of; and everything in between is kind of more, much more subtle. It's much more …

Johnson: It's totally how the experience is.

Hanrahan: It's much more … yeah it's much more clear. Second year okay we're going to do small building on an urban. Everybody knows the structural stairs. Then third year we do the comprehensive studios. And it's like okay life safety, everybody knows what a mechanical system is.

Johnson: Yeah.

Hanrahan: And then fourth year kind of option studios, which in a funny go back to maybe some of the uh first year, but what was interesting about; and it's interesting too. There's still a value here, which I guess is maybe my sort of vestige is what was so I think interesting about this moment uh that sort of was a kind of rupture with respect to what first year had been certainly a Columbian sort of what; certainly what I got in graduate school is that you know this was coming out of the kind of neo-rationalist phase of architecture and, you know the sort of phase of architecture where it was as important to learn about, you know, regulating lines of which you know Steven is a kind of proponent obviously. You know, that sort of prior decade was all about uh almost learning some of the classical precepts of architecture and more organized on rules, figure ground, some of the basics of drawing, etc.

And this was a moment that said it's possible to look at the fundamentals of architecture with respect to an architectonic idea that is the kind of; the stuff of architecture, the making of architecture uh, while at the same time sort of injecting this notion of experimentation and that would be both spacial; it would be spacial, formal, and also kind of I would say conceptual/narrative. I mean again those words are so fraught. It's like narrative. No.

I believe in narrative. No, it's the word is concept, but somehow, you know, you have form, you have space, and then you have the kind of whatever you want to call it. Again, narrative, concept, logic – I mean people use different words, but the students

were therefore asked to, kind of in advance of program, define the kind of conceptual terms or again narrative terms of which they were starting to understand space and form. And that was really different, really interesting. And I think is still very much a part of many first year pedagogies today. It's very much a part of ours.

Now, you know we have a whole other set of things going on, but I think what was really kind of important about that moment, it did address very specifically again the notion of making an architecture. Architectonics as a kind of, you know, as a kind of extremely important part of the first year education um and then this notion of kind of experimentation. Nowadays, you know probably over the last ten years we, you know, what the kind of computational revolution has changed first year to consider, you know, much more uh, you know, kind of parametric aggregational logics. And that's interesting in that it still has a kind of intersection for me with the notion of architectonics. Much more so than any kind of rule system so um, you know, that's pretty interesting. It does; it does bring its own kind of rule sets so to speak.

Johnson: Yeah, it really does.

Hanrahan: But it's not necessarily a kind of uh classical typology so. You know, that's been a really interesting transformation. So nevertheless that for me were the two kind of most interesting and kind of radical things to think about which were great and which, you know, had, you know, uh all sorts of kind of, you know, all sorts of implications. The critique was that the sort of format was too precious, you know, the kind of architectonics of the square.

You know, the point line plane seemed to sort of hearken back, but again it was saying what; for me what it was doing was, you know, trying to come up with words that would focus the student on the architectonic dimension which had to do with the, you know, the ground plane, solidity of the ground plane, the lightness of the frame uh, but that the organization was not necessarily programmatic. It was more kind of internal, conceptual, theoretical, whatever you want to call it experimental.

You know you could, you know, that could be a problem. I mean again you know and we're still living in, I think we're still … that's a kind of general critique I think of architectural education which was, which is still to this day incredible looseness, almost inconclusiveness of program uh which in fact is still celebrated, the kind of in-definability of program. Uh and I think that's a problem in architecture schools and architecture generally. It's like to get students just to focus on program in terms of human dimension understanding which this forced it because of the constraints but because it was never sort of issued as a kind of idea, it always remained very problematic for me. Students never really thought about program really. They were kind of forced into it by the dimensions of the thing. But it was like you kind of backed into program so that; and that's still true today. People … I mean yeah just in general. You know where I come from. You're supposed to overlap program and never, never come to any definition with respect to human occupation.

Johnson: Never supposed to make decisions.

Hanrahan: And it leads to; yeah. It leads to certain problems in architectural education. I think we still have … I think our first year still asks for a certain amount of programmatic indeterminacy shall we say so, you know, it's an issue, but program was not part of this.

Johnson: Yeah well the students…

Hanrahan: Who are definitely not part of this.

Johnson: Agree that they, especially once you did not have an architecture background.

Hanrahan: Right.

Johnson: They; which is also a critical kind of part that I'm looking at is how you structure a curriculum for people who have no experience and for people who have plenty of experience.

Hanrahan: Right. And this was good in some things, but bad in others.

Johnson: Yeah, right. And so they really liked the non-architecture uh background. People really liked that there was no program. That it kind of just focused on the simple elemental ideas...Of kind of these pieces, this land and what they mean to each other. It allowed them to kind of just not have to worry about the complexity of social or the social constraints and things like that. And um … and so I'm interested in kind of, you know, talking about the notion of creating the curriculum for students who have no architectural experience. And also finding ways to stimulate students who coming in who have plenty of it.

Hanrahan: Right. Well I think that's exactly what this did and that's still … I mean our graduate program um is its first semester is, you know, very much uh about kind of parametric uh modeling and organizations and uh it demands this um, you know substantial, uh, you know … it demands that students climb a pretty steep hill in terms of learning softwares, but it still has that kind of problematic looseness. It has just a kind of generalized sight and I think that is true that um; that it offers kind of easy entry for non-architects and it also offers a kind of respite for the students with architectural backgrounds to kind of loosen up again after, you know, maybe a pretty uh sort of rigorous education toward the end of their time, if they've gone through like a four year education.

Um, yeah, I think that's fine. I just think you know it's what comes; again it's what comes after that. What fruits does that bear, you know, in the sort of second, third, fourth semesters and it usually requires like another round of discussion which is that oh by the way you know buildings tend to have organizations by the way (Laughs) things like that. Steven's always very anti-organization. It had to have a kind of Gestalt.

Johnson: Yeah.

Hanrahan: Each; but that I think Gestalt in form is very different from thinking about programmatic organization, so that you know, but that's fine. You know, you just teach it later so this didn't do everything.

Johnson: No. It seems like the second semester you know you moved right into two buildings. You know, you come up with these abstract exercises. You go to house at the kind of end and then next semester it's, you know, photography studio and then this; oh what was the other one?

Hanrahan: So in other words the emphasis was on making, you know, conceptual sort of thinking and poetics, right, again somehow convincing the values of the people who designed it, condensing the sort of values of the school at that moment. I mean and, you know, you would be hard pressed to say that you know Columbia University at that time was focusing on pragmatics and program. Quite, quite, you know quite the opposite so yeah and yeah, I think that is, you know, again emblematic of the most important sort of values of the place so right.

Johnson: Now, so in regards to it; let's kind of focus in on each project. In regards to the first one, the kind of the line project. What did you notice most frequently with students running into like common problems or prominent issues that they were consistently running into?

Hanrahan: What kind of problems in that one? Oh God, it's been so long.

I always; I mean they were all great. They were all you know very different and very interesting to teach. Um I, you know, I think in a way that one was; that one always seemed to be the; I can't remember. I mean we always would you know sort of wrap up and say which one was the hard one. I always remembered the second one as being the more difficult one.

Johnson: That's what some students actually have said.

Hanrahan: Is that right?

Johnson: They say that that was their least favorite one and their least successful one.

Hanrahan: Yeah because it was kind of like you had introduce the ground plane in that and there was some notion of going down and up and then you had these walls.

Johnson: And then the hearth. They didn't; a lot of students didn't like the hearth.

Hanrahan: The hearth and … And then they'd get yelled at. Some professor would go it looks too much like a fireplace and then the students were like you put the word in the program. What are you, you know. It should be more abstract and them some would go it should be less abstract. People gather around the fireplace is an icon of, you know, so it was always a bit confused. What was beautiful about the first one I always thought is this notion that it's a kind of three dimensional drawing. It was just

really elegant sort of exercise and I think, you know, and you could start that project from either the model or the drawing.

And they always met in a really wonderful way. The drawings were always nice. They always captured, you know, just a very elegant sense of movement, sometimes structure, always a kind of path and a sequence. They captured light beautifully. You know, it was just; it was great. That one, I remember as having very, very few problems and the sort of elegance of the; the elegance of the relationship between a ground plane which is marked by a line and then has some relationship to a three dimensional projection was really, you know, everybody just kind of got it immediately so no. I don't remember any, any; that was the good one. That was the fun one, yeah.

Johnson: It's almost like and I keep thinking about the parallel to this, the furrows on the ground as kind of almost being an abstraction of the nine square problem. You know, as the columns is kind of that's point of reference and this is lines in the ground.

Hanrahan: Right.

Johnson: I find an interesting relationship to that.

Hanrahan: Well, it was clever. It was much more, to me it was much more about time and, you know, in a sense a kind of passage across the site, almost like a step or two steps.

You know, you could say that if you measure it to the body so rather than the nine square which to me was always a kind of physical structure. This was more a kind of, even a more elemental structure. It's like a just a marking of the site.

It was as if it was agricultural. It was something very primitive, even more primitive than the grid in a way and more abstract oddly enough. The grid becomes always a kind of armature for a volume and this didn't even say that. This just said somehow it measures time and movement of the body across the site so it was enough. It was just; it was brilliant. It was really, really, nice. Yeah. Really, really nice exercise. Yeah and then the second one was like whoop. (Laughs) You know, kind of hiccup.

But it was, you know, almost like a necessary transition because where the ground plane here wasn't really touched other than the line, it was kind of marked as a measuring system. And then this second exercise was like uh-oh, got to go up and down and, you know, and you know; this kind of system evolved and, you know.

The second one after you taught it a couple times, you always wanted to, I always wanted to somehow get students to understand that the ground plane was something that could be manipulated and that the wall system implied volume. In that sense, it was, for me, always kind of a look ahead to the final exercise.

It was kind of; kind of a let's get through this thing. Let's get to the third one. This is like kind of; and then plus students were tired, you know, and you've got to do three of them and it's in the middle. It was always kind of let down.

But it was kind of a necessary set of things to understand with respect to, you know, the section and I think, I think what was really important about that one and the last one was that, and again this was a huge virtue of these exercises which now, you know, I mean if you don't give a site in first year curricula and many don't, you know, particularly you might start with a kind of set a parametric. Again, I'm talking about over in ours where you start from a high level of abstraction with respect to the unit and you can look around in the undergraduate; there's some first year things and our book has some of the graduate things.

Um but, I think students are asked to start with a relatively high level of abstraction, almost sightless, and that, you know, it's placed there. Their kind of research into form and space is somehow placed later onto a site, a physical site.

And I think that was the really nice thing about these exercises in that even though it was relatively abstract square piece of plywood, it always had density. We always understood it to have a kind of top and a bottom, a sky and a ground.

Hanrahan: And therefore was something you would draw and cross-section that had real meaning with respect to architecture later. It was mass. It was volume so that second exercise was really important to start to get students to understand okay, first exercise when you drew cross-section it was like this. Some of the more sophisticated ones were little notches.

Hanrahan: But it was just, you know. Now you can draw, you know, and the wall or the wall system is continuous with whatever that kind of transformation is starting to happen in terms of the shift and the two levels and all that kind of stuff. So there was mass there. There was material. There was sky. There was ground and that was quite profound I think in terms of the issues it raised.

Students really struggled with it though. It was always kind of like what are we doing here and I want to make a volume, but I can't and it's was walls.

Johnson: So there trapped.

Hanrahan: Yeah, they were trapped.

Johnson: That's interesting.

Hanrahan: But it was a good; it was again … I still think it's just a wonderful; I mean I always liked teaching it even though I could see the students struggling with it just because the issues were really important and you always had to kind of, you know, watch them struggle a little bit and say well, you know, you don't like it now but you're going to like it on the next exercise. You'll understand why you're learning it.

Johnson: Did the students know where they were headed?

Hanrahan: Not really, no. No, they're just there absorbing. So then you get into the final exercise and I have a hillside now, I can really do things. I can dig and put up.

Johnson: And they really embraced that?

Hanrahan: Yeah and then you can make a volume, you can make a building, and you know, yeah. The it all, I think it all kind of made sense but again, I think it was a critical step because of that issue of section which is, you know, not necessarily a lost art but it certainly, you know, you know, a part of architecture which can be overlooked quite easily in education today because of the kind of computational tools don't necessarily demand an understanding of section particularly through the earth.

Johnson: Absolutely.

Hanrahan: Yeah so that was quite beautiful I always thought. Yeah.

Johnson: And so it seems like with the last project, you know, the students obviously, the school had a preference for them. Those ones were the most published and they were very complex. But it seems like they also, they; I really like this balance of the kind of the stereo-tonic tower versus the kind of tectonic tower and the relationship between and it's a synthesis really of the first project and the second project. And then it's inundated with program, kind of a very familiar program. This idea of dwelling. And so I find it fascinating. Do you think that students had an attachment to the idea of dwelling? They already knew what it meant to do that so it kind of made the program less overwhelming in a way? It was just it's familiar. Do you think that that helps?

Hanrahan: Oh yeah, of course yeah and dwellings are, I mean just a simple sort of dwelling is still; was used. That was nothing new. You know, that's been true of curricula since the bows are.

You know, you do a sort of small house, a gate house, whatever you want to call it, you know, and we still do small dwellings or house so I think absolutely. Just the familiarity of the word suddenly injects, you know, memory and, you know, just placed you'd been and all those kinds of things and I think students were able to exploit that. Yeah or when you say, you know, just hearth that again, that was a trap because it was like well I know what I hearth is, but I don't think I know what you want me to do and then they'd always chewed up, but certainly point line plane, you know, it was like; or the point, sorry the point line. That was strictly abstraction.

Hanrahan: So it was like the rules were kind of more set there. So um you know, again that intermediate thing was a little tricky but yeah, to introduce program in that kind of primitive level was I think very good. You know, really all you needed was a space, you know, with some kind of volume around it. And you can call it dwelling. (Laughing)

Johnson: Well and that's the interesting thing is they were really inventive.

Hanrahan: It wasn't terribly complicated. Right.

Johnson: And so I wonder like how students really dropped their kind of preconceived ideas of home or dwelling and came up with some very interesting approaches.

Hanrahan: Yeah. They weren't constrained by square footage or none of that, you know. There was no, no organization boundaries, etc. The point was to…

Johnson: There was the square, the triangle, and the circle plan type, right?

Hanrahan: Yeah, people blew that off in like ten seconds. That didn't take long.

Pretty fast but you know, what stayed again was the kind of architectonic, what you mentioned which was absolutely wonderful which is the frame building versus the stereo-tonic. I mean really wonderful. You know, just a wonderful formulation of again kind of working backgrounds to our program from architectonics I thought and I think that's really, really valuable. I mean given, in a sense, my critique of the sort of lack of program through the first year, I think it's still a really, really valuable thing too and it's exactly what you said. Students without a background and students with a background can find a kind of, you know, really interesting common ground where you say look we're going to get the program through the architectonics of the project and your own internal conceptualization. So you know and that allows people to define program in their own ways, define space in their own ways, and to also define it around the issues of making again through the stereo-tonic and the light. And so it allowed for all sorts of invention that you wouldn't get if you gave square footages and the house has to be organized, you know, and living with bedroom and kitchen.

And I think that again is still used, you know. It's still a really, really important way to think about the kind of, the sort of how program can be implied through other things, through this notion of making and through other means of conceptualizing what the notion of organization is, whether it's narrative or concept or you know, all the things we talked about. So that was; that was very, very positive and I think, yeah, it led to so much invention and was/is a great way to teach it.

Again, you start giving people a bigger building, bigger organization and suddenly the thinking shifts and you have to teach that in later years, but I think if you're trying to get people to a point where they; where they understand that the way, the sort of meaning of the building, the kind of poetic dimensions of the building, the kind of meaning of the spaces is not; it's not necessarily tied around this notion of kind of organizing or problem solving, but it's around this dimension of the kind of qualities to the spaces, the kind of physical characteristics, the architectonics of the solution and the conceptual organization. Those are good values. I still think those are very good values.

You know, I think served students, you know moving forward. I think, again, they had to overcome certain other biases, but I think it really served students well.

Johnson: Well it was interesting how and you all mentioned this all the writings you guys have done in abstract about it, but it seems like these projects really focused around materiality and haptic qualities of what heavy materials can do, what light materials can do, and what they offer, what opportunities they offer in terms of, you know, you're perception. And then, you know, kind of synthesizing them together and so I always find it really interesting that, you know, in each project you isolate a material.

First it's kind of the tectonic light pieces and then it's a heavy construction of either masonry, kind of this unit idea, or concrete. And then somehow it all comes together and then they really think just simply the relationships between the kind of autonomous components that you're working with and I think that's; it's really fascinating because it's very kind of human to us. We understand this idea of material and heavy and light and so I think that that's why these have turned out so rich because they focus on very specific things. They don't have to think about, you know, stud walls or really; it's just what does it mean to be light to heavy and then marrying the two.

Hanrahan: Right. Right. Yeah, I think that's right.

Johnson: Let's see. What about - I haven't asked this question before, but I always have it written down - the references in the reading materials because in the reading list…

Hanrahan: God, I can't remember.

Johnson: Oh I know. I think I have it somewhere in here, but so there's like the power of limits. There's lots of things about proportions.

Hanrahan: Right.

Johnson: And uh, and I know Steven's really big on the golden section.

Hanrahan: Right.

Johnson: And there's a lot of talk about proportion and composition. Um, there was like the Hunchback of Notre Dame was one the reading, was on the reading list. Basic; I forget what it is, but there was a lot of, the thing I found interesting was there was a lot about composition and proportioning. Was that kind of something that was um injected into this idea of thinking because obviously when you're working with kind of an autonomous system of components you want to think well how do you, how do … well and you have set limits, height limits in these things, but how do you decide how long something's going to be and how thick this is going to be and so on and so forth? So was that a common discussion of how you determine proportions in the system?

Hanrahan: No. I think my memory was, again I can't remember too well, I think the issue of geometry was always there because of the square ground plane. That sort of starting point there um, but I think very few people, now maybe Steven was the exception, uh but I don't know if you know that he taught that long. I can't remember, but I think um, you know, the kind of … I think there were two things that ended up being stressed with respect to "organization" again or composition, whatever you want to call it. One was this notion that a new kind of mathematical set rules was emerging over the last really several decades and a lot of people were very interesting kind of new mathematical organizations which had to do with typology.

Had to do with new kinds of uh say non-linear organization so I think a lot of younger faculty brought into it an interest in sort of the new math, you know, versus the old math which again was almost, you know, was kind of precomputational.

Computation was emerging just at that moment so people were very interested and you know, all the kind amazing sort of diagrams that you get from, you know, non-linear systems, non-repetitive systems, algorithmic systems, and I think that started to emerge as a great interest. So you don't; and you see that in a lot of the projects. You don't see more traditional kind of geometrical sort of uh, sort of systems like the golden section and you know, the sort of simple rectangles, etc.

But nevertheless, the notion that somehow you needed um a kind of starting point and students would often find these kind of amazing diagrams and very interesting things, you know, uh you know, Poincare's relationships between sort of randomized sort of statistical analysis.

And sort of you, it's you're plotting these points along curves and things like that. I mean they were really quite beautiful and they had nothing to do with kind of classical organization. So in a way, the text probably served as kind of provocation or it allowed; it gave the students license to sort of look at, you know, geometry as a kind of topic, but then you, they were encouraged and allowed to sort of roam far and wide and particularly look at these kind of new mathematical sort of ideas, you know. Just fractals, I remember students bringing in fractals very early on.

In the kind of, you know, discussion um, you know, yeah. All the, you know, fractals leading to again the kind of non-linear system's clumpiness of, you know, the universe, you know, sort of rather than sort of the traditions of sort of composition. Sometimes students would like at these kind of radical extremes and core of concentration and dispersion and yeah, things like that. Things that you find in nature and I think that was really, and that still is kind of something that's of value here in our first year which is how does nature; what is the geometry of nature? It's not necessary.

There are things that you find in nature that do follow the kind of uh, you know, the mathematics of the golden section.

Absolutely, but then you also find things in nature that are quite different than that and that, you know, that's a really interesting kind of conversation. So that came on very early here and that was really wonderful.

The other thing was of course movement. You know, that a lot of the kind of so-called rules and proportional systems had to do with movement and particularly again the first one, you know, brought up all those kinds of ideas. So very early on people were bringing in, you know, Darcy Tom's ideas of growth and Lloyd Bridge's photographs and so this issue of movement growth or transformation was much more important than again the kind of more kind of simple ideas, but nevertheless kind of core idea of kind of organization.

So think those two things, you know, the new math and the idea of movement or growth was very early on and a big part of it. It was great. So it; and gradually, interestingly enough, all those texts found their way into the later reading list.

They weren't there early on, but so those early reading lists were nice provocation I thought.

Johnson: Now obviously Steven got the idea point-line-plane from Paul Klee and Kandinsky. You know, and so; and those were also on the list, the Paul Klee's notebooks. Was that a discussion? Did people really, really dive into Paul Klee?

Hanrahan: Oh sure, absolutely. Yeah. That was another; I mean I should say that was always a good source and that was a great way to get students involved in sort of visuality. I mean these exercises were also, always visually very rich and you know, I remember always encouraging students to just kind of look at everything. Just look, you know, and yeah, the fact that I think students; we even discussed it very early on that these thing harken back, you know, the bow house and maybe even a little bit before that, but that you could look at these kind of extraordinary kind of examples of modern art and modern form making and, you know, from the 20s and before and that they were intending to be very rich.

I mean, you know, you can look at certain kind of Picasso drawing which look just like Paul Klee drawings.

Hanrahan: So everybody, there was kind of a common language there which had to do with just the same things you've been talking which is reduction, abstraction, but also with a notion of making so that the abstraction wasn't completely abstract. That there was a kind of again haptic or, you know, phenomological dimension to the reduction and you know, that was absolutely a big part of it. Right? Visuality.

Johnson: I think we've covered a lot. Let me just make sure. We talked about that. Yes. You know one thing you said, I don't know if you remember this, but you wrote and I was reading it last night actually and you talked about how these projects liberate. The students because they're so free and there's; it liberates both the non-architecture majors and the architecture major background people. To just think about what it means to construct. And the idea of space. I thought that was a great way of explain a lot of people to the many things, but in the most simple terms you just said it liberates you. There was really great insight.

Hanrahan: Well I still take a lot of grief from that around here so…

Johnson: For what?

Hanrahan: Well, you know, there's still professors who think that's the last thing you should be doing in a first year so I stand.

Johnson: So they want like highly structured?

Hanrahan: Yeah. I still bring that. I still bring that value to, you know, the first curriculum.

Johnson: Do you teach at all?

Hanrahan: Not at all. I just look at it from afar. So people come in and go oh there, you know, this is too much freedom. I'll go okay. I'll get on it right away. You know, right. (Laughs) I mean yeah, I'm not involved in pedagogy too much anymore, but yeah.

I think again that that was the first thing we discussed which that was why I thought it was such a wonderful and radical and important break because of it brought it. I don't remember the word liberation but, you know, because we used experimentation. That was the word. But that's; it's like you bring in this value which says there is this part of it which is all about, you know, doing something you haven't done before and doing something that nobody's done before. Even though, you know, probably everything's been done, but it really hasn't though and it is a kind of discovery and I thought that was great. It's again you bring that value to the, you know, to the teaching moment and you say this is about discovery, this about you discovering something about yourself and architecture and there's; this isn't going to be something. This is a strictly rule base, but there were enough rules that again you could kind of work backward from the rules into a more conventional architecture or kind of not. You could always be in this really interesting threshold. Between something really experimental, something kind of architectural. It was nice. It was a really good moment.

Johnson: Well as Robert, he called it, he's like you can being again kind of.

Hanrahan: Yeah, absolutely right.

Johnson: I remember one last thing. So you, you talked briefly about what was happening before these projects came about. Can you just a little bit more describe the quality of the first year work at Columbia right before this kind of?

Hanrahan: Well, it was consistent with what I was doing at Harvard and uh you know, the Cornell sort of method in a sense. The Colin Rowe, I should say the Colin Rowe sort of method dominated which was heavy on figure ground. It had a lot of, you know, classical proportion systems embedded in the pedagogy so that in a sense that was kind of rollover some of the geometry, but like I said that geometry fell by wayside quickly and students got more interested in more complex geometries.

Johnson: It was more historic in a way.

Hanrahan: Well, you know, golden section, all the texts that you named were also part of the mathematics of the ideal villas and the, you know Le Corbusier you know, used it his entire life. The modular was based on basic, classical systems and proportion so um. Those ideas were important, but more importantly just the education was really figured around nine square and the nine square came, you know. It was kind of combination Beaux-Arts and modernist. A little bit about house and still a good, still a good kind of system. Again, it stresses a knowable kind of structural frame which starts to; you know, the problem that you have with it is that it would always in a way define, you know. It became a language very, very quickly for students, both the nine square and the figure ground.

And what was so interesting about this was the stereotomic volume so to speak was the kind of, you know, was kind of sneaky figure ground exercise. You know.

Johnson: Sure. I can see that.

Hanrahan: And uh you know, the tower. So it was kind of a good, you know, and that was always why some of that second exercise was kind of tough because it brought up issues of figure ground without a building which so it kind of made it impossible, you know. For a student to really understand um, but by the time you got to the slope side of the tower then you could really start to think about things that are drawn with a lot of mass and things like that. So this again was kind of building upon a little bit those kind of uh more rationalist and more uh I guess you would say non-transparent or non … you know; the figure ground. The figure ground is still a very important tool, but it's limit is that everything one side of the line is black, everything on the other side of the line is white.

So the notion of kind of a sort of blended system of architecture and the notion that somehow architecture, you know, you can create a kind of architectonics that has a more a kind of transitional kind of feel developments, right, as opposed to everything white and; on one side it's white and on the other side it's black. And that's true then of the iceberg too that the column itself is black; everything around it is white. It's a piece of structure. Everything that's not structure is spacial. Again, there were certain sort of absolutes prior to this and again, this very quickly brought in; the discussion became much more about uh you know, this sort of the notion that architecture is as much kind you … you can objectify certain parts of architecture. A building is an object, but it's also intensely involved with its field and it's; and it's … and the kind of space around it and the ground plane and so it became much more kind of complex and less object oriented I think then the kind of, you know, the previous generation of kind first year pedagogy which was very much known about.

You make a volume and the volume has structure. It has a figure ground relationship with its surroundings and space and … you know. This brought all sorts of issues of transparency, you know, sectional transition, again the second one without volume which was always tough, and then the notion in the end that the volumes intersect not only with each other, but the ground plain. And so it's much more about a kind of complex field of elements than it is about these kind of known volumes and more architectural absolutes and that was; again that was just in purely sort of formal terms. It was really important sort of transformation too and it kind of liberated my thinking as well as an architect. It was great.

Johnson: Great, perfect.

Kenneth Frampton

Personal Interview

New York, NY

March 1, 2013

Johnson: Well, so, the focus of my research is on Columbia during the years of 1986 to 1991.

Frampton: Why that?

Johnson: Um, because this is the time when,, um, … when, um, Steven Holl was developing the assignments the point, line, plane and volume.

Frampton: Yes, right.

Johnson: And so my focus is in on looking at for sure pedagogy with those assignments, uh, kind of as focused.

Johnson: And so I … I was looking and what I found really interesting about them is they had a very strong anthropological component which I feel, for some reason, is coming from, from you during that time. And then, of course, we have the Paul Klee ...

Frampton: Yes, that's right.

Johnson: So I'm kind of examining and, and looking at your role as the chair and kind of how you see or how you saw the first year program pedagogically and its, its importance during that time.

Frampton: Yes. Well, it's a lot time ago, and do I really remember? I mean I do remember, of course, the … these three exercises which we'll talk about, correct me, in the first semester.

Johnson: Yes.

Frampton: And, um, I mean I think they, they were … Yes, I mean, I, I mean the plane, obviously, was a more synthetic one, and, uh, saying truth, if I think back, you know, what the hell do we give for point and line? You know, what exactly do we ask the students to do? I can't honestly remember. What do we ask them to do?

Johnson: All you simply asked them to do was, uh, to describe the path with linear elements to …

Frampton: Well, that's for line, but what about point?

Johnson: Well, that's true. Well, I think that it was described that the point was that first moment and then right from it a line is formed.

Frampton: Yes. I mean, you know, I mean, at first, I haven't thought about this since that time, probably. I mean, at first the, the question of the line also was inherently topographic, you know, and that … and also involved, you know, the implicit of the idea of the architectural promenade, you know, related to the Corbusian notion.

You know , it's important for him this notion of the promenade, you know. And, um, and that, I think, is something that has kind of remained with me. And, uh, you know, this comparative critical analysis of built form course that I thought over a very long time, you know, what was basically predicated on, well, on two things really.

One was on, uh, this distinction between public, private, semi-public and service and asking students to analyze the plan and section for that matter also into those parts of the plan that could be considered, uh, public, those parts that are uh, unquestionably private, and, and those parts that were, um, you know, between the two really are semi-publics, uncertain between these two oppositions of public and private, you know.

And then, um,, um, semi-public … And then service, you know, which was … these, these spaces which were, you know, like lavatories, bathrooms, storage, um, elevators, escape staircases, as opposed to main staircases.

And then, you know, the next thing we did, the students were asked to work was to trace a, a movement through the, uh, plan configuration and section configuration, uh, to arrive … Uh, strangely enough, I've never thought of it before, but to arrive at a point, you know, I … a point, a point of arrival which always, you know, implies a hierarchy, which sometimes perhaps cannot really be found. But in the private house, for example, the point of arrival would be the most public space inside the private house, you know.

Namely the living space, you know. And, and, um, so that would be the idea of root goal, in fact, you know, involved in the idea of promenade, the idea of root, root goal. And um,, um, so that's an elaboration was that, you could say, um, not, not essential, I mean, that, that, you know, going back to this first year exercise, you know, this level of elaboration that just gone through, you know, is not kind of intrinsically connected to that, except in as much as the notion of promenade, you know, is built in, I supposed, to this idea of a line exercise.

Johnson: Mm-hmm. And then so … And it's interesting a lot of … Even I talk to Tom Hanrahan the other day. And we were talking about the next assignment which was the plane assignment, so there was always problems with this, with the students, because they were dealing with this idea of the hearth, which, which, obviously, it kind of comes from Semper's Four Elements, you know, this idea of gathering and it's also kind of this transition to space of, of hierarchies of space, now only dealing with the subtle suggestion of, of walls which imply of volume but was just kind of ambiguous for the students. And so what do you think about, uh, a project or that project, uh, in terms now introducing the program of a heart and now structuring the idea of movement through a landscape with just the idea of, of, of walls?

Frampton: I don’t know. I mean, you know, there has been walls or other kinds of enclosures, you know. You know, it's always been part of, uh, place-making, you could say, so I don't think it’s a big … I don’t see the inherent difficulty, really. I mean, I really don't know what the question is.

I mean, the issue of the hearth because of fire and because of cooking and so on, you know, is fundamental in terms of group, people being grouped around the hearth, you know. It's so basic. It is interesting, I think. That that what makes Semper's Four Elements of Architecture so remarkable is it represents the fundamental break with, you know, the whole Vitruvian, endlessly reworked Vitruvian triad of commodity, firmness, and delight, you know, utilitas, firmitas, venustas, you know, in Latin.

I mean, Semper's Four Elements of Architecture breaks completely with that very long, you know, uh, Renaissance, post-Renaissance tradition. I mean, of course, it’s even … It’s obviously before the Renaissance. We're going to go back to Rome, so you know, that kind of definition of architecture.

But I mean, Semper's Four Elements of Architecture, you know, of 1851 you know, it’s such a fundamental break with that. And the hearth, that's what so remarkable about it. The hearth suddenly becomes an element of architecture. It's recognized as being fundamental, you know.

So I don't know what, you know, what is the problem. I mean, you know, Tom Henry hadn't told me about the problem, but I don’t remember, okay, maybe there was some problems but what were these problems? That's why …

Yes. You know, I mean, what's the problem? What's the problem? You know, inherently, I don’t know what is the problem about the walls, I mean, walls, screens or whatever. I mean, what's the problem here?

I mean you could argue that and I don't know if Tom mentioned this, but I think one of the fundamental things is the roof, you know, and, and the roof over the hearth, you know, is probably, you know, more fundamental than any kind of enclosure because it stops rain and so on. I mean, uh, it protects the fire, in fact, the roof over the hearth, you know, and also protects the people around the hearth from the … I mean, you know, can't … hierarchize the orders of protection, the roof is surely just as important, if not more important, as any kind of wall, you know.

And, uh, and he makes a cause. I mean, the Four Elements are even … one, the hearth, and two, the framework and roof, you know. Well, actually, that's even wrong. Number one is the earth work, you know, two is the hearth, three is the framework and roof, and four is the internal wall, you know. So they are kinds of hierarchized, you know, I think. Anyway, where are we going with this?

Johnson: So okay, so then, really the big question from me is developing a pedagogy for first year education, the one that includes students who have no architectural experience …

Frampton: Yes.

Johnson: And one who had significant amounts. How did these … how do you … How does one begin to think about making a curriculum for those two conditions and ones which can stimulate the minds of those who have experience and one who … and to introduce those who have none. That's a very interesting kind of …

Frampton: Well, you know, it's interesting that there are … that didn't … what we're going to talk about, but I mean, since we started already, I mean, what interests me is, of course, you're right, Paul Klee, point, line, plane, was the, was the big influence behind this and this was very much coming from Steven.

You know, if I'm honest. And, and, you know, it does say something about Stevens, um, you know, Steven's own formation as an architect. It does say something about abstraction, you know, the importance of abstraction, even though something almost near platonic about this point, line, and plane, you know. It's very abstract, uh, absolutely, categorically abstract, point, line, plane, you know, and kind of, and implicitly near platonic, I would say, you know.

And this, however, is something else. And in fact, you know, if I were to, you know, which is not going to happen, but I mean if I, you know, I were to, you know, if I were to ask myself the question what should innocent or not so innocent students study, uh, what would be the first exercise?

I think you should be predicated on the, on the Semperian four elements. And it's interesting that though when I went to the AA in the 1950s, our first exercise in the first year was a primitive hut. And students made primitive huts, so-called primitive huts, all right, some, some very elaborate.

I guess I made one, but I can't remember what the hell I did. I remember being very impressed by one particular hut by a particular student that was really very sophisticated. But in any case, you know, what I do know is that Semper's Four Elements was virtually totally unknown, Semper being completely suppressed.

You know, and, um, yes, and, and, uh, um, so, you know, what would have been didactically rich at that moment, 1950, first year students, primitive hut. I mean it was like primitive hut, but I mean it was sort of thought that, you know, if we students were doing primitive hut, they would learn something rather,, you know, … But there was no … My memory is there was nothing really clearly articulated about the whole exercise.

You know, and whereas this, you know, if you gave the Four Elements, you know, there's a discourse there, you know, that is deep. And I mean what, what even also what Semper does with this in terms of craft production, you know, the, the earth work being associated with stereotomic and masonry and heavy, and the, the roof and the framework being associated with wood and with lightness, you know.

And, and then, you know, carpentry, there's masonry and then the internal wall to the wood weaving and the fire associated with, you know, making, smelting a

metal and all these kind of things we were having since he's able to take these four elements and, you know, expand them into craft production you know.

I mean, all of that is I think so didactic. Of course, no one does it, you know, but, um, it's astonishing, really, I think that it sits there as a potential for the first year training school of architecture. And no one does anything, not as far as I know, you know.

Johnson: At least today.

Frampton: Yes right. Right.

Johnson: It seems to have disappeared.

Frampton: Well, maybe ever, you know, did, was it ever really integrated, you know, I mean sitting there as an astonishingly brilliant, rich reflection which is very anthropological and also this important word that, uh, you know, Semper didn't invent it, you know. World creating, you know, cosmos, micro-cosmos, you know, this, this, uh, um, capacity of the human subject to create a world, you know, to create a world. It's fundamental and, and, um, we don't use it.

Johnson: And it seems like these projects, these three projects are so integrated into that, those ideas that you've just discussed, so which is why I kind of find them fascinating.

Frampton: No. But, you know, they won't be long … just insisting on is … at the time we did them in this period, you know, Steven and so on, they were not integrated into this discourse, because I didn't do, at that time, had I, had I … I don't think I'd ever … I didn't know the existence of Semper's Four Elements.

Frampton: So, you know, they were not integrated, and so we did something a little different from my own experience in 1950 in the AA but it's still was not this, you know. So it was equally, as it were, you know, floating somewhere, you know, in terms of a basic exercise. It was abstract, you see. Harry Malgrave and Wolfgang Herman write their first book on Semper ...I think I knew nothing about these, uh, four elements, because when I wrote, uh, Modern Architecture: A Critical History, which comes out in 1980, I do quote Semper for the SA Science, Industry, and Art, which I somehow I knew about, but I did not know about the Four Elements of architecture.

John Stuart

Skype Interview

N/A

March 5, 2013

Johnson: Let's just start with the basics. So like what was tour basic architectural background prior to arriving at Columbia?

Stuart: Um okay I didn't have any architectural background. I was literally groups…um a member of the group that started the three year…that started the summer before the three year program. And that was an initiative I think started by Polshek but continued by Tschumi to have a class of students who did not only have architectural backgrounds but also brought other backgrounds to the class. So I came from a phD program in classical archeology from Princeton and I had completed everything but the dissertation at that time so I was…I think I was twenty six when I um started the architecture program and so I was one of the kind of older members of the class.

Johnson: What year was that?

Stuart: That was 1988.

Johnson: Okay 1988. Um and so what attracted you to Columbia specifically.

Stuart: I specifically went there to study with Bernard Tschumi, because I had been aware of his interest in kind of archeology and la villette was an important um kind of layering exercise and I was…you know he was a young dean at the time and he um I though he'd bring kind of new ideas to Columbia and I thought that was…so I went there specifically for that reason.

Johnson: Okay so what were your educational expectations going into this?

Stuart: Oh I had no, I had no idea, no idea whatsoever. I mean I knew, I knew friends in architecture at Princeton but I had, I had no expectations and I think that was kind of the best way to start because I saw people who came in to the program with expectations and they were like totally well Steven's one of his favorite things to do was to have a…and probably like some of my classmates would argue about this but to have a handshake project which was a house. It was deceptively simple um and what it did was…you know all of the guys with backgrounds in architecture would kind of be um be like yeah I'll show him everything I can do you know I know how to size doorways and I know how to you know I can lay out a great bathroom blah, blah, blah and um and they would just get slammed on this first project. Because of course Steven Hall was kind of interested in the poetics and so those of us who came in without knowing anything and said hey look we're not even going to try to do, we're not even going to try to design

what we think of being architecture we're just going to start from the ideas. So that was kind of an unexpected um but very welcome handshake.

Johnson: Okay yeah I do…Robert has mentioned the handshake problem as you guys call it and I like that. Everyone else has said the same thing about how that unfolded. So this first project the linear composition the kind of first introduction to this kind of graduate program how did that unfold for you? Like what were the things that you went through trying to figure this out especially coming from a non architecture background?

Stuart: Right, right, right um well um I um hadn't seen that. I looked at your, at the printed materials and they weren't familiar. I'm not sure that we were actually given those. They seemed a little older than my year but I, I think maybe by the time I got there they stopped doing those kind of…they stopped giving those programs out. I mean I don't think it's impossible to get something in writing but I never looked at anything really in writing it seems so um anyway and I had Jeff Buckholds as a, as a summer teacher like kind of like this is a pen, this is paper, this is kind of how you lay out your desk and how you tape a piece of paper to the, to your drawing board and all of that stuff and Jeff was very close to Robert McCarter.

And um, um so but Jeff didn't really share um what the first program project would be and so um I had Paola Lacucci as my instructor and she was a kind of um a motherly person. She was perfect for me because I had been you know she was kind of the person who would say "John that is beautiful" and you'd be like what does that mean like…well okay you like it that's really what I need to know but um like why? So you'd never really know why and I never do this with students know. I never tell them, I never tell them that its beautiful but she…it was kind of her way and she came out of this group of Italians from the sixties who were really kind of more super studio kind of…where I feel it, it's eat, have a meal so she would invite all of her students over and we'd all eat together and she would always come by looking for food so you know if you wanted to get the first desk in the studio you would just have like cookies or something there for her. So it was very much a humanizing experience in the studio and I started the first project as as…I went back to my roots as a musician. I had been in the Boston Youth Symphony and gone to Brown on a music scholarship, played with Aaron Copeland and all of these guys, I played clarinet and so I kind of I went back to music and I kind of looked at um how, how I could kind of understands those rhythms through the lines, through this path and the lines. In this experiential path.

It was very naïve. I didn't know anything about anything and I just remember…but I was kind of fearless and industrious so on like one of the first days of class Paolo's studio was rest next to Steven Holl's studio and, and I remember one of the first days of class I was…I had just been like making stuff like just putting stuff together like and then doing lots and lots of little tiny like these little models and they all looked like you know little messes and then I wasn't at the desk I had walked away and Steven brought his whole studio over to my desk, not while I was there but he said look at this guy he doesn't know what he's doing he's just making stuff this I what I want you to do. So he didn't complement me personally but it was kind of like a thing that that

was kind of what you were supposed to do. We would also have sketches for example that were twenty sketches in two minutes and stuff like…

It was just built very quickly and the idea I think was to get us to think experientially and rhythmically and also to kind of be much more…be very generative in our process as opposed to kind of contemplative and then finally just kind of producing something but kind of learn about design by kind of reflecting upon something that you made. And you know when I went off and I when I later worked with Zaha it was exactly the way that she worked in her office in terms of just like constant…she did little tiny sketches and I think she probably still does and there are little sketches over sites that are to scale and just over and over and over. It's almost, it's, it's somewhere…it seems to hover for her somewhere between kind of the mindfulness and the mindless and to I think that was that state that we were speaking in the first three projects the line, the plane and the tower projects so.

Johnson: Okay now it seems like the furrows in the first project is kind of banding across the earth was kind of meant to set up a rhythm for you to kind of respond to and did that help? Did that give you something to kind of start with?

Stuart: Yeah absolutely. Yeah, no it was really, it was if I had, if I had just met this ground with no yeah with no, with no kind of demarcation with no um scale it would have been very difficult. His helped to be able to…I remember we would kind of walk off the scale of the furrows like to kind of understand in a studio so we'd say like okay here's one line and here's another line and you know…I don't know they were an inch apart and I think it was a quarter inch scale and they were four feet so we'd actually say okay here's four feet, here's…to try to kind of bring that, make the scale manageable to kind of understand it.

Johnson: Now the transition into the plane project everyone, like I talked to Tom and Chris Sharples both said that the plane project was always a tricky one and that students either didn't like it or didn't manage it well. What was your experience with this project?

Stuart: Yeah it's super tricky. I don't think, you know that was the hardest one for me to kind of think about what I did and even how I even approach it because I knew I approached this line project through a specific piece of music through this Mozart clarinet concerto but I…and I believe the plane project was one that I um think I chose a specific kind of component of it but I actually don't remember what the…specifically how…what the kind of basis for the plane project was and I remember what it looks like but I'm not sure whether it was every archived or not but it was I think I have photographs of it but it was yeah it was very, it was very, yeah it was very difficult. Because I think it was really about light and dark and it was about as opposed to kind of implied space. I mean it was very kind of the plane kind of created the potential for very highly defined space and it was then about another condition of light and dark and I'm not sure we were ready yet to um address that. It wasn't really part of the like how and when one experiences light or one experiences darkness. I remember creating these you know Serra like planes that were parallel and shadows of light would come through

but I wasn't…I didn't think that project was very successful on my part and I just thought it was me. Because there were some very beautiful plane projects.

Johnson: Yeah it seems interesting that all of you guys keep saying that this project was the one that really kind of was the most challenging like well who knows the tower could be most challenging for you but we haven't gotten there yet but it seems like I'm really curious as to why, why the plane project seemed to kind of be challenging for the students you know?

Stuart: I think that you know looking back on it now I, I would say that it had…it required a bit more program and for those students that were able to kind of connect program to like naturally just bring program into the project it probably worked better for them. But you know if you go from the line project which is really a program with experiential derive through um I mean through rhythms um and suddenly you're through…and then you think that the tower project which will be a programmed…it's specifically about program about what happens in the tower when you go through it and you go up to the top of it and experience it or not or whatever. The plane project had all of the kind of derive like qualities of the, of the line project with more defined spacial kind of connections but none of the programatic elements so what happens when you go from dark to light? And then or, or turn or, or your view if blocked by a plane and then it's unblocked. How do you, how do you evaluate that? History of do you know whether that it operating in a, in a manner that's you know that your interested in.

Johnson: Well how was it evaluating it? How did people try to help you get through these challenges?

Stuart: "It's Beautiful." And then we left terrible reviews and Paola would say its okay, its okay it happens all of the time. It happens to me. Let's go have some pasta and so it was kind of like you know that project the second project kind of like I'm trying to think of even one that was really good that I knew. I don't remember anybody's. I remember people's line projects and their tower projects but not so much the plane projects in my studio.

Johnson: Sure.

Stuart: But Paolo was also kind of at the…she was at Steven's poetic edge and somebody like Tom Hanrahan was and Ken Kaplan were at the…were more in the kind of Cornell kind of orthogonally driven gridded kind of, kind of um aspect I think and so I think that the idea of…and Steven Holl was somewhere in the middle. He had both the poetic and he had the kind of you know he had been working on projects and they were kind of gridded in the city.

Johnson: Yeah.

Stuart: And so I think um I think that was the difference and I think Alvaro Malo might have been teaching.

Johnson: Yeah.

Stuart: By Jim Tice was not teaching. Amy Anderson was teaching second year but have you talked to Amy about this?

Johnson: No Robert and I have been trying to get in touch with her but she doesn't e-mail us back so. It would have been useful because he's told me that she's would be great to talk to for this but…

Stuart: Is she in Hawaii?

Johnson: Yeah apparently she is still in Hawaii as far as we know. I believe Robert is going up there for a lecture in a little bit which is another reason why he's trying to get in touch with her but alas I don't know if she really has.

So then the last project, the tower project it kind of is everyone's favorite. Let's talk about that for a little bit like I mean that's a lot, that's finally a program. It's kind of going back to the handshake problem where you know have a house again and then you have this kind of balance between heavy and light so what was that experience like for you?

Stuart: For me it was also I think a moment where we personalized the programs of the tower so it brought…I think it brought…it went from in my case for example from thinking about music in an abstract way to playing to kind of, to kind of understanding a piece to understanding a kind of particular moment in the piece too then designing a tower in which the piece would be performed. It was this whole thing about when you play a wind instrument how you breathe and the importance of the diaphragm and kind of how you…there's certain I don't know whether kids do it now anymore but there were certain kind of exercises where you'd play kind of lying on your back like lie on a piano bench or something and you'd in order to kind of strengthen the diaphragm the muscles the breathing and um and so my tower was kind of about going from kind of from this you know going up the hill to this, to this dark area and then coming out to a platform on the top of the tower where you'd lie kind of at an angle and you'd play and as you play you'd see kind of the lines kind of extending beyond where there would kind of be this dream world this kind of…this world of possibilities…of spatial possibility that you would then inhabit while you were playing the music.

So that was um…that was pretty yeah…it's interesting how many things kind of…well it could be two ways it could be like that those projects are really kind of portraits of where the student is at that time. It's more kind of about what's interesting to them but its also kind of potentially about…so it kind of, it kind of would help the schools understand to have kind of a portrait of the class and the way in which the class obeys rules or doesn't obey rules or what they bring to the, bring to the program so this is also a way I think for um the projects to be…to kind of point to a future direction and to future potential of students.

Johnson: Well that's a good segway for this question then. So pedagogically looking at it as a first year as now an educator yourself how do you view these projects as a kind of collective whole. What do you think was the important thing that they provided and lessons which we can learn from them still today?

Stuart: Um, well one of the things that I remember at the time was that the work was…I think that there was more and more kind of fragmentation and kind of more of what Paola was doing moving away from, moving away…okay let me step back. I remember being very…the summer I did that…I mean the fall of the tower project I think was the first time that the models for Coop Himmelblau's law office in Vienna were published and I was just shocked that there was a connection...that somebody was actually building something that looked anything like what I was…because we were in a bubble. We were in this world that was about kind of imagining the potential and just kind of understanding space and thinking about movement and I don't think that there ever was…there was never like okay I'm going to make construction drawings and it's going to be built but then you see construction drawings of something that's going to be built that's very similar to it and we were accused as a class I remember of having projects that all looked the same and of having projects that were all kind of you know very kind of worthless in the sense of what are you learning from doing this?

What are you learning from this fragmentation and it was a critique of Columbia in light of what was happening with Moneo at the GSD at the time um or at Yale at the time where there was much more of a kind of your coming into learn to be builders and your coming here to learn to be…to know how buildings go together and how we think about construction and at Columbia it was um much more thought about you're coming to learn how to think and you're asked…and your primary goal will be to kind of create a clear narrative about um that goes from an idea to a spatial construction, whatever that spatial construction looks like and those kind of…I was hoping to go in that direction because of Bernard Tschumi I mean my father was an engineer and he taught at MIT and there was all of this stuff about…I mean you know he was constantly asking me why…How do you explain what you're doing to an engineer? How do you get a build and I was like you don't ask an engineer to do something that they've never done before and they'll never do something that they've never done before. I mean they simply do what they know how to do and so I think that all of that kind of experimentation was really, rally kind of stuff that toned the rest of the school. So it came out again really in the second year when we were looking at housing and this is where Amy's I think comments would be so helpful because there was a, there was a…the housing projects were going…the third semester so the fall following the first semester fall was always housing and my year in 1989 there was a crisis I think…I want to say that Amy was running the housing studio and Bob Stern was teaching in it and he just had, he had a , he had a fit and he just like at one point he cleared the entire studio and said everybody put everything you're doing out on your desks and we're going to go and look at where these studios are, where the whole group is and what the students are learning and I think somebody in my studio kept a tape recorder running underneath in their desk drawer.

So we heard them kind of talking about these…we heard Bob railing about the fact that there were no fire stairs and the students aren't learning anything and that we have no…I mean it's all about the you know about the egress and it's all about the relationship to the street and there were no streets.

So I think that and interestingly enough it was Bob Stern who was the primary advocate for Bernard Shoomy coming to Columbia so it was a very interesting kind of…but he was unprepared for the effect that Steven would have on first year kind of rolling into second year and he didn't really know how to deal with it and he still to this day doesn't really know how to deal with it so um it's but I think that it opened…yeah…and the fact that we never encouraged to think of enclosure. I mean and I, I don't do that with my students. I mean I encourage my students to think about enclosure because I felt that it was a kind of handicap for me not to think about what the…what is the inside? What is the outside? What are those spaces that are between inside and outside? Where is that…I don't know where is that…where do these kind of concepts fall apart and where do they become clearly defined? And since they were really never on the table…like there was no inside or outside in the first year projects and there was no…really then the second year projects it was difficult for I think people to get into thinking about…for people without backgrounds particularly grasp that.

Johnson: Yeah the photography studio I believe was in the spring right?

Stuart: Yeah that was um that was my worst project ever.

Johnson: Well it seems…that also seems weird because you guys go from this kind of highly abstract exercise into like oh here is the building program right away.

Stuart: Right.

Johnson: And I don't get the two…the transition at least like theoretically kind of looking at it in a pedagogical way I don't see how that's a logical leap within a first year. If, if…

Stuart: I don't know…I don't know what Tom's…I think it was a Tom Hanrahan project. I think he was in charge of that particular program.

Johnson: Yeah good point, at one point he was that's right.

Stuart: And then I just didn't…I thought that it was just kind of a disconnect between…I thought that nobody ever figured out how to get the line, plane and tower project to kind of successfully um kind of integrate with the, um with future projects. And one of the reasons might have been because of there was never really a project that that addressed site and the photography studio was definitely not about site. It was about…it was…I think it…if I remember correctly I think it was like either a corner or a just kind of in fill small scale three story in fill I want to say it was on a corner in Chelsea.

Johnson: I think it was on a corner. I'm pretty sure.

Stuart: Okay but that project because we never really dealt again with the ground and with the way that you move across ground up and down and through it in the first year that was…that ended with the tower and then we did this other project and then we did after that the Steven's Institute Project which was the pilot plan for some new technology um I don't think we adequately addressed um what we try to address now much more thoroughly which was that relationship to going below ground to being on

the ground to being above the ground, the way in which ground extends and landscape extends into that…like that relationship between landscape and building.

Johnson: Um huh.

Stuart: Maybe it was a New York thing but it was…and it's so strange because if you think about it shouldn't it have very little I think to do with these first year studios but at that time thinking about his own interests in landscape and these continual kind of movement and planes through the city as kind of a filmic landscape or you know continual as a kind of derive. But we never really got that so you go to the, the studio, the photo what is it a studio for a photographer or something like this.

Yeah you're just like okay this is where he king of shows his work and here's where he or she lives or whatever. I mean I don't, I don't thin it really helped us to…it didn't connect the dots.

Johnson: So you're saying it probably would have been more helpful to start examining the city as part of a spatial sequence to understand it and then using that as kind of an abstract method or site do you think. Like how would you make that?

Stuart: Diagram and there really was no diagram and there was no diagraming in that. There was, yeah the diagraming of context really didn't happen and maybe that's where the housing and, and even in the case of my housing, the housing project that I did which was with John Blackman, I don't know if you're going to talk to him but he's in Houston. He's another one who is very close to Robert McCarter and we did it on…like her husband was on a cruise ship we didn't even have a context it just floated around...

Johnson: Wait it was on a cruise ship?

Stuart: Yeah our housing project.

Johnson: I don't remember seeing this in the abstracts. I need to look at…

Stuart: It's not archived and there's a reason.

Johnson: Wow.

Stuart: We saved parts of it but no it didn't get abstracted but…

Johnson: Yeah okay that makes sense. I was like wow I would have definitely noticed those projects.

Stuart: Yes you would have and it definitely would not have been…it was really too, it was too far flung for them to put in abstracts. It would have made…Bob Stern just would have had a stroke and never would have become dean t Yale.

Johnson: Okay great. Well it seems like we have gone through everything. I mean well thank you very much. I appreciate your time.

Pia Wortham

E-Mail Interview

N/A

February 27, 2013

Johnson: What was your architectural background/experience prior to arriving at Columbia?

Wortham: I had had no architectural education before my first year at Colombia, but I had worked for an architect in Italy for a year. Basically I learned architectural drawing, or drafting. I visited building sites and got a very detailed education of architectural history of the area around Milan and Venice. (BA in civil engineering)

Johnson: What attracted you to the program at Columbia?

Wortham: I applied to four schools and Columbia was the only one that accepted me. Yale, Rice and Princeton.

Johnson: What were your educational expectations upon your arrival?

Wortham: I trusted that Columbia was a great school but I did not know enough about architecture at that point to have specific expectations.

Johnson: Gate/Garden/Basin (Linear Composition)...Your basic requirements were to create a spatial path, using light-weight construction, towards a basin of water along a flat plane of land which was inscribed with furrows. Can you share your thoughts on this project? Your initial reactions to it? Strategies? Challenges? Etc.

Wortham: The assignments and curriculum and work load for that first year seemed normal to me, yet not to all of my classmates. I had no idea that working with wood was novel until the 2nd and 3rd year students called us Santa's elves.

Now that I think about it my approach to the projects of that year has been my approach since leaving Columbia. I thought about the site. The furrows indicated human civilization and with nothing else on the site I imagined a desert; a place where water comes from below not above. So I made a kind of sculpture to the wind as a way to irrigate whatever was planted in the furrows.

Johnson: Courtyard/Hearth (Planar Composition)...Your basic requirements were to create a hierarchy of spaces, using heavy construction, along a path navigating a slight change in elevation and leading to a heat source (or hearth). Can you share your thoughts on this project? Your initial reactions to it? Strategies? Challenges? Also discuss going from the linear project to this one, and what that meant to you and your thinking about architecture.

Wortham: This second project continued my sort of invented desert culture and how they might construct another symbolic or spiritual place. Perhaps some of this anthropological or spiritual direction came from my critic, Paola Iacucci. My hearth was more of a point on a pilgrimage or path rather than a home. We looked at a project done in the desert of the US that was points along a path. I do not remember the author. The challenges came with the design process and making something beautiful that fit the idea or story one had chosen to follow as their concept. So there were several iterations in terms of forms but I remember being devastated if a juror questioned my concept rather than the form. Or if they suggested a form that did nor follow my story.

Because we knew this project was one of three the idea of path was important to me. Both the path that architecture had taken through human history, starting with prehistory, and the path that one takes through the built space one was designing. I also want to add at this point that at no other point in my education has a program of study been so well rounded. The classes outside studio projects raised the same questions as Steven Holl did; everything was related and could inform what we were doing or trying to do in studio. I would love to have the reading list from a class Amy Anderson taught. Some students complained it was too much reading without understanding that she was giving us a wealth of information that we could chose from rather than specific page to page reading assignments. I enjoyed this freedom. (Is there any chance you could find me a copy of that reading list?)

Johnson: Tower/House/Observatory (Volumetric Composition)... Your basic requirements were to create a rudimentary dwelling constructed out of heavy construction and a freely-programmed tower of light-weight construction on a landscape that had a 20 degree slope. Can you share your thoughts on this project? Your initial reactions to it? Strategies? Challenges? Also discuss going from the prior projects to this one, and what that meant to you and your thinking about architecture.

Wortham: The Tower house was not an observatory that first year. I remember our projects as being simpler than the ones you show in your other attachment. This was the project where my story or concept came together better. It was clearer from the beginning of the design process making it, if I remember correctly less painful to come up with the forms to the story.

I based the tower on my parents; my Mexican artist mom with my American business/ banker father. But I explained it as an introverted and an extroverted tower. The circulation with in the towers was very important to their design; as if the path through the building could affect your state of mind.

I want to interject here my initial surprise at this whole story or concept idea. I had come from studying civil engineering at Tufts University, as one of three women in a group of 45 male students. Engineering is straightforward and the only writing I did was in lab reports, which had to be short, and to the point. I had a hard time with the papers required for my history classes because I had said what I deemed necessary to say in 15 pages and Mary McCloud wanted forty. (I did not have take the structures classes but rather than taking less classes I had to and sometimes wanted to take double the theory classes.)

So back to the idea of a concept; I remember being very surprised at first when a project seemed to be judged on its concept as well as if not more for the actual physical building. It almost seemed as if a good concept could make up for lack of work, in terms of sections and plans as well as a boring project. Remember this was my first impression.

Johnson: Did you find these three projects challenging? Why or why not?

Wortham: I am not really sure what you mean when you use the word challenging? I thought these projects were great. They got us thinking and talking about what architecture was in general and to each of us. Our other classes gave me great background to be able to discuss these topics, and we addressed the idea of a concept. Kind of like answering the question that many artist or writers get... "Where do you get your ideas?"

It was not challenging in a way that was too hard, confusing or obtuse to understand and address with a built form.

Johnson: How did these initial projects affect the rest of your education at Columbia?

Wortham: These projects provided the basis for my approach to a problem for the rest of my architectural career. Although I think I might have arrived at it on my own, that first year reinforced my convictions and greatly accelerated my learning curve. Although it didn't always sit well with all of my subsequent teachers a Colombia.

Johnson: What were the biggest lesson which you took away from this first semester? Also, what were the primary lessons that you feel your studio critic was pushing?

Wortham: The biggest lesson was this approach to a problem or site/program. The importance of the site in terms of light, air views, smells, etc... and the history that might come with it. In terms of what the studio critic was pushing for: that having a concept or an idea to guide you gives the project cohesion and allows it to grow in layers of meanings whether you decide to make it public or not. My interpretation =It is about a custom made way of creating the built environment rather than pret-a-porter catalog architectural shopping.

Although now this process of having the concept generate form has evolved somewhat to fit different clients and programs. Sometimes a form can "grow " a concept.

Johnson: Did you find these projects effective? Why or why not?

Wortham: Yes I did find them effective, basically because of the reasons described in question ten. I think it is a more responsible way to build and to be generally aware of one's environment whether you end up practicing architecture or not.

Johnson: How did the studio critics help shape the development of your projects? What as the level and type of engagement? Any anecdotal recollections would be helpful.

Wortham: The studio critics discussed how a concept could generate form, and that a concept can also grow and develop throughout the design process.

An anecdote might be when I explained a introductory housing exercise in second year by using the first chapters of a novel by Gabriel Garcia Marquez and the jurors told me I was crazy and that housing wasn't about developing a concept and that if I felt I really had to do that to generate form then I shouldn't tell anyone.

Johnson: In regards to the 1st year, second semester assignments: Looking at the first year as a whole sequence do you feel like those two semesters had an intimate conceptual relationship? Please describe.

Wortham: I am just now remembering the second semester assignments. I had Robert as a critic. I know we had a music school somewhere in the country, and a photography school in Manhattan... I had a little trouble leaving my invented desert culture and dealing with a real program, but overall I remember the semester went well, though my reviews were nothing like those of the first semester. Robert and I got along very well and he provided a solid next step in applying what we had done before to more real sites and programs.

The big change came when we did housing. I remember we talked about it as being a step back to the "old school" of architecture.

Johnson: A sort of free question. If you feel like there is anything you would like to add in commentary which these questions did not cover, please feel free to address it here.

Wortham: I cannot think of anything right now but if I do I will get back to you.

Mario Gooden

E-Mail Interview

N/A

February 28, 2013

Johnson: What was your architectural background/experience prior to arriving at Columbia?

Gooden: Prior to coming to Columbia I had an undergraduate architecture degree from Clemson and four summers of working experience as an intern in offices in South Carolina and Atlanta.

Johnson: What attracted you to the program at Columbia?

Gooden: What attracted me to Columbia was the reputation of the faculty (for the most part.... all very good modernist architects); the theory courses and seminars; and New York.

Johnson: What were your educational expectations upon your arrival?

Gooden: Frankly, I did not have any pre-conceptions about what the educational experience should be but rather I was determined to construct the best experience possible for myself after understanding all that would be available at Columbia.

Johnson: Discuss your approach to the Linear Composition project.

Gooden: All three projects were approached in terms of spatial relationships rather than form or formal composition. Pedagogically, the linear composition project assignment was related to the avant-garde.... Kandinsky, Oskar Schlemar, Maholy-Nagy and not composition in the aesthetic sense arranging objects. From this understanding, I approached the project thinking about the spatial relationships in works by choreographers and composers such as John Cage and Arnold Schoenberg.

Johnson: Discuss your approach to the Planar Composition project.

Gooden: The planar project was less successful in my view as I approach it by being more faithful to the program. Whereas the linear project did not place an emphasis on the given program.

Johnson: Discuss your approach to the Volumetric Composition project.

Gooden: The volumetric project as well could have taken more liberties with the program and with how volume is understood as being a condition of lines and planes and not just enclosure.

Johnson: Did you find the Core 1 Fall semester projects challenging or intellectually stimulating? Why or why not?

Gooden: Both. The projects were challenging because they prompted to me to rethink what it is that I thought I knew about architecture and the design process. I found this deeply intellectually stimulating and was not intimidated by the challenge but welcomed the challenge to think in a different way.

Johnson: How did these initial projects affect the rest of your education?

Gooden: These projects did not so much affect the rest of my education as did the pedagogy of the assignment and the challenge from my studio critic to "free myself" and to think about space. Form was never a work that was uttered at all my any of my critics during my time at Columbia.

Johnson: Did you find these projects effective? Why or why not?

Gooden: They were effective for challenging pre-conceptions about architecture and space.

Johnson: Did these initial projects impact your career beyond your education? If so, how?

Gooden: These projects emphasized space and relationships (.... not form, neither image) as well as the need to theorize relationships through critical position. The relationships to the avant-garde and to contemporary art practices at the time of course has stayed with me.

Johnson: What supplemental elements (reading assignments, intermediate assignments, personal research, etc.) helped you develop your projects?

Gooden: See references to John Cage and Arnold Schoenberg above.

Johnson: What were the biggest lessons which you took away from this first semester?

Gooden: Space

Johnson: How did the critics (professors) help shape the development of your projects? What was the level and type of engagement?

Gooden: My critic did not tell me what to do but rather was extremely provocative in her challenges to me to liberate my pre-conceptions and to see and explore space and the movement of space.

Mary Fernando Conrad

E-Mail Interview

N/A

March 4, 2013

Johnson: What was your architectural background prior to arriving at Columbia?

Conrad: I had enrolled at the GSD (Harvard) and it had been a terrible experience and I had transferred. Prior to that I had no architectural experience whatsoever. I had been an English Major.

Johnson: What attracted you to the Graduate Program at Columbia?

Conrad: To be honest, I don't remember, but I did only apply to the GSD and the GSAPP.

Johnson: What were your educational expectations upon your arrival?

Conrad: None

Johnson: When did you arrive at Columbia and who was your first studio instructor?

Conrad: Robert McCarter

Johnson: Gate/Garden/Basin (Linear Composition)...Your basic requirements were to create a spatial path, using light-weight construction, towards a basin of water along a flat plane of land which was inscribed with furrows. Can you share your thoughts on this project? Your initial reactions to it? Strategies? Challenges? Etc.

Conrad: I don't remember this project.

Johnson: Courtyard/Hearth (Planar Composition)...Your basic requirements were to create a hierarchy of spaces, using heavy construction, along a path navigating a slight change in elevation and leading to a heat source (or hearth). Can you share your thoughts on this project? Your initial reactions to it? Strategies? Challenges? Also discuss going from the linear project to this one, and what that meant to you and your thinking about architecture.

Conrad: Robert did something very interesting -- he assigned up building to analyze as the preamble to the work and I was given Brion-Vega. It seemed to me at the time and in conjunction with this assignment that that entire project was conceived of as occurring within the space of a wall – a poetic idea – and that really caught my imagination. I remember that I had a very Frank Lloyd Wright sort of project and struggled to articulate/ develop the idea.

Johnson: Tower/House/Observatory (Volumetric Composition)... Your basic requirements were to create a rudimentary dwelling constructed out of heavy construction and a freely-programmed tower of light-weight construction on a landscape that had a 20 degree slope. Can you share your thoughts on this project? Your initial reactions to it? Strategies? Challenges? Also discuss going from the prior projects to this one, and what that meant to you and your thinking about architecture.

Conrad: The two previous projects really served to strip me of my bad habits and as such had been painful and confusing. Here I think there was more to dig into, more to work with, which made it easier, but also, by now I had learned a little and this was an easier project. I also finally got somewhere with drawing.

Johnson: Did you find these three projects challenging? Why or why not?

Conrad: They were all really challenging, but the first one more than the second and the second more that the third. It was the simplicity of the requirements and the way in which is didn't depend on tricks but rather and elemental understanding of the foundation of architecture that I imagine make it as difficult for a long term practitioner of architecture as for the student and this is the genius of the pedagogy. It broke down the education into fundamentals (perhaps like Joseph Albers at Black Mountain or Bauhaus pedagogies), peeled it away from style, movements, ways of living and asked that you consider the sculptural possibilities of inhabited space.

Johnson: How did these initial projects affect the rest of your education at Columbia?

Conrad: They really set the tone. I should also say, by comparison with the GSD at the time under Moneo, that Columbia under Frampton was a much more polyglot (Bob Stern and Bernard Tschumi in a collegial setting!) place without sacrificing any of the earnest searching for architecture capital A. I would say that at the GSD, everyone rushed out to get an electric eraser so that they could cross hatch in the style of Richard Meier's office but at Columbia everyone rushed out to get a glue gun the hallways were full of oversized models. The emphasis on model, and searching for form in model was a very important part of this pedagogy and one that can easily be overlooked. There as a tendency to investigate in drawing and make a model for presentation but this education really stressed searching in model and the three formal exercises really lent themselves to understanding how to see in model and how to build models and how to become conversant in that tool. This was fundamental to all subsequent learning for me.

Johnson: What were the biggest lesson which you took away from this first semester? Also, what were the primary lessons that you feel your studio critic was pushing?

Conrad: Please see above.

Johnson: Did you find these projects effective? Why or why not?

Conrad: Absolutely.

Johnson: How did the studio critics help shape the development of your projects? What as the level and type of engagement? Any anecdotal recollections would be helpful.

Conrad: The Columbia I experienced was a tremendously collegial place. I do think Robert McCarter really helped foster that as well as Ken Frampton. There was a sense of mutual respect regarding the various schools of ideas and no one's ideas were belittled. We all felt we were investigating. Doing research. Engaging in glorious experiments that might result in failure but the honestness of the experiment was what mattered. I thought it was very exciting.

Johnson: In regards to the 1st year, second semester assignments: Looking at the first year as a whole sequence do you feel like those two semesters had an intimate conceptual relationship? Please describe.

Conrad: I had the very good fortune of having Liz Diller as my second semester professor. She is a tremendously talented person and teacher who lit a fire in my that has served me the rest of my life.

Johnson: A sort of free question. If you feel like there is anything you would like to add in commentary which these questions did not cover, please feel free to address it here.

Conrad: I think I received an incredible education at Columbia and as best I know, I think my peers feel the same way. We feel we were very very lucky.