ARCHITECTURE

AND ABSTRACTION

What are the relationships between ideas and architecture? Can an authentic and meaningful architecture be developed in our current pluralist context? Can successful aspects of Modernism remain vital in the context of Post-modern criticism? How can architecture help us to form an understanding of our cultural context?

It is in a context of inquiry that discourse can best be carried out, a questioning before criticism, concerning ideas that establish the foundations of judgments and products in our civilization. Architecture forms a vital part of human culture, and thus we are concerned with the development of architectural ideas. By examining the relationships between architectural intentions and implementations, we may come to a more comprehensive understanding of meaning in architecture and architectural thought.

A broad range of interaction is fundamental to any informed discourse, especially at this time of transformations in cultural thought. In today's climate of cultural exchange, the conceptual distinctions separating architecture from other arts, such as sculpture and painting, are being re-evaluated and redrawn. It is our contention that architecture can become increasingly meaningful when confronted with disciplines that test the validity and the traditionally defined bounds of the field. Therefore, we also believe that the basis for a critical and meaningful architecture can be developed in our current context of pluralism and redefinition.

Currently, the field of architecture is inundated with various ideas concerning the place of architecture in a cacophonous world. The myriad outlooks reveal a need to synthesize or remythicize our fragmented condition—particularly in the acceptance of this fragmentation through representation of its models (Venturi), or by abstraction to reveal its underlying structures (Eisenman), or in the desire to unify these conditions figuratively (Graves), or through an idealized notion of type (Rossi).

As an inquiry into representation and meaning in architecture, we are looking at abstraction because, as the process of drawing away from experienced reality, it is the basis of interpretation and expression in the process of forming art/architecture. An investigation of the process of abstraction is also important today to better understand and define the forces which have led to the recent abandonment of traditional Modernist ideals, and to question recent reactionary tendencies in architecture.

What was once abstract and provocative to the cultural establishment is now accepted within its institutions. The radical context in which many potent Modernist artworks were created no longer exists, and so questions arise: What art might be provocative and challenging, and what constitutes abstraction today, when previously confrontational abstract works have become the norms of institutionalized power?

In questioning the institutions and suppositions of our existing environment, it is important to question ourselves and the relevance of architectural literature. What is the relation of writing to building? One of the characteristics of our post-industrial culture is reliance on theories to justify the work of art: it has become the responsibility of the written word to imbue with meaning dissociated architectural experience. Much architectural discourse today involves the writing and criticism of architectural ideas, rather than the experience of architecture itself.

The proliferation of architectural publications has transformed our perceptions of meaning and architectural experience. The printed word has long superseded architecture as a primary form of cultural communication. And images, in the form of ubiquitous architectural photographs, are consumable and easily digested, leading to a visual, rather than tactile and spatial, sense of architectural reality. The crucial question then is, how does one experience architecture?

The intent of the Journal is not to contribute to the schism between meaning and architectural presence, but rather to attempt a synthesis of the theoretical and the pragmatic, the verbal and the visual, the real and the abstract. A meaningful and critical architecture cannot be practiced solely within the confines of a technological ideology (the critique of functionalist Modernism) or aesthetics (the critique of recent formalist works). It must be born of a synthesis of the two within a context of inquiry.

ARCHITECTURE

AND ABSTRACTION

ACKNOWLEDGEMENTS

It is necessary, but not sufficient, to understand and remember. It is also necessary to question.

The Journal is begun in this spirit. We believe that interaction and discussion are essential to education and the understanding of architecture as a whole, and to understand the relationship between what is and what could be.

To this end, we have assembled realized and projected works in the Journal by historians, critics, architects, students, and artists. We are seeking to establish a critical context for dialogue among those concerned with our physical and cultural environment, regardless of affiliation or discipline.

To focus attention on substantive inquiry, each issue of the Journal will center on a specific critical topic, creating an underlying connection for the diverse attitudes presented. Beyond the particular themes and editorial positions of the Journal, the goal of these inquiries is to contribute to a greater consciousness of meaning and form, through questioning the meaning of form, and the form of meaning.

Donald Cromley and the Editors

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Our inquiry is guided by the perception of a current crisis of meaning, stemming from a schism between art and experience, the tendency towards specialization within society, and the crisis of production that has characterized modern thought. A comprehension of abstraction is essential to understand the experience and meaning of architecture, and the dialogue between ideas and actions in our culture.

The process of abstraction, through memory, projection, and imagination, establishes an essentially human condition: it is intrinsic to human existence. And art, as a distinctly human activity, enables us to transform and transcend our context through interpretation and expression. All art abstracts.

"Abstraction" derives from the Latin *abstrahere*—to draw away from, to separate the conceptual or the ideal from a perceived object or experience. It involves a process of cognitive extraction from one's experience within the world. This process has the dual effect of creating a new world view through which one may elicit a more fundamental understanding – while simultaneously disregarding certain aspects—of the original phenomenon. The process of abstraction dissociates from empirical existence, from praxis and apparent reality.

Therefore, when one asks, "What is abstract?" one is also asking, "What is real?," for when one abstracts it is always of or from a source. Abstraction is a process of confronting reality, and is how we distance ourselves from what we perceive as reality. The distance we create and the models we employ to illustrate our separation from or integration with perceived reality is essentially how the characteristics of an epoch are defined. How we define terms such as abstraction describes our own values as much as those of the terms themselves.

This understanding of "abstraction" does not imply inherently positive or negative values for architecture. The significance of the process relies more fundamentally on its interpretation and intention. Abstraction can be identified with the rational ordering of a humanistic world, yet it can also embody an anti-humanist, nihilistic representation of reality. The difference in the interpretations of the term revolves around the identity of human culture: whether a culture views itself as anthropocentric—as the center of all meaning residing in human activity—or as theo- or a-centric—as meaning in human existence deriving from an incomprehensible universe. Here, the incomprehensible holds an idea of unity beyond apparent multiplicity. In the former understanding, representation comprises a humanist world-view, which aims to understand an idea through a thing and to understand the unknown through the known, as in Kant's notion of the Sublime.

Why then has there been historically a recurrent conflict between "realistic" painting and the traditionally "abstract" arts such as music and architecture, each viewed as embodying entirely different interpretations of the same world? If abstraction and representation both deal with a relation to a source, what then constitutes a difference between them? Is abstraction merely a reference to the **conceived** rather than the **perceived** world?

All works of art, whether "figurative" or "abstract," involve a dialogue between conception and perception, yet both tendencies have been regarded at one time or another as propagating a loss of meaning. Many see abstraction as disregarding practical existence as a store of meaning, and creating an elitist language of esoteric references. Yet others view representation as an avoidance of the unknown and incomprehensible, and as developing a reactionary language that deals only in the realm of the *status quo*, the functional and commodious. These questions concerning the relationship between art and experience are of particular importance to architecture because it is the art with which our daily lives are most in contact.

Much of the current critique of Modernism has focused on similar tendencies. A Modernist belief in reason and universality has been criticized as incommunicative, exclusionary, and creating a schism between "high art" and popular taste; as utopian, generating a sense of placelessness, and evading everyday "reality"; and as mistakenly concerned with economy in place of essence, creating an overriding concern with utility and efficiency and a prevailing faith in the progressive aspects of technological application. Yet to view "abstraction," or "abstract architecture," as many have,

synonymously with Modernism, is a stylistic interpretation that does not serve as a cogent investigation into the question at hand. Rather, we believe that an array of readings is necessary to uncover the full implications of the issue.

The search for new languages of artistic expression in the early part of this century led to the creation of many languages, not only in the arts but in the sciences as well, and the disruption of what Lyotard describes as a "universal meta-language." Consequently one of the most identifiable characteristics of our time is that of a plurality of voices and notions helping to define how our culture is to proceed.

Many cultural endeavors today are attempts to reverse the loss of meaning that Modernism has engendered. Most of these architectural tendencies have been well documented, but a cursory list would read as follows: attempts to "ground" architecture in its context with cultural and regional allusions, and to re-establish meaningful and relevant references through aestheticism, historicism, semiotics, and the reintroduction of figurative, narrative, and realist concerns in contemporary art.

Yet many of the recent reactions to Modernism have raised a new set of problems while seemingly taking care of another. The desire to place our time within the tradition of Western culture has resulted in the transformation of history into historicism, and the formal concerns of aestheticism have replaced symbolic meaning. By retaining formal goals, the reintroduction of representation as a center of concern does not eliminate the problems that have been identified with abstraction. How do questions regarding representation and abstraction translate into architecture? If architecture is to be considered an art, then how do its media, programs, and intentions differ from those of other arts such as painting, sculpture, literature, and music? If "the purpose of architecture is to transcend function," as Peter Eisenman has proposed, then what are the purposes of the other arts, and what is the role of function in architecture?

In recent history, abstraction has been considered only marginally valuable because it is viewed as representing merely the functional, scientific, and economical methodology of *techne*, rather than the greater symbolic representation of *poiesis*. *Poiesis* is inherently more participatory because it involves individual expression and transcendental imagination in the formation of meaningful symbols. *Techne* forms the basis of rational humanism—representing the technique of accumulating scientific knowledge in place of experienced reality. The projected works of both Boullée and J.N.L. Durand embodied the humanist representation of the *techne*, grounding architecture in the mathematically quantifiable and rational taxonomy of the Enlightenment. This

intention to break with history, to form and create one's own world, exemplified the desire to control reality and the will to power. The origins of Modern architecture lay with the neoplatonic abstractions of Boullée and Ledoux. Their attempts to identify architecture's constituent elements, to codify architecture through a scientific categorization of these elements, were seen as a means of determining an autonomous language of architecture. The association of the reductive ideals of instrumental reason with scientific and technological developments has led to the hermetic and incommunicative tendencies within Modernist architecture and to the exclusion of the symbolic meaning resident in *poiesis*. The conflict between the two is the crisis of meaning. A critical concern for architecture today is to integrate meaning and form.

The presentations here, a composite of individual perspectives, reflect a multifaceted view of abstraction, facilitating a more extensive understanding of its meaning. Yet, when we try to understand the various voices concerning the role of abstraction in architecture, we find the individual interpretations so disparate as to seem incompatible—some are concerned with the search for an authentic personal expression and the autonomy of the artist, others with understanding underlying patterns of "reality," and still others with the role of the artist and architect in communicating with their audience.

However, all these share some common relationships: the process of abstraction operates on many levels. And, although the definitions of these relationships vary, all, in some way, confront the process of interpretation between the individual and the world, or perceived reality; the process of expression between the individual artist and the product of art; and the process of communication between the products of art and architecture and the community of people with which they interact.

The Journal is a collection and presentation of various, although not particularly allied, tendencies within the discussion at hand. A few individuals argue that the Western analytic tradition of abstraction as a means to uncover underlying truths in nature is by no means bankrupt, but rather, open to revision. Architecture is inherently abstract, yet the architect, during the design process, must confront the realities of the program, site, and construction in order to create architecture successfully (Gwathmey). His design process therefore is a rational means of coordinating, developing, and transcending the "real" limitations of the project. Tyng proposes that geometry is an abstract archetype inherent in nature, in human thought and culture, and in history. She posits a cyclical history of cultural attitudes, expressed by geometric qualities analogous to the formal architectural and cultural products of the respective age.

Reacting to certain recent interpretations of representing and remythicizing our environment are the arguments for abstraction as a politically liberating process negating representations of power (Knesl). Post-modern representation is a form of classical intention involving the re-presentation of a whole and unified cosmogony, but invalid for our contemporary cultural reality of disharmonious and fragmentary existence—contemporary architecture, he feels, should reflect this deconstructionist attitude. Coop Himmelblau opposes the current trend toward rationally defined urban spaces and proposes instead an "open architecture," of loosely defined spaces, without predetermining the user's choices.

Three separate arguments share the notion that abstraction limits communication, accessibility, and comprehensibility of meaning in architectural forms. The world today lacks any cohesive meaningful reference; therefore an architectural iconography should be based on a Jungian conception of symbols—uncreated archetypal indicators of meaning (Wines). Architecture, as public art, must accommodate local references of site and society to be meaningful; abstraction as universality oppresses by denying these factors (Armajani). And by separating a part from the whole, abstraction can be destructive, since one can never really separate oneself from nature. The immediate environment and our experience of it (no matter how chaotic it may seem) may be seen not as inimical, but rather as a source of art and meaning. Eastern holistic thought recognizes these relationships and presents a model other than abstraction for transcendence and the creation of art because it does not sever thought from matter nor ego from experience (Cage).

In a large part of our Journal (Woods, Arakawa, Hejduk, Hurst, Togut, El-Zoghby, student projects) contributors identify themselves with abstraction as a creative poetic language and an autonomous artistic process, free from limitations and compromises of program, site, construction. It is abstraction as the "boundless" transcendental process of the imagination. Dore Ashton elucidates the similarities of Malevich's and Rothko's searches for an artistic expression of the incomprehensible and transcendent world of the "void." The rendition of the Orphic language as the poetic, rather than the declarative, explanation of

the world, involves the polarization of human experience that has been the center of ideological debate in Western history.

Historically, architecture has increased its dissociation from building by incorporating the goals and methods of other arts and sciences. By building for programs that go beyond the solely utilitarian aims of human existence, architecture can transcend its consumable functions and enter the incomprehensible realm of the "void" (Libeskind, Abraham). As categorically defined by Loos in his essay *Architecture 1910*, "Only a very small part of architecture belongs to art: the tomb and the monument. Everything else, everything which serves a purpose should be excluded from the realms of art . . . if we find a mound in the forest, six foot long and three foot wide, formed into a pyramid, shaped by a shovel, we become serious and something within us says, someone lies buried here. This is architecture."

The question, then, of what might be the purpose of art and architecture after any traditional intent has lost meaning, is really a question of essence—what is the essence of art, regardless of the focus of any particular age or technique? Today there is a desperate need for redefining the essences of things; indeed, any age defines itself by what it deems essential. However, not one, but many essences are being redefined today. And this is what makes the question of abstraction so crucial: it is a process of relationships and essences that every culture needs to re-evaluate for itself.

Among all those differentiations regarding the crisis of meaning in our environment, we value a dialectic of critical representation/communicative abstraction and, above all, continued discourse. Today a critical and meaningful architecture must involve its user in a participatory way to raise consciousness in a process that is ongoing and dialectical. Yet, it is misleading for art and freedom to be seen as solely subjective, belonging only to culture, and utility as objective, within the realm of science and an external objective universe. It is this schism that has led to the separation of art from practical experience. We believe that a synthesis of the two can only arise in a context of discussion in which openness, freedom, questioning and experimentation can flourish.

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THE NEW ARCHITECTURE—A DIALOGUE IN THE MIND

Architecture presently faces the profound issue of a lack of communication with its audience and a confusion of methodology as to how to remedy the situation. The legacy of abstraction and its imposed standards on the profession has left such a vast chasm between building imagery and popular comprehension that no amount of applied decoration or deference to history can be expected to span the gap. Architecture is, after all, our most natural form of public art and, as such, demands a public language. We seem to be at a moment in time where a sizable number of designers are willing to concede this point, but simply do not know how to begin to restore a meaningful iconography to the structures they build. The process of design itself—so inflexibly defined by academic Modernist/formalist dogma—has made it virtually impossible to think of a building on any terms other than as an orchestration of abstract shapes; of cubes, cones, and spheres; of volume and structure; of plan and elevation. Buildings are always supposed to be about themselves—and this is the essence of the crisis of communication.

In spite of seven decades of impassioned attacks against realistic art by the advocates of abstraction, serious questions have been raised by visual artists during the last few years concerning whether formal means are really anything more than the underpinnings of compositional structure which support the obligation to have descriptive/representational content. The assumption among the Modernist-educated and aesthetically enlightened audience has always been that transcendental evocations demand pure form and space (and would be bogged down by the banalities of representation). Now, however, the entire foundation of abstractionism is under attack. Many artists are returning to the earliest roots of the Modern Movement for inspiration (Expressionism and Cubism, for example) and reaching the conclusion, like Picasso, that no created form can be truly fertile without direct associative content—without, in fact, overt referential and narrative legibility. Artists now are also turning, with a vengeance, to social and psychological observation and the use of art as a means of intervention, as a means of commentary on the human condition in a world of confused objectives.

For architecture, this translates into the necessity of searching for a new iconography based on a wide variety of outside sources, a response to social and environmental conflicts, and a search through the vast and seemingly unchartable landscape of the mind.

To even begin to get a handle on this challenge, there is a need to look at the nature of communication in more depth—particularly as it relates to architecture in this era when the notions of indeterminacy and chance are no longer reserved for the purely philosophical and scientific worlds, but, instead, have become part of the universal subconscious response to phenomena. The continuation of this discussion, therefore, will attempt to align the development of a new architectural language with some parallel concepts in language theory and psychology. These investigations, even in the elementary examination which follows, form the basis for an understanding of "meaning" and, accordingly, communication in its broadest sense.

Linguistics concerns itself with the analysis of structure and origin in language, semiotics with theories of sign and symbol, and psychology with the relation of both to human response and behavior. Art, although it can include a composite of all three, is an intuitive response to and interpretation of phenomena, rather than a product of objective analysis. In point, art is often the analytical subject or empirical demonstration used by each discipline to explain the nature of communication. It should be noted here, in passing, that proponents of the Conceptual and Language Art movements of the early 1970s became fascinated with linguistics and structuralism, indulging in an extremely rarified level of aesthetic response based on the product of art as the analysis of art. A final work might be limited to a typewritten description of its intentions. Most of the artists involved in these experiments backed themselves into tautological corners from which they could not be extricated, and the movements died from their own literary opacity. There is probably a lesson to be learned here. For the practicing artist to attempt such investigations is usually as unproductive as it is self-conscious, with a tendency to defeat the very multi-level instincts which make it possible to create art in the first place.

The basis for both studying and applying the lessons of language, signs, and symbols is an agreement on some generalized common denominators of meaning. In this regard, semiotic and linguistic theoreticians traditionally spend a
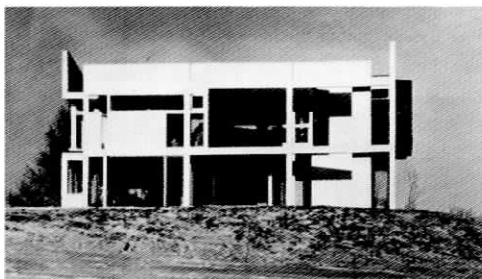
Peter Eisenman,
*House II, 1969-70.
Peter Eisenman,
Architect.*

Nathan's, Coney
Island.
S.I.T.E. photo.

Pablo Picasso.
"Ma Jolie" (Woman
with a Zither or
Guitar). (Paris.
1911-12, winter).
Oil on canvas,
39 3/8" x 25 3/4".
Collection, The
Museum of Modern Art,
New York.
Acquired through the
Lillie P. Bliss Bequest.

Atomic Particle
Tracings.
Argonne National
Laboratory, Argonne,
Illinois.

great deal of effort defining the terms of consensus. Once these parameters have been clarified (no matter how specious the rationale), propositions can then be comfortably expounded. The strength or frailty of the arguments depends on the relative credibility of the original definitions of meaning. At the risk of an over-simplification, this kind of research can be described as breaking down into two general categories of analysis. The first takes it for granted that the study of linguistics and semiotics has a responsibility to clarify—and, in certain cases, expand—the meanings of language and signification.[1] This route tends to be more generous in its acceptance of axiomatic paradigms as a point of departure because it is trying to create an orderly structure out of ambiguity. The second type of analysis is more introspective, less concerned with finding specific answers, cautious about accepting traditional hypotheses, and comfortable with the state of ambiguity.[2] This might be characterized as an anti-formal direction and is undertaken (like chess) as a game of the mind, without the more scientific objectivity of the first process.

There are comparisons between these two analytical approaches and the development of the arts in this century. The fundamental currents which have defined painting and sculpture since 1910 (when the Modernist revolution was at the height of its energy) can be separated into work which has tried to introduce a new language of form, and work which has appropriated familiar objects and situations in order to see them in a new way. Picasso and Duchamp would be artists most easily identified with these divergent attitudes (although, as is often the case with extraordinary creativity, each has dealt with the other's territory from time to time). But, more than their individual art, we are referring to a climate of activity stimulated by their influence. For example, the early Cubist paintings and constructions of Picasso (and the similar explorations of Le Corbusier in architecture) were based on a contention that a new century demanded a visual vocabulary which would reflect perceptual changes wrought by discoveries in science and technology. The resulting art was of necessity aggressive, physical, and purposefully revolutionary in attitude, with a very clear definition of what constituted old and new. Picasso's Cubism responded to the observations of physics,
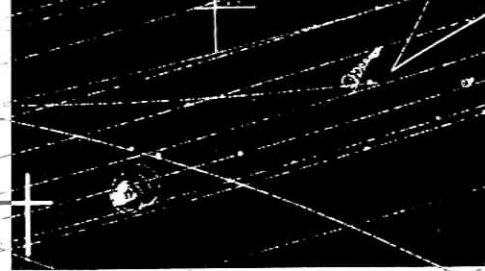
which declared that our vision of the world is prejudiced by the limitations of eye and brain mechanisms, so we assemble illusive images that have little to do with the true forces of energy in the universe. The disassembly and reconstruction of nature with new formal means—for example, paintings incorporating multiple fragmentations, transparencies, and layered dimensions of a human head in space—were intended to communicate a conception of phenomena presumed to be closer to the facts than retinal response had traditionally permitted. The emphasis of this work was clearly the development of a new vocabulary, so the fundamental conditions of nature (seen as a unified structure) were considered to be hypothetical. The spirit of Modernist art was very much about getting on with the job of revolution, and it needed a strong basis of assumptions to accelerate this mission. When extended to architecture, these postulates also included what designers decreed were the needs of human habitat in terms of space requirements, formal components, and living/working amenities. From these origins, then, one can certainly understand how such determinist and autocratic tendencies evolved into the air-tight ideologies of Rationalism and Structuralism in architecture and how, in turn, the public felt increasingly excluded from the dialogue.

From the standpoint of conceptual attitude, the legacy of Marcel Duchamp is another story (although probably no less esoteric and difficult for a popular audience). His breakthrough work in the Dadaist movement took place as early as 1914 (the year of his famous readymade "Bottlerack"); but the most profound effect of his influence on the visual arts was not felt until Neo-dadaism and Pop Art of the late 1950s/early 1960s and Conceptual Art of the 1960s/70s. Since that time, when his ideas were brought into sharp focus, the visual arts have tended to shift away from the objective motives of Modernism toward the more psychological and metaphysical orientation that he initiated (and which reflected the anti-formal interpretations in linguistics referred to earlier).

Duchamp's contribution, in this respect, is enormous. He established an inverted hypothesis which stated that if art could be based on aesthetic merits, then it could also be based on cerebral equivocation—each being equally undefinable. His "readymades" and "assisted readymades" could be inter-

[1] See Umberto Eco,
A Theory of Semiotics (Bloomington,
Ind., and London:
Indiana Univ. Press,
1976).

[2] See Jacques Derrida,
Dissemination
(Chicago, Ill., The
Univ. of Chicago
Press, and London,
Eng., The Athlone
Press, 1981), Barbara
Johnson, trans.

preted as art, as utilitarian items, or neither, or both, without any conditional elevation or reduction in aesthetic value. This attitude was not about creating a revolution of form, but a revolution of thought. It also became the foundation for all subsequent anti-art experiments. Commonplace objects were chosen as the raw material of his art because they did not have to be invented and, therefore, could be accepted by the viewer as devoid of artistic intent. When, for example, a collagist like Picasso used such ordinary artifacts in a painting or scultpure, they were chosen for their associative properties, their transformational value in making art that would bridge reality and illusion, and their formal contribution to a work which was ultimately an orchestrated composition. The final art, in this case, was judged as an organized aesthetic product. Duchamp used objects to create "non-compositions." His work was never meant to be admired within a traditional aesthetic context. It was intended to function as a semaphore of information which changed the spectator's attitudes toward the entire role of visual art in its environment (in this case, usually an art gallery or a museum). Since these exhibition spaces represented certain parameters of expectation for the audience—in other words, the proper setting for viewing "crafted art"—Duchamp's uncrafted interventions had to be evaluated for their capacity to alter thinking on every level. His work, like dialectical reasoning in linguistics, was a provocative discourse on the nature of meaning, yet one which simultaneously challenged both questions and answers. As Duchamp himself described this research in art, "I have forced myself to contradict myself in order to avoid conforming to my own taste."[3]

Although this message reached all of the other arts in this century with a meaningful impact, architecture has been left virtually unaffected by the notion of art as principally a dialogue in the mind. Buildings are seen by their designers as exclusively physical intrusions in the landscape which ask to be appreciated only for their formal content, their compositional and functional excellence, and their evidence of rational thought process. Until architects are able to transcend these traditional restraints and see the products of their efforts as collectors and transmitters of contextual information, as embodiments of dialectic, and as distillations of psychological insight, the gulf between the profession and the public will remain.
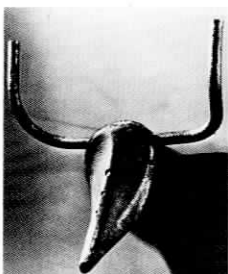
When dealing with the psychological element in architecture, one has to assume there is some level of symbolic content, conditioned by history and humanity's collective response to environment, which can be included as a starting point. Duchamp had the luxury of working within the frame of reference of an art exhibition space, with its pre-conditioned audience. Also, he could utilize a range of flexible materials and objects to create his statements—many of them already the product of reflex identification. His raw materials, from the outset, allowed for free manipulation, flashes of immediate insight, and the capacity for infinite change. The public domain, as the context for architecture, is, unlike an art gallery, chaotic and distracting, and carries a wide range of implications for people. Buildings, perhaps more than any other art form, suffer the restrictions of difficult execution and unchanging physicality. The element of permanence—or the look of permanence—makes it difficult for buildings to convey perceptions about a universe which we know to be in a constant state of indeterminacy and chance occurrences. The finality of drawn plans and elevations, the ponderous weight and density of construction materials, and the restrictions imposed by industrialized building systems would seem to offer few possibilities to capture the ephemeral intuitions and fleeting moods of the mind. Other arts seem better suited to these objectives. Painting is intentionally illusory, and its media are fluid; literature starts with a culturally endorsed form of signification; and theatre is kinetic and psychological because human behavior is part of its fabric. Still, these art forms wrestle with the same problem of identifying a basis for symbolism that confronts architecture. Today's world of chaos, pluralism, and entropy just doesn't lend itself to symbolic consistency.

For symbolic consistency, probably no other historic architecture surpasses Europe's Gothic churches. They were invested with such specific religious references that the question of how to animate walls and capture popular response was never an issue. It was implicit from the beginning. Every construction element and sculpture seemed miraculously to materialize as a cohesive part of a total vision which had been cultivated by the society. In our present era, architects are challenged to find a language and identify its sources at the same time (assuming that, indeed, these references exist at all). It is

[3]*Harriet and Sidney Janis, "Duchamp Anti-Artist," View, Series V, No. 1. (New York: March 1945), p. 18.*

4. *The late scientist philosopher Jacques Monod summarized, "Chance alone is at the source of all novelty, all creation in the biosphere. . . . pure chance, only chance, absolute but blind liberty is at the root of the prodigious edifice that is evolution." Jacques Monod, Chance and Necessity (New York: Alfred A. Knopf, 1971).*

necessary to establish a flexible base for symbolism which allows for a constant fluctuation in its content. In this sense, the symbol is the condition of flux itself; so it is not as much an iconic or metaphorical indicator as an unconscious acceptance of changing phenomena. This "anti-structure" view is in accord with some of the latest models used by scientists to describe the universe.[4] Virtually every attempt at empirical reasoning, every search for perfect phenomenological patterns has been futile and unproductive. Human faculties of observation must be regarded ultimately as illusory and misleading, drastically reducing the reliability of those theories which try to describe nature based on finite structure and order.

Carl Jung's proposal that symbols can be produced either by cultural consensus, or unconsciously and spontaneously in the form of dreams, can be seen to have a great deal of bearing on the subject of symbolism and psychological elements in architecture. It was Jung's major contribution to perceive the expansive dimensions of the "unconscious" mind as reflected in dreams (as opposed to Freud's "subconscious," with its maelstrom of libidinal fantasies and repressed desires).[5] Jung envisioned the unconscious as both the collector and the creator of symbols. Dream interpretation could be based on an interchangeable status between signifiers and signifieds, between inherited symbols and dreamed ones. By understanding that in dream sequences each could supplant or become the other, he opened up the notion of a mutable and provisional symbolism.

These concepts are applicable to architecture if one regards buildings as semaphores of information—like Duchamp's assisted readymades—which can evoke subliminal responses in the audience. This function, referred to by Jung as the "cue" or "trigger" effect, can include all of the usual aesthetic and formal conventions of architecture; but its true essence is beyond the scope of normal design intentions. It is a distillation that must be grasped by the architect on the most difficult level of conception in art—the ability to bridge the conscious and unconscious, the known and the void—and then be translated into readable terms.

Jung is careful, in support of his theories, to differentiate between signs and symbols. "The sign," he wrote, "is always less than the concept it represents, while a symbol always stands for something more than its obvious and immediate meaning. Symbols, moreover, are natural and spontaneous products. No genius has ever sat down with a pen or a brush in his hand and said: 'Now I am going to invent a symbol.' No one can take a more or less rational thought, reached as a logical conclusion or by deliberate intent, and then give it 'symbolic' form. No matter what fantastic trappings one may put upon an idea of this kind, it will still remain a sign, linked to the conscious thought behind it, not a symbol that hints at something not yet known. In dreams, symbols occur spontaneously, for dreams happen and are not invented: they are, therefore, the main source of all our knowledge about symbolism."[6]

The notion of entrusting the content and imagery of architecture to the ambiguities of changing phenomena and the symbolic content of dreams would be anathema to most designers. The invasion of the irrational, the equivocal, and the subliminal goes against the grain of everything architects have been trained to respect in terms of functionalism and rationalism. This kind of search, however, is probably the only one that makes sense in a world without a traditional definition and structure of symbolism.

20th-century architects have circumnavigated this whole issue by claiming that symbolism has been implicit from the outset, could be manufactured at will, or could be borrowed from architectural history. Since none of these assumptions seems to have produced a relevant building iconography for the 1980s, the quest should still be considered open and worth pursuing.

The 20th century has produced an infinite number of architectural variables based on the traditions of abstract art. For some brief interludes (most significantly, the uses of decoration and figuration during the last decade), designers have earnestly tried to camouflage these origins by injecting appropriated references and quotations. The problem, in summary, has been that formal abstraction has remained so pervasively the sub-structure of architectural aesthetics, nothing has essentially changed since 1910. The recent attempts to shift to representation have also been problematic because the sources have remained strictly architectural and the audience has been left out of the dialogue. And, finally, there has been little or no

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Chartres Cathedral, Main Portal. S.I.T.E. photo.

Detail, Orvieto Cathedral. Photograph by Wim Swann.

5. See Carl Jung, "Symbols and the Interpretation of Dreams." The Collected Works of C.G. Jung, Vol. 18, The Symbolic Life, trans. R.F.C. Hull (Princeton, N.J.: Bollingen Series XX, Princeton Univ. Press, 1950).

6. Carl Jung, "Analysis of Dreams," Man and his Symbols (London: Aldus Books, 1964), p. 41.

evidence that architects have tried to tap into Jung's provocative resource of the unconscious mind as the ultimate contemporary manufacturer of symbols.

The question today for architects—as it was for Jung in the 1930s—is to first be able to identify these highly personalized symbols created in the collective unconscious and then to construct a pattern of references which might give them wider application as a source for art. What this really means for the designer is the ability to develop a highly sensitized antenna to the "ambient sensibility" of our time. This is an awareness that, in itself, cannot be learned. But an approach to the conception of a building can be proposed which will allow for the infusion of an ambient sensibility, if it has been grasped in the first place.

The architect must sense and be able to deal with an "other level" of meaning in art which suggests that an object—any object, including a building—can invade the mind, or grow out of an unconscious dream stage, without any obvious referential associations; but, instead, as a question concerning the identity of that object and whether what we see as that object exists as perceived. This alternative means of conceptual development is neither pure abstraction, nor representation, as defined by most of the art of this century. It is somewhere in between. It is probably closer to theoretical science in process. As noted before, when touching on the topic of physics, the sciences have repeatedly indicated that human beings are only microcosms of the universe and that our capacity to comprehend the total state of phenomena is limited because we are an embodiment of the questions and, therefore, not vehicles through which the answers can be distilled. Yet science, like art, does not admit defeat so easily, and generates models to retain what it assumes to be known in order to explore the unknown. In this way, the object (now called model) and its associative levels can reach beyond metaphor and become useful tools of demarcation for the human mind. They denote our sense of limitation, on one hand, and our notions of some abstract destiny on the other.

To place this concept again in the framework of art, Duchamp's "readymades" and "assisted readymades" were chosen (as opposed to "designed") objects intended to remind the audience of certain shared identifications on one level

and yet, by their selection and treatment, to suggest that the first level is not the only dimension of an object. The immediately associative aspect, although helpful in attracting the viewer, is only the first plateau through which a more intriguing set of questions can be proposed. Since both the questions and the answers are essentially equivocal, it stands to reason that they connect more to the dream world of the unconscious than to the rational—and limited—world of the conscious. If Duchamp had spent undue effort in composing or crafting certain compositional (formal) elements in his work, the very act of these self-conscious calculations would have distracted from his most important mission. What he was suggesting by introducing the "model of an idea" was a context for the viewers that would force them to invest his objects with more and more complex meanings. In this sense, his work functioned like the vortex of space, like a receiver or dispatcher—like a kind of mind-created "black hole," imploding and exploding mental information.

Returning to the subject of architecture, these concepts can be contributive only when the entire definition and development of building design itself has been changed. Traditionally, the creation of an edifice as the exclusive product of invention has been the principle duty of the architect. This has usually been accomplished through a kind of reflex process, *i.e.* conferring with the client, determining the use of a structure, planning a program, and then translating all of the service or "use" factors of the building into a statement of sculptural form. This is obviously an over-simplification for purposes of summary, but the description is fairly accurate, and it points out the fact that design is often nothing more than an attempt at art, diluted by trying to bridge the distance between expression and expedience. Art is frequently the loser in this situation, because architects harbor an inherent panic about neglecting practicality in a building (derived from an education that has consistently misrepresented Bauhaus functionalism), and will generally go to extremes to rationalize every formal element of a building in terms of its serviceability. In reality, the results may be absurdly capricious, and the

Delusions of Grandeur (La Folie des Grandeurs), *René Magritte, 1948. Hirshhorn Museum and Sculpture Garden, Smithsonian Institution.*
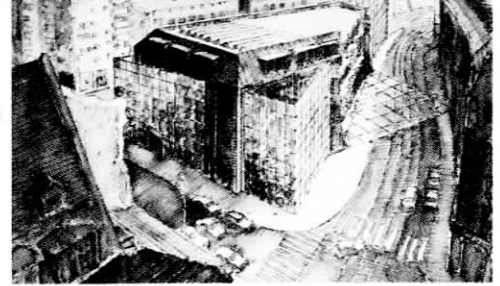
translation of function into sculptural dynamics frequently ends by needlessly dissecting and articulating people's living and working spaces to the point of total intrusion (and, often, total uselessness). Art gets lost in the shuffle for the simple reason that the motivations had nothing to do with art in the first place. Art is not an applied ingredient, not an aesthetic appendage to make function look presentable. Art is a prime motivation. Since it is also the assumption of this discourse that art is the supreme purpose of architecture, then it follows that some radical changes in creative process must reflect this objective.

If, as we have observed in our earlier discussion of ambient sensibility and the influences of psychology and the sciences, the sources of a communicative architectural iconography are based on the context of questioning itself, the discovery of a new language must involve the displacement of ideas. During the 14th century in Italy, for example, architectural imagery was a product of implicit or explicit symbolism.[7] On one hand, the messages transmitted by a building came from thoughts or ideas implied (metaphor, allegory) which successfully connected with the public because they referred to something else understood, but not specifically expressed. Explicit symbols, on the other hand, suggested much less ambiguity. These images needed no analyses, no deciphering, because they had already been so totally conditioned by repeated use that the audience could accept them on face value. Clearly these two traditions are not comfortably applicable to the 1980s and we are, therefore, left with a situation in which the architect is literally forced to deal with Jung's vision of a mutable and provisional symbolism.

Capturing and utilizing such an elusive source is not an easy task. If it cannot even be defined, how, the designer may well ask, can it be embodied in anything as specific as a building? Some tentative answers might unfold by proceeding along the following logic: if a building today cannot be constructed by relying on explicit or implicit symbolism as a means of communication, then the architect might begin by taking it for granted that the "state of shelter" carries a timeless residual of meanings for the average audience. This suggests that the primal element of "use" may be considered general, rather than specific; and there is then no reason to believe that use has anything to do with the old notion of functionalism. Functionalism, in the Modernist inter-

pretation, was **assigned use** and, as such, became the basis for formal manipulations which we have already determined are no longer relevant. **Pure use** breaks down into generic building typologies—the house, the office, the school, the museum, the public hall, the church, etc.—and these identifiable shelter profiles may be the nearest equivalent we have to symbols in our public environment. Pure use can also be "subject matter." It can relate to the architectural vision in the same way a human figure or a still life relates to the painter's eye. Pure use is there to be used. It is the object/subject to be acted upon and transformed. It is the model through which the architect can explore the climate of questioning that is the basis of our potential universal symbolism.

If use is model, then the artistic use of use might become meaningful imagery in a building by initiating a dialogue concerning the origins of its own existence. This is a quite different creative process from traditional abstraction and representation. It has more to do with narration, wherein a building's final aesthetic resolution is the result of a description of its own evolution or destruction, its own life or death.

To carry this description of process further would risk prescribing a *modus operandi* for design, and any good theory should avoid this at all costs. What seems lucidly clear, for the 1980s, is the need to transcend the old limitations of formalist/functionalist design and historical quotation in architecture as the panacea of creative expression. The real challenges are elsewhere. The new search will inevitably lead down uncharted roads and come up with some awkward answers before the triumphs. But this is the price of courage in any art form. Certainly these are risks worth taking when compared to the dreary alternatives offered by scavenging the skeletal corpse of Modernism or trusting the frail health of post-Modernism. Architecture of the immediate future will be different because it is, fundamentally, perceived differently.

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[7] *See Otto Von Simson, The Gothic Cathedral (New York: Bollingen Series XLVIII, Pantheon Books Inc., 1956).*

JOHN KNESL

THE NEW OBJECTIVITY OF A CRITICAL LATE MODERNISM

The current desire for a return to "representation," evidenced in Jencks's proposition of the muted naturalism of "abstract representation," seeks to pull the veneer of humanism over the harsh realities of our age.[1] The postmodern condition seeks to be in touch with the authentic, to be at home in the **presence** of the fullness of the firm metaphysical ground of the history and nature of "man." The harmonized unity of classical form re-presents as *imago mundi* the unity of the universe as the metaphysical ground of all being. Re-presentation is the mode of classical thinking which designates something as what it "is" by tying it into a conceptual representation of the immutable whole. Classical form, therefore, re-presents through the part, a whole unified by an ultimate and metaphysical center. By contrast, modernist thinking tends to keep the (metaphysical) referent at bay, presents rather than re-presents and stays as close as possible to the objects at hand.

The postmodern sensibility provides a mirror for us to see ourselves as individuals against a world of stable values and satisfies the need for "stories" to weave meaning back into the time we live. It seeks to personalize and humanize the forces that determine our lives and are at work inside us, beneath the persona. By resurrecting the classical idea of unity, it tries to make peace with the technification of every practice and every power. Where modernism had been taciturn, the postmodern wants architecture to fill our eyes over and over, whispering about our desires and wishes –instead of pushing architectural form critically to dramatize the play of powers and forces that we live.

Modernism started as a break with the alliance between classical architectural composition and the ideology of traditional society. Modernist forms were not to re-present anything but to present facts arranged in a clear and wholly transparent order. The modernist position sees the design of the building as the presentation of the *sachlich*–the factual and objective–traces of the physical movement, placement, and containment of forces. Modernism lived by the eschatological conviction that the social structure and constitution of the individual would arise radically renewed from immersion in the fire of purified facts, operations, and concepts. The limitation to the positive and the establishment of new

fundamentals would realize the ideals of the Enlightenment: to build a rational and generally liberative social praxis from universal and wholly transparent axiomatic fundamentals, and to create a human existence free of bodily and spiritual fear and want. This is the modernist "repetition" of the Enlightenment's belief in the liberative potential of rationality.[2] This critical positivity, however, eventually turned into a false neutrality of machine efficiency.

The noble and scientific restraint of modernism to the factual soon found itself both intrigued and usurped by the play of power. Modernism was enlisted to reinforce and justify the abstraction of human beings to mere functors designed and trained to perform within economic and social input-output relations determined by efficiency. Yet the aim of modernism had been the radical renewal of the spirit on the basis of a fresh relation to materiality. Thus, it is the play of physical appearances in Purism, for instance, based on limiting itself to the closest possible contact with things, sensations, and ideas, which speaks so refreshingly and forcefully to us today. But after this brief moment of speech close to the heart of things–still open and courageous in facing the nothingness behind its objects–modernism fell back to re-presenting a new myth: the glorification of technicity and the ideology of progress was to prepare the ground for the brave new city and set the scene for a new valorization of capital and the social domination exercised through it.

In modernism, the powers that both **realize** and **re-present** themselves through the textuality of spatial structure tend to become reduced to physical **traces** of **practices**. The nostalgic desire to hold fullness, to stand on firm ground, and to be in touch with the whole again–almost any whole will do–is just under the half-cynical pastiche and behind the immersion into the unmediated concrete of postmodern form. This is true both for physical form and the form of a postmodern life no longer naively fascinated but nevertheless obsessively driven by an unceasing stream of promises of fulfillment. Is desire destined to skip on forever from object to object, seeking and missing itself? Or could desire find and complete itself within a praxis oriented to a totality that remains open to action while opening up the possibility of new action? Such wholeness would be based on continual diver-

[1] Charles Jencks, "Perennial Architectural Debate: the Eisenman Paradox–Elitism, Populism and Centrality," Architectural Design 53, (1983): 4-22.

[2] Jeffrey Mehlman, Revolution and Repetition, (Berkeley, Cal.: Univ. of California Press, 1977).

[3] Michel Foucault, The Order of Things, (New York: Random House, 1973); Michel Foucault, Language, Countermemory, Practice, ed. and trans. Donald Bouchard (Ithaca, N.Y.: Cornell Univ. Press, 1977).

gence and difference rather than logical closure and rigid exclusion and inclusion. The fragmentation and scintillating plurality apparent in the postmodern spectrum are not necessarily the liberative multiplicity of a life founded on the affirmation of **difference**—rather, it is mostly variety in the service of pacification of desire and valorization of capital.

The meaning of architectural form is established, not by scholarly interpretation, but by power-practices. Architecture, therefore, needs a critical general concept of power in order to conceptualize what it is that seeks to realize itself with/against architectural form. Foucault's analytics of the strategic practices of knowing demonstrate the systematic connections between power, knowledge, and truth.[3] Power is a relation of difference between an active and a reactive force: this relation desires to become itself, which necessitates **seeing** (representing) and **knowing** itself.[4] Since power is not a property but a **relation** of forces, it depends as much on the reactive forces as on the active forces for what it can do and what it can know.[5] Power desires to be conscious of itself as **identity** and it needs this consciousness, and the corresponding signifying systems, to organize the practices by which it must work to maintain itself. Power can be grasped only through its semiotic and non-semiotic **practices**, since they are positive unities.[6] Meanings and truths do not exist as independent ideal facts but are always generated and formulated by power-practices. Architectural form is one dimension of the practices through which powers exist: it both physically establishes powers in social space and it turns the environment into so many **texts** through which powers speak. A critical conception of architecture as textuality must see the **built text as a strategy and a record of power**.

The representation of power in space is not just a dispassionate inscription and a rational argumentation. The built text is impregnated with desire since power desires its being and enjoys its functioning and the recording of this functioning. Objects in the environment are constituted as parts of an economy made up of connected and disconnected energy fluxes and organized by desire.[7] The experience of power and lust produced by the construction of an environment made up of these object-machines is then recorded in semiotic media such as spatial structure and literary writing and constitutes the self-identity of the subject as a kind of residual—an excess of experience. Can critical design stretch the representation of powers in space to the point where excessive stress forces them to reveal their true quality? The concept of **differance**, the ceaseless breaking up of meanings (*i.e.* power relations and uses) in language could perhaps constitute a model for such critical stretching.[8] Deconstruction sees meaning as forever displacing and transforming itself within the play of the structural relations of preexisting meanings and of textual battles. Postmodernism, on the other hand, seeks secretly to restore to the powers and conditions of today, the legitimation provided by the great classical metaphysical referents: man, nature, and history. To understand the current resurgence of the classical concepts of representation and unity, it is necessary to retrace the historic development of the power/signification nexus.

According to Foucault, the pre-classical episteme understood the world as a multiplicity of **resemblances.** All creation bore His signs which pointed us to the resemblances which both **expressed** and **were** the unity of God's will. Man and all things were at home in this universe that constantly announced its unity to man through never-ending webs of resemblances. Since the unity of His will created analogy in all things, the world had to be understood by similarities that overpower disturbing and alienating heterogeneities. (Today, Rossi uses this force of analogy to establish spatial types ambiguously based on both local history and on pure geometry which would resist the onslaught of instrumental rationalistic thinking.[9]) Architecture is one of the things of the world that re-presents, by resembling, the unity of all creation and its fullness and presence which is His. Since architecture constructs metaphoric figures exemplary of the universally reigning resemblances, it is **not conceived in reference to the actual scale of the human body and its operations in space** (what we have learned to call "functions"). Instead, architecture builds symbolic images resembling the harmony of creation by using the proportions of the body as the highest example of godly harmony. The genius of the architect consists in devising the signs (harmony of proportions) that lead the contemplator to see the resemblances which situate building, person, and society in the

[4] Gilles Deleuze, "Active and Reactive," in The New Nietzsche, ed. David B. Allison (New York: Dell Publishing Co., 1977).

[5] Jacques Derrida, Writing and Difference, (Chicago: Univ. of Chicago Press, 1978).

[6] Hubert Dreyfus and Paul Rabinow, Michel Foucault: Beyond Structuralism and Hermeneutics, (Chicago: Univ. of Chicago Press, 1983).

[7] Felix Guattari, L'Anti-Oedipe, (Paris: Les Editions de Minuit, 1972).

[8] Jacques Derrida, Positions, (Chicago: Univ. of Chicago Press, 1982).

[9] Vittorio Savi, "The Luck of Aldo Rossi," Architecture and Urbanism 65, (1976).

peace of a world unified by the presence
of God.

The architectural object re-presents the unity
of creation by visibly agreeing with it. This
agreement is beauty—the "clearer similarity
of the bodies with the innate ideas, the true
substance," and the "victory of divine reason
over matter."[10] Alberti had equivocally sought
this agreement both in *a priori* musical harmonies and in empiri-
cally achieved "symmetria" between the parts and the whole. This
proto-modern definition of beauty began to establish the relative
autonomy of the aesthetic against the old equation of the good,
the true, and the beautiful. For the academy of the later 17th
century, architecture was to idealize the observation of nature by
purifying it into the **ideal**. Through the abstracted ideal, archi-
tecture re-presented the fullness of the universe of creation and
enunciated the **presence** of power by letting the numinous to-
tality evidenced in the presumed harmonies and correspondences
of creation enter the present through what were now seen as
idealized resemblances.

Idealizing abstraction reached its zenith during the 18th century:
abstraction was to compare things in such a manner that their
identities were defined as pure form or pure idea (Descartes).
Today the cry for greater representation poses abstraction as the
former's polar opposite. However, both representation and ab-
straction "abstract" and reduce, in that they must select the quali-
ties to be represented. Thus, different modes of abstraction and
representation must be distinguished by the **goals** and **methods**
involved. Abstract Modernist building, for example, found it more
honest and sufficient to present only certain "abstracted" qualities
of the material and spatial form derived from functional efficiency
and elementarized spatial form types (the floor slab, the window
as interruption of the wall plane, etc.). Classical architecture,
though, had always sought in its works to re-present the world as
not abstract, as fully real—with the force of the **natural** and the
obvious, as not fashioned for specific purposes by specific powers.
Affirmative re-presentation abstracts in such a manner that the
ruling order appears as natural by repressing or subverting the

otherness incorporated and exploited by the
ruling powers. The principal task of archi-
tecture before modernity was to re-place
the artificial constructions of historic prac-
tices within the image of the intact fullness
and presence of the numinous (God, Nature,
Society/Individual). Critical re-presentation
on the other hand, **plays** the exploitive ab-
stractions **out beyond their limits**, so that
the repressed potentialities may form themselves and speak for
themselves.[11] While critical re-presentation also has to work with
abstractions, it shows them as such (Brecht) and does not try to
delimit, contain, and "master" the real through abstractions, but
keeps itself open to being "corrected" by the real.

The episteme of the 18th century, referred to by Foucault as the
"classical," assumed that rational discourse could establish a per-
fectly transparent correlation between the things of the world and
their representations in language. Scientific discourse was to
construct tables of knowledge which were inscriptions of the
order of the universe captured in the timeless universality and
simultaneity of the **space** of what can exist. This image made
it possible to reapprehend time in its entirety, that is, to be in
possession of the **origin** of all things and of man, to be in the full
presence of a universal reality, and to possess universal knowl-
edge. Building was to explicate the order of space as purely
spatial ideas. Boullée's designs therefore have no real dimensions,
but are colossal ideal images meant to re-present a pure gram-
mar of space as a dimension of the world, to unfold the order of
geometry as regularity and clarity, and to infuse the contem-
plator with the terror/love of the Nature-God who thought out
such an order.[12] Proportions and the "personality" of a building,
the Renaissance foundations of harmony and beauty, are now
only subtle pleasures for the educated. On the other hand, now
that the bond of meaning between thing and idea had become a
matter of rational/scientific discourse, new architectural forms
could be invented in a process modelled on verbal discourse. In
the mode of an *architecture parlante*, new spatial types should
elaborate the new meanings of a revolutionary society in the form
of a rational visual discourse.[13]

[10] *Erwin Panofsky,* Idea:
A Concept in Art
Theory, *(Columbia,
S.C.: Univ. of South
Carolina, 1968).*

[11] *John Knesl, "Essay
on Liberative Play,"
Troy, New York:
School of Architecture,
Rensselaer Polytechnic
Institute, 1978.
(Mimeographed.)*

[12] *Étienne Boullée,*
Architecture,
*(Paris: Bibliotheque
Nationale, ms. 9153).*

[13] *Claude Nicholas
Ledoux,* L'Architec-
ture Consideree sous
les Rapports de
l'Art, des Moeurs
et se la Legislation,
*(Paris: H. L.
Perroneau, 1804).*

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The grid of intelligibility at the onset of modernity in the 19th century is based on the **positivity** of the objects which it researches and develops. Modern thought positivizes the metaphysical. It is not contemplative, but a mode of action and a direct way for power to "make" itself: the world is seen as **production**. "Man," now a finite being, is cut off from his metaphysical **origin**—the fount of classical authority, fullness, and presence of being. Having lost its anchoring in an absolute origin, architecture becomes eclectic and plays on historic styles and building types as legitimating historicizing references that refer to the emergence of the institution involved in the building program. What is actually happening, though, is the continued uncoupling of formal/stylistic systems from content. Eclectic architecture uses the formal coherence of a stylistic system as an aesthetic device attempting to convey a sense of **unity** and purpose, and to give the "aesthetic" pleasure of **recognition** of the continuity of "man" as a unity. Thus, the aesthetic becomes more "autonomous" so that it may speak hauntingly of the lost unity of earlier times and so that it may, as a "technical expertise," produce coolly calculated emotional effects. The Beaux Arts system shows this clearly. After the positivities of function have been accommodated by "distribution," it imposes a hierarchical order of subordination to the principal "room" to achieve unity (Guadet) and, finally, aesthetic "composition" gives personality and intangible "character" to the building.

In Le Corbusier's buildings, the "diagrammatic" delineation of the powers which are involved in the program seek more than a tracing of movement patterns and an enclosing of activities. Technified labor and society are to be reconciled with nature and the human spirit that creates order. These buildings are a re-synthesis of abstract axiomatic elementary "unities" (the long window band, the pilotis, etc.) which are the spatial/formal correlates of programmatic objectives for a human life-praxis, envisaged as at once more efficient and spiritually free. These programmatic goals and the corresponding forms/types are established as universals and, as general themes, dominate the interplay of powers and desires which are concretely involved in the design situation. In the villa at Garches, for example, singularities are played out against generalized abstractions: the figurated void, the positioning of the stairs, the cutting away of the floors to make loggias, the suppression of columns, are all to be marks of the presence of the individual asserted against mass society and mass production. But because the type is first clearly set up as rule, the building becomes more of a didactic performance, re-presenting the humanization of rationalization, than a dramatization of the dance/struggle of the desires and powers concretely involved in the design situation. This example shows how modernism uses forms in a **diagrammatic** fashion, that is, to conduct intensities of desire and thought directly, rather then to re-present them.[14] This non-signifying diagrammatic delineation of powers and desires seeks to protect them from being overcoded by ruling power and can be condemned only where it reduces and falsifies, or where post-war modernism subscribes to the equation of efficient production and happiness.[15]

Inclusivism, pluralism, historicizing pastiche, equating the concrete with the real, and fetishized detail, are all strategies of postmodernism to recover a fullness of being. In pursuing these paths uncritically, postmodernism reinforces the "positivization" of the present to "just this here and now" and the concomitant loss of memory.[16] Soon, we will move from instant to instant completely filled by the present which relates to our own bodies as just so many "system components" to be controlled.[17] Fullness would be regained, but at the price of the loss of memory—and thus of critical consciousness. Against this technification of the body, of language and thought, and of social structure, have stood the works of critical philosophy from which a critical Late-Modern design practice must learn: the Frankfurt school, critical phenomenology (Merleau-Ponty), Marxist structuralism (Bourdieu), and the post-structural directions—the interpretive analytics of Foucault, the method of deconstruction developed by Derrida, the Nietzschean materialism of Deleuze and Guattari, along with the experimenting play of Barthes and Lyotard.

These writers stress the decenteredness of the modern existence and may actually be preparing the ground for a mature Late-Modernism which will overcome the limitations of the earlier modernism—a result of muddled relations between the positive and the metaphysical. Concepts such as "differance" in decon-

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[14] Felix Guattari, Molecular Revolution, (New York: Penguin Books, 1984).

[15] Klaus Herdeg, The Decorated Diagram, (Cambridge, Mass.: M.I.T. Press, 1983).

[16] Fredric Jameson, "Postmodernism and Consumer Society," in The Anti-Aesthetic, ed. Hal Foster (Port Townsend, Wash.:

Bay Press, 1983); Michel Foucault, Language, Counter-memory, Practice.

[17] Jean Baudrillard, "From Ceremonial to Cloned Body. The Irruption of the Obscene," in The Return of the Body,

eds., Dietmar Kamper and Christoph Wulf (Frankfurt am Main: Suhrkamp, 1982).

struction (Derrida) and "difference" (Deleuze) could open a new mode of experience and a new mode of relating the physical to the metaphysical in order to prevent the subjugation of the meta-physical by the positive—the latter constituted **the** characteristic of the modern—and the return of the metaphysical as irrational irruption. We must fully accept that there can be no metaphysical rock on which to place "man": metaphysics by itself always har-bors repression of difference that comes from the other side—from materiality. We must recognize that all practices, semiotic and non-semiotic, are driven by strategies of powers which sup-press the fact that their own being and identity are nothing but the existence of difference between them and the re-active powers. Instead of seeing multiplicities and difference and an ultimate groundlessness as threat, we must see these as neces-sary for the possibility of liberative and creative desire and thought. **We must ground ourselves, not on some metaphysical sub-stance, but in the changeful stability of the webbing of prac-tices. The visualized paradigm for the new type of order and of synthesis is neither the center, nor the indefinite grid, but a decentered, supportive, and open structuration with rela-tively stable fixed nodes and connective lines which together establish a net over the nothing. The method corresponding to this model might be described as a radically new form of dialectics affirming difference rather than identity for the continual liberation of non-exploitive powers and desires.**

Deconstruction unfurls the nature of the intentions of the power whose voice speaks through the "text" of the architectural form in order to reveal the logical and semantic violence perpetrated by the power that speaks. In this process deconstruction also brings to the fore the violence written into the semiotic system as a whole—the dominance, say, of the grid in American cities over public space. The true locus for the much-asserted auto-nomy of architecture is in spatial "writing": once a specific spatial grammar has been established historically in a place as a spatial typology, power must work with and through the syntactic/spatial differences, *i.e.* force relations, established by this grammar (that may preexist this power), in order to write itself into the world. This historically established grammar can be used by other powers to resist the first power—as the structure of the historic city re-sisted "modernization" to the amorphous space of the "open city" first by its own inertia and then by having been adopted as value by certain interest groups.

Architectural deconstruction extends the play in forms and the powers involved in them beyond their normal limits, so that their hidden strategies come to the fore. It is crucial to note that in such a process, what is merely a subordinate part within a hier-archy of forms and powers can become the site for the entry of repressed potentialities and can thus **re-structure the whole from below**. Such "open" form, made possible by deconstruc-tion, is not anarchy. The critical Late-Modern paradigm of archi-tectural form rejects both the myth of total openness and a total modern synthesis; instead, it establishes webbings of **local** and **temporal completions** and perfections of figurations, in both physical form and practices. These webbings remain open to new differences desirous to form themselves. These local completions are **"small" closures** which fulfill local/historic forms of desire and power. Formal resolution no longer serves as a metaphor for the fullness lost or yet to be gained, but is a figure in which full-ness is **really** present—yet only to the extent to which it is objectively attainable in a concrete place and specific time.
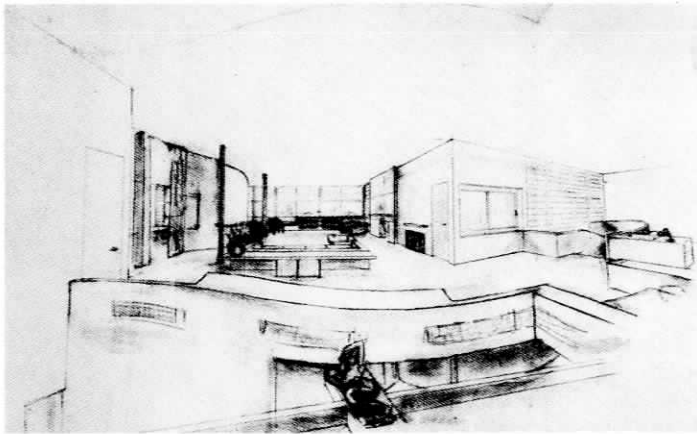
Deconstructive architectural design must grasp spatial form through the **practices** by which power designs and maintains itself along with the truths and meanings it generates. A critical architectural practice then must extend the program of opera-tionalized activities beyond the boundaries which limit what they can do and say to reveal the **practices** of which they are a part—and thus make possible different practices. Programmatic activ-ities and the corresponding normalized form types must be **"played out"** by the work of design to the point at which they reveal more of the true nature of the power that they make and re-present. Design locates itself at the extreme boundary of the limits imposed by power. Decentered itself, it works to make the program and preestablished form-types fully "talk it out." Design is conceived as critical experimental play sustained beyond the limits established by power and reaching the limit of representa-bility of which the Kantian sublime speaks.[18] As its powers of ar-ticulation become more sure, architecture can at once be affirma-tive **and** critical. But rather than tell pictorial stories (as a kind of spatial TV and obeying the reigning order of significations) it would demonstrate the nature of the powers and desires at work in spatial form directly to the body.

The architecture of this new objectivity can actually de-construct itself since the act of extending forms, interpreted as wills-to-power beyond their assigned limits, already sets the stage for the formation of new structurations. The crucial points in this opera-

[18] *Jean-Francois Lyotard*, The Post-modern Condition: A Report on Knowl-edge, *(Minneapolis: University of Minne-sota Press, 1984).*

20

tion are the **selection** of the tendencies to be played out (since not all tendencies can be played out in any finite work) and the **way** and **extent** to which this interplay of wills is pursued. This is where the individual designer's ability and inclination can legitimately make a difference. This model for design maintains modern openness, but also offers the real completions and "small" closures denied by the old "heroic" modernism. It avoids projecting utopian images of total completion and fulfillment and resists losing itself in little satisfactions. It realizes objectively attainable wholeness in a real way rather than in the metaphors of postmodernism.

All classical architecture is conceived as **metaphoric** re-presentation of the wholeness and fullness of human existence through the image of the body and the repetition of the type. Until modernity, architecture was a practice that essentially affirmed the ruling power-practices, both social and cultural: it represented the current order of the world as the metaphoric image of an eternal structure of the universe. By contrast, the modern rhetorical figure of **metonymy** does not simply re-echo meaning complexes that are already built into a language and thus realize powers that are part of this language and society. Literary metonymy replaces the expected (the "normal" expression) by one whose range of meanings and uses has no immediate relation of closedness or similarity to the "normal" expression. It forces the reader/listener to connect two hitherto unrelated meaning complexes kept apart by the forces of order. It forces forms and signs foreign to one another to argue out their desire and power amongst themselves to the point at which the power-imposed definitions of meaning are **transgressed** and what is implied in their relationship is released to create new meanings and possibly new form and structure.

Imagine, for instance, the vacuous representational "public" lobby spaces of New York office buildings and their blank marble walls filled with personal photographs from the lives of the people who work there. Acute embarassment, not only of the corporations but also of the workers, would arise from this clash between the normalized separation of the work world and the private life, be-

tween social association through contract and social association through Eros and common participation in the drama of living. This would urge a critical understanding and thus the formation of new ideas and feelings about work, the public, and the private realm. Or, as a more properly architectural example: imagine the transgression of the sacred rights of private property by an arcade that traverses the office building—the bastion for the private-will-to-power-through-money. The public right to dwell in the city is superimposed on the private right to exclude the bodily presence of the unwanted. This superimposition tests the limits of the powers that work through the established definitions of public and private. (We have yet to see a homeless person camping in front of the Seagram building . . .) Now, if such arcades were not entirely devoted to commercial consumption but were also to offer certain "themes" around which social encounters and communication could develop, the forcing together of realms imposed by the powers interested in efficient valorization of capital and in social domination would certainly be illuminating. In the historic city, such themes used to relate to the sphere of the religious/political and were implanted into the body of the city as statuary, squares, and buildings with particular historic significances.

By cutting things out of their normalized contexts and playing them against/with one another, design can open a dimension of relative freedom from the old domination that assigned specific places and roles and imposed an obligation to a certain logical closure. It is the distinction of the aesthetic-semiotic dimension that what is normally suppressed or simply unrealized can speak for itself and thus identify domination, enable liberating difference to form itself, and delineate direction for this process. The metonymical has an answer to the double problem of meaning: **Will forms be usurped by power and will their intended meaning be received? In metonymy, new forms of power/desire are present implicitly and cannot easily be incorporated by existing power and its systems of circumscribed and integrated practices. Metonymically stated elements eventually stand by themselves as new forms and meanings that do not re-echo the world from and against which they arose. New meaning and new form created by metonymy must be recognized and actively adopted by desire.**

John Knesl has worked as an architect and planner in Austria and the United Kingdom and has taught architectural design and theory at Rensselaer Polytechnic Institute and the New Jersey Institute of Technology.
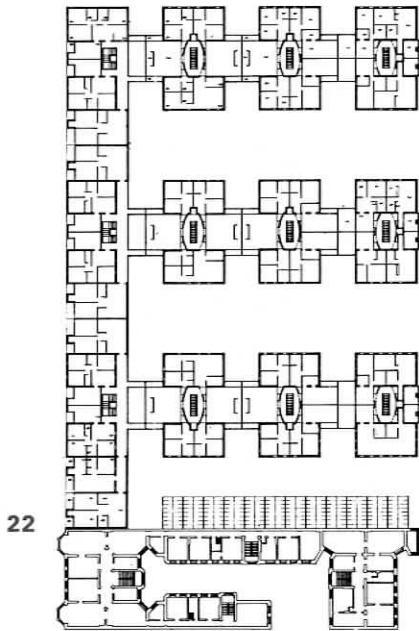
Clearly, the design-play of a critical Late-Modernism must have knowledge of the paths of desire and strategies of power-practices. Architecture therefore, cannot afford a retreat to a false autonomy that merely masks the acceptance of its operationalization as a discipline. Instead, it must deal with the economic, socio-political, and cultural powers involved in the programs **through** the spatial texts they write and seek: since powers must ultimately have a basis in material relations, the spatial dimension of social powers is not just a re-presentation, but a part of their very identity—of their "nature." The material basis is where the body lives, and through it architecture can reach the other side—it can undercut the normalized significations and desires. For the new objectivity, the **bodily** is not a metaphysical substance but the structured density and recurrence of force relations (as are Guattari's mechanic connections and disconnections of energy fluxes). It is the thickness of Merleau-Ponty's "flesh," a sentient supportive bond that establishes a world for a subject and a subject for the world. Since the development of modern power has been founded on an ever more direct and finer disciplining of the "bodily" (that is, of desire, perception, non-conscious thinking, and of nature and social structure[19]) the bodily is potentially critical.[20] **The bodily should be conceived as the boundary between the metaphysical and the material, a connecting window/door, or rather, a black box through which commerce occurs between the material and the metaphysical, the place where we are closest to the production of new desire and of new impulse to thought, where we touch the basis of power**. Critical design has to develop the special relation that architecture has to the body which it surrounds and to which it speaks imperceptibly.

The apotropaic attempts undertaken recently, for instance, by Graves and Ungers, to re-humanize life and spatial form by the imposition of figuration and "theme" on the runaway operationalization and exteriorization of physical form and activities, ultimately stands in the way of critical playing-out of difference, and so does the quasi-anthropological sidestepping of the issue in "rationalism" and "typology."[21] Perhaps the critical Late-Modernism I have in mind must await a new generation; but are we educating architects for such an undertaking now?
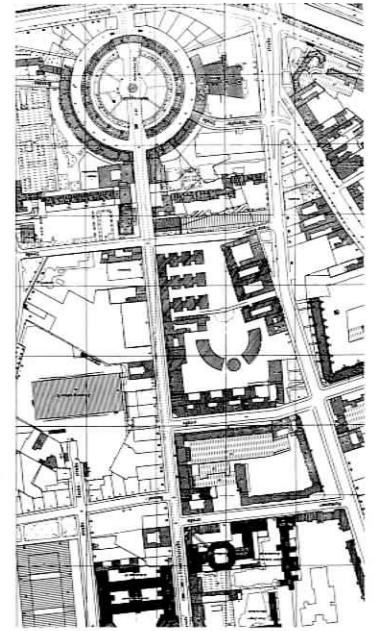
[19] Michel Foucault, Power/Knowledge: Selected Interviews and Writings, 1972-77, ed. Colin Gordon (New York: Pantheon, 1980).

[20] John Knesl, "The Art of Space, the Participation of Art." Proceedings of The International Conference on Participation, Technical University, Eindoven, the Netherlands, 1985.

[21] Anthony Vidler, "The Third Typology," in Rational Architecture. (Brussels: Archives d'Architecture Moderne, 1978).

Pier-Luigi Nicolin, "Innenhof un Innfingarten." Block 20, Friedrichstadt, Berlin, IBA. In playing the block center against the grid-block urban structure, the interior of the block becomes public/exterior, making it possible for a series of intermediate spatial forms to arise between block center and grid streets. These new forms of public space may support new forms of public life.

22

HOUSE FOR LITTLE RED RIDING HOOD

Winning entry for the national competition, Places I, sponsored by Columbus Coated Fabrics, Columbus, Ohio. The program asked the competitors to suggest places of anticipation, transition and gathering in a 20' x 20' x 15'-high volume.

The "House for Little Red Riding Hood" is a formal investigation of spatial definition by means of permutation and combination of simple architectonic elements.

The project consists of a cylindrically enclosed space, set upon a square platform, which contains a flight of stairs/platforms and a volume recalling a house. The intent is to oppose the mystery of an abstract volume with the strength of clearly recognizable imagery.

One enters the volume through a single cut-out in the skin of the cylinder, forming the silhouette of the house. Crossing the threshold of the cylinder, one is inside the quintessential space of the house—a rectangular enclosure complete with

pitched roof, window, door, and dormers above. Here, inside the house, one is outside the previous reality, yet simultaneously outside the project itself. As one passes through the house, one is still outside the previous reality but finally inside the project, in a cylindrical space illuminated from above, imbued with the image of the house and its constructed landscape. One then ascends the stairs inside this space and perceives the environment one came from: both inside and outside the project.

The mystery of discovering the house, the piazza, and the city walls is the *leitmotiv* of the project. These are the light footsteps of a by now grown-up Little Red Riding Hood dancing on the roof of my heart.

Livio Dimitriu is Assistant Professor at Pratt Institute and at New York Institute of Technology. He is an associate in the firm of Perchuck Design Associates in New York and has exhibited and published extensively in both the United States and Europe.

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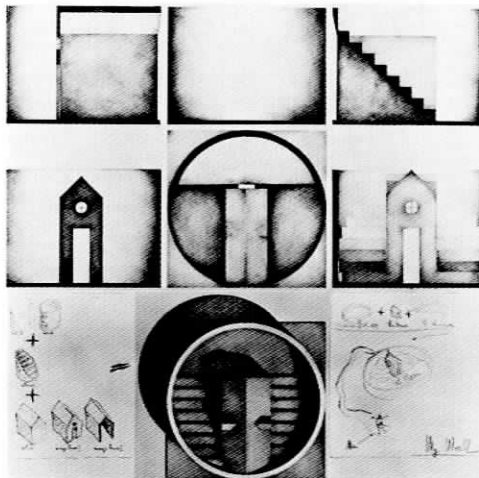
Competition entry

A VERTICAL CEMETERY
Second-year student project
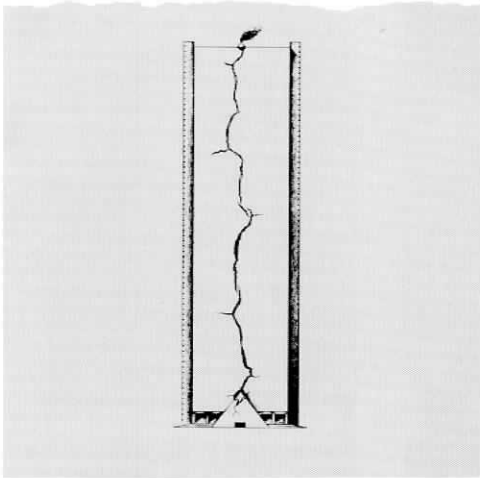
The project is situated amidst the corporate high-rise buildings of midtown Manhattan, on the block north of the Citicorp building, facing west on Lexington Avenue. The cracked tower confronts the peak of Citicorp with an image of entropy and accident. The accident, the crack, is the result of a collision between the pyramid, a symbol of omnipresent death, and the tower. This ontological symbol intrudes upon the corporate reality, reminiscent of the result of the corporation's frantic pace. The tower remains unresolved, a ruin, with its roof in flames.

The tower houses a mausoleum with funerary urns contained in labyrinthine spaces within the larger square of the tower. Rooms and mazes are repeated through the 35 stories, forming a vertical atrium within. Separated from the tower's cracked skin, the mausoleum becomes a half-open shelter. On the east, a cistern of water opposes the pyramid on the west. These four primal elements, earth, air, fire, and water, signify the timeless architecture of death.

West elevation

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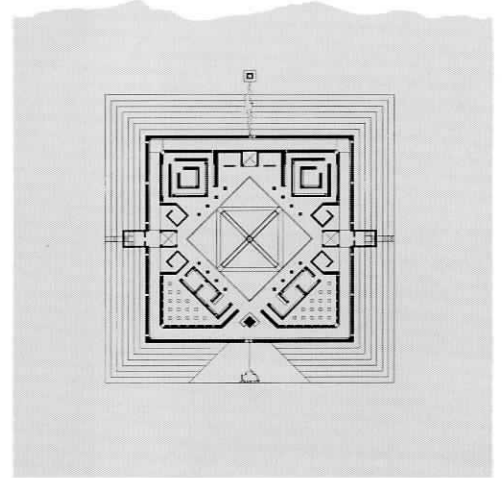
Typical floor plan

Ground floor plan
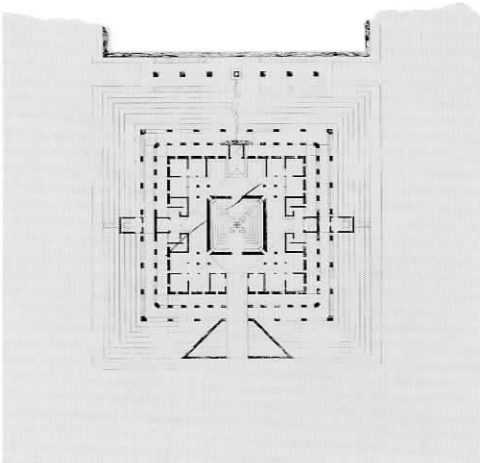
Lower level cemetery
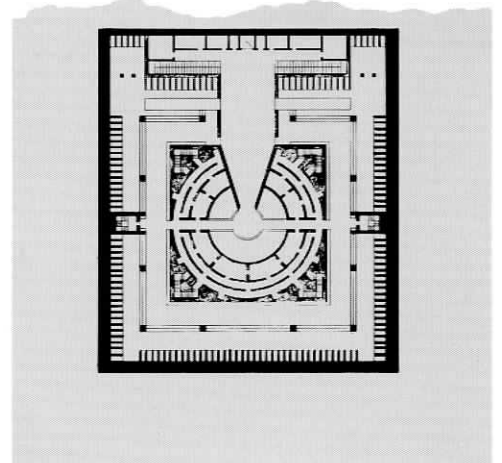
MOSQUE FOR SAUDI ARABIA
Fourth-year student project

the water:

store of imminent meaning.

infinity

the courtyard:

Plan

inorganic exterior space

trapping the natural form.

memory

Cross-section
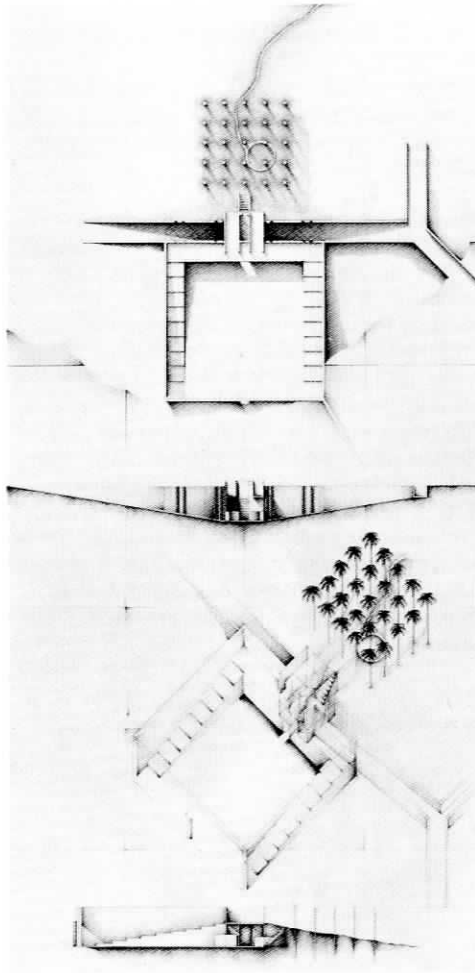
the room:

transparent

cool, peaceful.

cessation

the channel:

Axonometric

forceful and coherent

light upon walls.

absolution

the prayer space:

Longitudinal section

buried into earth.

The problem was to create a small prayer space, secluded and serene, surrounded by the Red Sea. The mosque is situated on a small island adjacent to the corniche of Jeddah, which is connected to the mainland by a pedestrian bridge. The place for prayer provides for the following sequence of ritual activities: removing and storing shoes, washing in running water, and facing Mecca to pray.

silence

We talked with Charles Gwathmey about the use of proportion in his design process. Emphasis was placed on this particular element due to its effect on responsivity, which in our inquiry describes the simultaneous relationship between the user and the abstract idea.

PJA

We would like to ask you about the use of a 3′ 6″ module in your design process. We are trying to determine how it's being used. Le Corbusier spoke of the use of regulating lines and proportions as a means of tidying his designs after an initial inspiration. Conversely, Ezra Ehrenkrantz utilizes the standard modules which exist in construction materials and are determined by economic forces. Does your use of a module lie within this polarity or in some other realm?

Gwathmey

I think it's a combination of both. Our use of a module was inspired by Le Corbusier's "Modulor," which has to do with man's occupation of space and subsequent proportions derived from the Golden Section. The 3′ 6″ planning grid we have used in our residences arose from the occupation of space and dimensional characteristics which seem to repeat themselves in things like stair width, showers, ceiling heights, and so forth. In a pure sense, that is not about material. However, when designing brick buildings and certain masonry buildings which involve coursing, you would adjust the planning grid to accommodate those aspects of the material. We always use a planning grid and the vertical proportioning system derived from Le Corbusier's "Modulor." We then adapt it within that proportion to specific materials. There is clearly an ordering and overlay of both.

PJA

You have mentioned in previous interviews that the 3′ 6″ module is used to simplify aspects of the design program, in order to transcend, to push the process into another realm of design. We are very curious about this notion.

Gwathmey

I don't think a module guarantees a design reality; however, it does guarantee a construction reality. There is always a difference for me between construction and architecture. Le Corbusier's "Modulor" has to do with harmonics. It is a tool which visually orders dimensional characteristics. Although we try to incorporate both architecture and construction in buildings, the only guarantee in understanding how a 3′ 6″ planning grid and a modular vertical grid serve as design tools is to know that is where the design process begins. It is then how you create over it, or extend it, that makes it transcend. I mean, anybody could take a grid . . .

PJA

Is that, indeed, proportion?
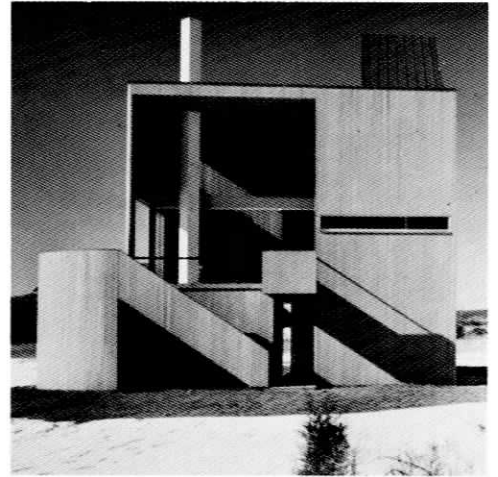
Gwathmey

I think it is proportion. It's derived from both a mathematic and a geometric base (the Golden Section), which have been proven over the centuries. I don't know what's better.

PJA

Do you feel meaning is derived by assuming a classical approach to design or from the way your clients use the space? In what sense does your use of the module affect your architecture?

Gwathmey

I don't think the grid and module control in that way. They are used in a more general manner. I think you have to accept them as devices. They have become very efficient for us over the years. I can sit on an airplane with a piece of graph paper and through drawings which are proportional and referential dimensionally, actually come back with a little sketch which I can blow up, and it will be pretty close.

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PJA
Our questioning has to do with the central role the module plays in what eventually becomes your architecture.

Gwathmey
It is clearly a primary reference for us, as opposed to a subjective organic geometry.

PJA
As you go through your design process, does the process change at all?

Gwathmey
The design process doesn't change, but if the program changes or adjusts, the design changes. In other words it is not a shoe-horn proposition nor a linear proposition. It is a composite proposition.

PJA
Would that be different from an attitude where, if the design process brought out a need to change, then the process might respond in some way?

Gwathmey
Well, yes . . . you make me nervous when you say "design process changes." Our design process has to do with comprehensibility: setting up a mechanism that accommodates programmatic, site, and other universal issues in a coherent way. If the programmatic base changes, then theoretically, within a *parti*, it should be able to accommodate change through manipulation and re-evaluation. It's the old story about devising a system that is on the one hand general enough to accept variation, and yet specific enough to become articulate.

PJA
That ties in very well with how you use a module, actually.

Gwathmey
I think so.

PJA
You mentioned comprehensibility; how much of the program can you actually know at the beginning of the design process? Does your understanding of the program change as you make design decisions along the way?

Gwathmey
I think the clearest way to make an initial diagram which becomes a design is to be as familiar with the program as you possibly can. The research, which is a consuming effort, is very precise.

PJA
By "consuming" are you referring to the one chance you have to take everything into consideration?

Gwathmey
Yes, I think it is a waste of time to try to make a diagram of a building, without understanding its program.

PJA
What if you notice something in your diagram and learn something new, something that could not have been pre-supposed?

Gwathmey
Then that's an opportunity.

PJA
Wouldn't acknowledging that opportunity effect an attitude shift in your over-all direction?

Gwathmey
It depends on how major your perception is regarding the opportunity.

PJA
Do you think an inquiry into abstraction will serve a practical use for architects today?

Gwathmey
I definitely don't see how you can avoid it. I don't think architecture is either painting or photography. I think the nature of architecture is abstract. The idea of space, volume and form, and the mathematic, geometric, and proportional roots tend to make abstraction inherent on one level or another—it's the degree.

27

JENNIFER ROSENTHAL

PRINCETON FARM PROJECT
Second-year student project

The project is a result of an exploration of the forms inspired by pure geometry imposed on an irregular site.

A geometric matrix was formed by generating a series of overlapping grids which are arranged to follow the different angles of the boundaries of the site. A second grid system was also imposed which consists of a series of adjacent squares which are hierarchically and proportionally related through the use of the numerical relationships of the Fibonacci series and the golden section.

The interaction between these two geometric systems defined the location of major site axes, roads, building sites and forms, and the partially enclosed open spaces.
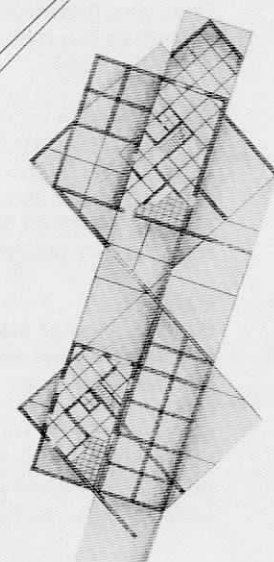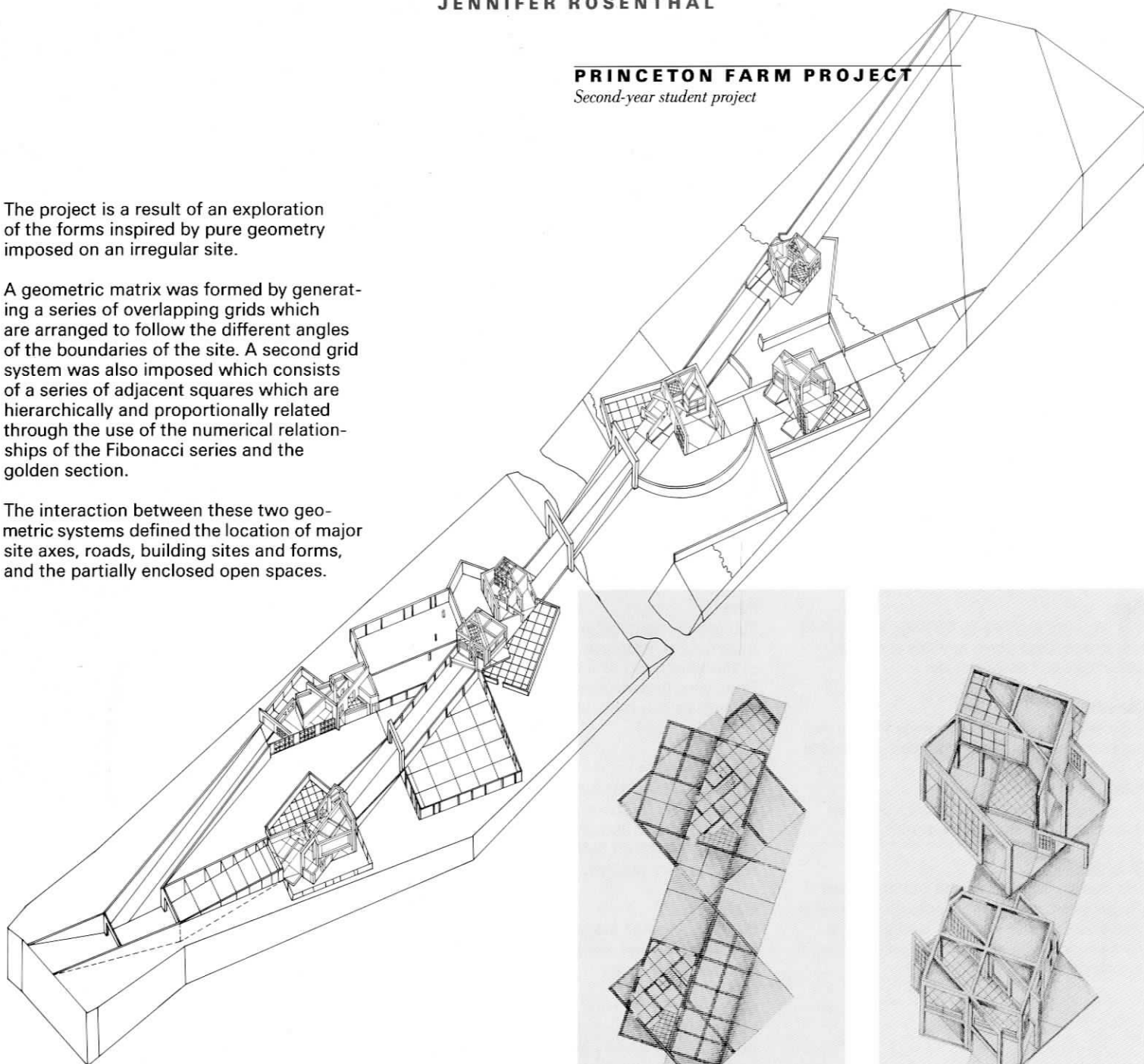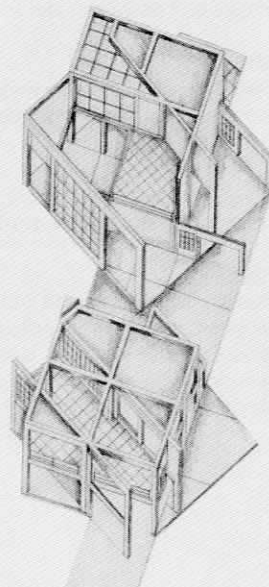
Site axonometric

Plans

Axonometrics

PRINCETON FARM PROJECT
Second-year student project

The architecture of Stonehenge becomes complete as light envelops the arrangement of its forms. The relationship between the cosmos and the earth becomes implicit in the stones. The Pantheon encloses interior space, separate from the world outside. In this sense the space is self-referential. It is only the ray of light which comes through its oculus which suggests a connection with the outside.

This project, in recognition of the relationship between perception and the light which renders form perceptible, posits a linear form, providing a series of experiences which terminates in a view of the reflected progression. The form is depicted as a reverse image. Depicted as a negative form, the project becomes the white, or light, on a two-dimensional surface. The balance between open form, light, and enclosed form is achieved through the perception of the project as a two-dimensional figure.
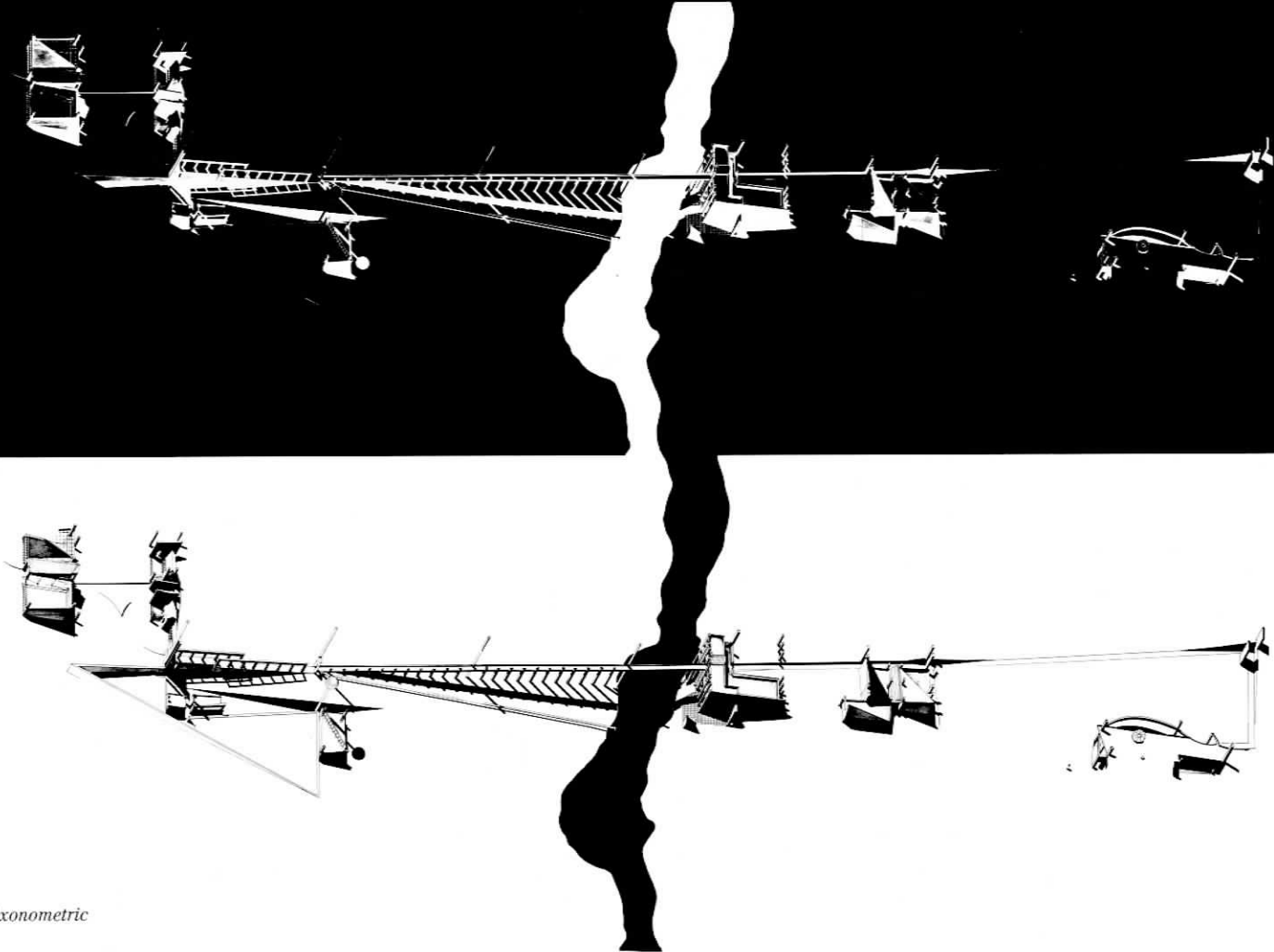
Site Axonometric

PRINCETON FARM PROJECT
Second-year student project
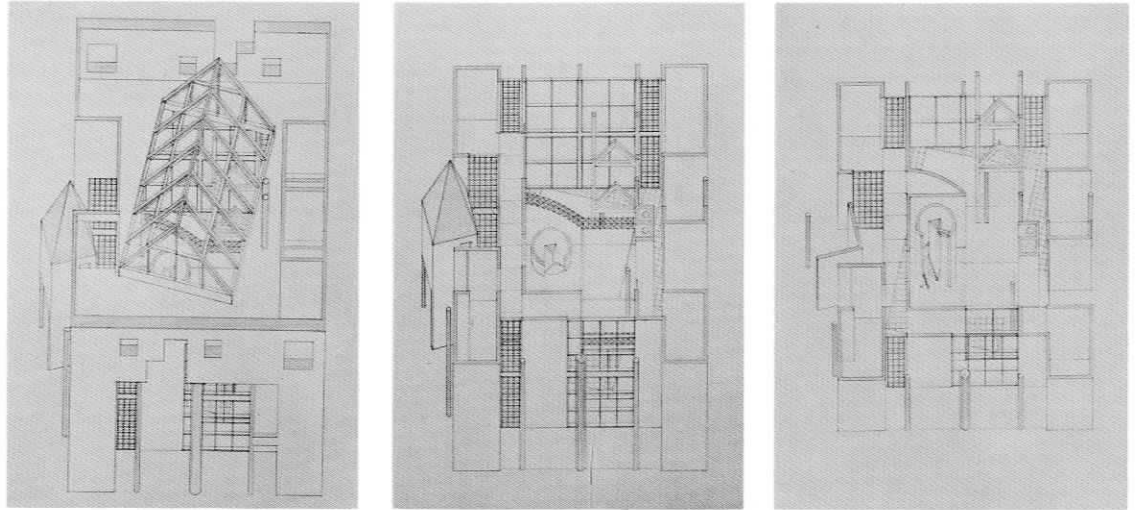
Axonometrics
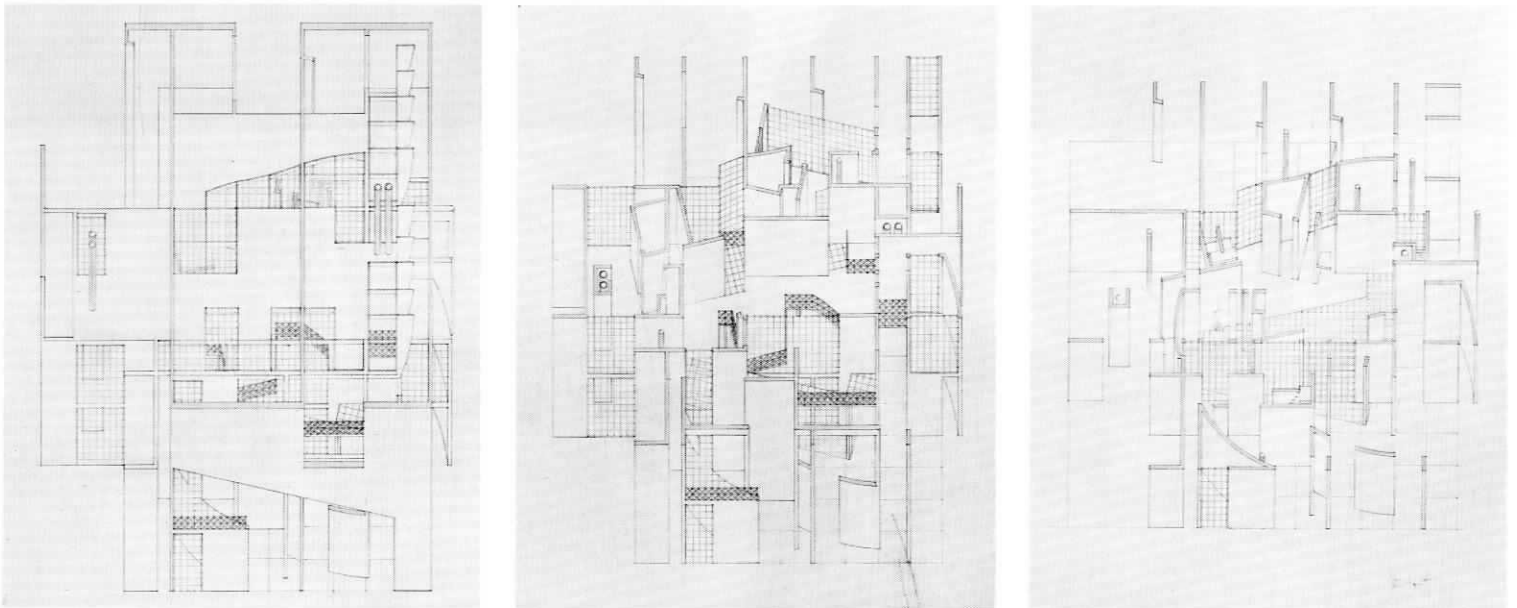
[1] Gyorgy Kepes,
Language of Vision
(Chicago: Paul
Theobald and Co.,
1944), p. 77.

[2] William La Riche,
Introduction to "Theory
in Practice," Architec-
tural Forum (Septem-
ber 1972), p. 34.
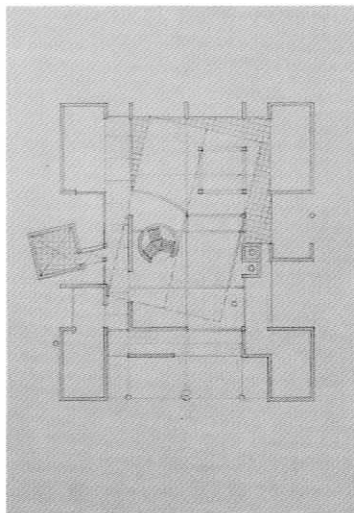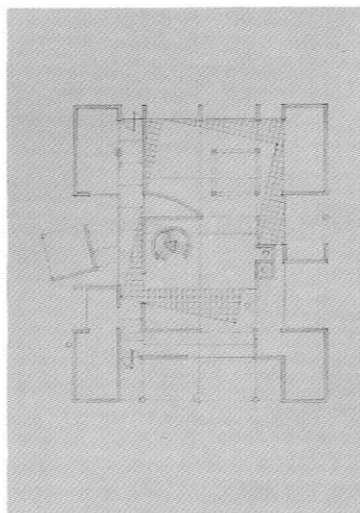
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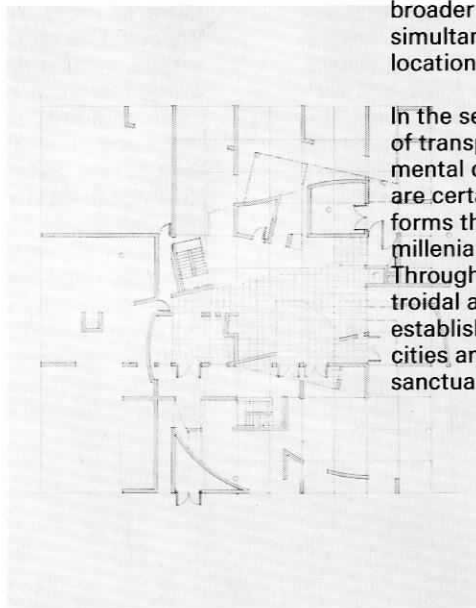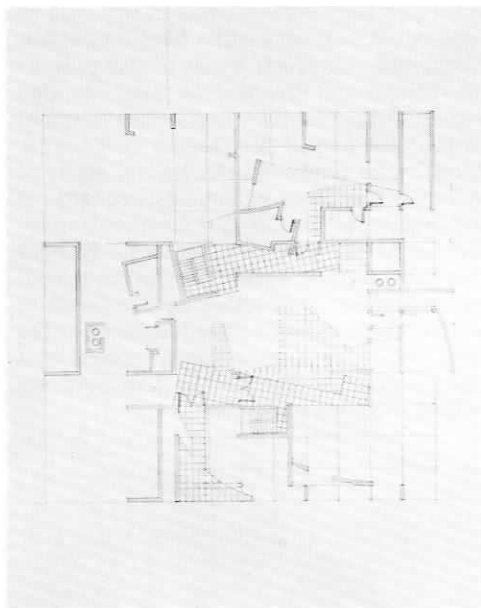
These houses are two in a series of struc-
tures on a predominantly linear site. Over-
all site geometries, generated from the
golden section, established exact locations
for all the structures. In the first house,
the site geometry becomes the basis for a
three-dimensional exploration of form.
Solid void, center, periphery, point, line,
plane and volume are all universal concepts
that can generate spaces when transformed
as a result of shifting, rotating, compress-
ing and interpenetrating.

"If one sees two or more figures partly
overlapping one another, and each of them
claims for itself the common overlapped
part, then one is confronted with a con-
tradiction of spatial dimensions. To resolve
this contradiction one must assume the
presence of a new optical quality. The
figures are endowed with transparency:
That is, they are able to interpenetrate with-
out an optical destruction of each other.
Transparency, however, implies more than
an optical characteristic, it implies a
broader spatial order. Transparency means a
simultaneous perception of different spatial
locations."[1]

In the second house, in addition to the idea
of transparency, the notion of the funda-
mental cell or megaron is explored. "There
are certain archetypal forms in architecture,
forms that have recurred throughout the
millenia in various cultural contexts. . . .
Through the combination of serial, cen-
troidal and field organizations, we have
established . . . the continuous space of our
cities and the discontinuous space of our
sanctuaries within them."[2]

31

ANNE GRISWOLD TYNG

THE ENERGY OF ABSTRACTION IN ARCHITECTURE: A THEORY OF CREATIVITY

Abstraction is the well-spring of architecture. It links creative source to tangible structure. Insight into the creative process from abstraction to built form may be found by following the process in reverse from architecture toward abstraction.

The history of architecture offers no convincing explanation for the change in styles or for the confusing returns to "classical" or "gothic" revivals. When I was a student at Harvard during the Bauhaus reign of Gropius and Breuer, I wondered why we had such a strong empathy for the rectilinear "box," when previous eras had produced more memorable works of architecture crowned with pantheon domes and gothic spires.

History seen only as straight linear chronology was not meaningful to me. Seen in a broader perspective, as the curving linearity of a repeating cycle, the recurring periods of "revival" establish a consistently repetitive rhythm of shifting empathy for different styles. The continuous "rounding out" of consciousness in human history can be understood as a circular movement that repeats an underlying order in four distinct phases. The occurrence of these four phases of shifting human orientation is transformed by chronological time as it pulls the circular movement vertically to another cyclical level. Every cycle creates new tangible variations keyed to the abstracted energy of its four stages.[1]

Four dynamic shifts in human orientation direct energy first upward, next outward, then downward, and finally inward. Upward-directed energy correlates with orienting principles of the square, with bilateral symmetry, orthogonal or rectilinear form, and with the balanced spiritual joining of the "masculine" and "feminine" principles. Outward-directed energy correlates with the circle, with expansion around in all directions from a center, with extroversion and dominance of the "masculine" principle. Downward-directed energy correlates with the vertical pole or contained verticality of the cylinder along with the physical joining of "masculine" and "feminine" principles. Inward-directed energy correlates with the triangle or its three-dimensional version as a spiralling cone, with introversion and the dominance of the "feminine" principle. From square to circle to pole to triangle, or from cube to sphere to cylinder to cone, the cycle progresses from simple to more complex forming principles. The cycle

also proceeds from contained energy toward apparent loss of energy outward, downward and inward, a causal sequence that makes an acausal upward leap to a new level of containment, a simplicity including the previous complexity. The spontaneous return to upward-directed energy, to an orientation defined by the square or rectilinearity, appears in history as a rebirth or renaissance.

The improbable return to newly contained energy and simplicity in "bilateral" rebirth continues again on the probable path of the cycle toward entropy. For each phase in the cycle, new creative energy is found in the improbable occurrence of a new ordering abstraction in the energy-efficient configurations from cube to sphere to cylinder to cone. From simpler to more complex symmetry, each improbable order momentarily contains and focuses energy in the probability sequence toward an apparent loss of energy. The predictability of entropy, or loss of energy, in the Second Law of Thermodynamics is valid for such a contained system. In creativity, and in living form, the apparent loss of energy to the environment is improbably captured and synthesized in a larger context that establishes a higher level of energy to begin a new cycle.

One such cycle began in Italy with the period of rebirth named the Renaissance, its four phases marked by shifting empathy from the forms of Proto-Renaissance to High Renaissance to Baroque to Rococo. This ordering geometric sequence shifts from the simple, serene, symmetrical, horizontal, rectilinear forms of the palaces of the merchant princes—Strozzi and Ruccelai—to more rounded forms of domes and arches, the horizontally expanding space of the dome of St. Peter's in Rome and of the Duomo in Florence, then to the vertical extension of time with the helical stairs of the Palazzo Contarini in Venice and those inspired by Leonardo at the Chateau de Blois and Chambord, as well as the vertical monumentality of memorial columns and obelisks placed throughout Rome by Pope Sixtus the Fifth, shifting again to spiralling space/time complexity in the undulation of facades and lanterns of Borromini and Guarini. The eleven cycles I have traced from the time of the Great Pyramids of Gizeh to the present suggest that we may again be reaching a point of "rebirth" in a momentarily balanced release from limits of space and time.

[1] A.G. Tyng, "Geometric Extensions of Consciousness," Zodiac 19 (Milan, Italy: 1969), pp. 130-162.

[2] Talbot Hamlin, Architecture Through The Ages, (New York: G.P. Putnam's Sons, 1940), p. 569.

[3] Helen Gardner, Art Through The Ages, (New York: Harcourt Brace, 1962), p. 717.

Although each phase is of equal value and importance, historians' names for the extroverted Enlightenment and the introverted Dark Ages show a general bias toward extroversion. This may be explained in part by the sense of regression and loss of control of the environment that is felt in the shift from the extroverted rotational phase to its containment by the introverted helical phase. The bias toward extroversion is also shown in the strong sense of rebirth in the shift from spiral introversion to bilateral extroversion and a renewed control of the environment. On the other hand, the helical and spiral phases of introversion have produced new insights into the healing of the body and mind, and the flowering of poetry, music, literature, drama and the arts. Greater powers of abstraction may have evolved in the empathy for weightlessness and dematerialization in the spiral phase.

To see our present position in the cycle, we can look back at the late 1800s to what historians have recognized as the Eclectic phase of multiple styles. Combinations of Gothic, Romanesque, Renaissance, Classic, Egyptian and Oriental were described by Talbot Hamlin as "this kind of superficial picture-puzzle design."[2] Along with the interaction of space and time that blurred boundaries between styles, a dematerialization of matter with light occurred in the more vigorous skeletal forms in steel and glass initiated by Paxton's Crystal Palace. The series of Paris Exposition buildings culminated in the tapered vertical steel lacing of the Eiffel Tower. Another vitality of this "spiral" phase occurs in the work of Gaudi, in his muscularized columns, undulating facades, faceted turrets and perforated towers. Perhaps the masterpiece of this

phase is the Roeblings' Brooklyn Bridge where, at its opening, the first public use of electricity highlighted the daringly delicate wire network hung on curving tension cables from its towers.

The shift from the ordering abstraction of "spiral" cone to "bilateral" cube appeared as a dramatic break with the past. Among painters, the previous spiral phase of multiple movements included pre-Raphaelites, primitives, genre, landscape, historic and epic painting. Matter was dissolved with light by the Impressionists and Pointillists. The realization of abstraction underlying nature was stated by Cézanne: "Everything in nature adheres to the cone, the cylinder and the cube."[3] In painting, this new dominant single movement was literally called "cubism."

In architecture, the startling breakthrough from complexity to simplicity occurs in Frank Lloyd Wright's early work. The Robie House of 1908-9 articulates this new empathy in the horizontal sweep of wall and roof planes, in the integration of form and structure, in the joining of interior space with the exterior and nature, and in the flowing together of interior spaces previously differentiated and compartmentalized by the Victorians. Wright's work had a powerful impact on Europe where, twenty years after the Robie House, the International Style was centered at the Bauhaus. The late-19th-century split between William Morris's Arts and Crafts movement and modern industrial production was resolved by the Bauhaus in a fervent dedication to design for mass production under the credo "form follows function."

Clues of a shifting empathy to the "rotational" phase began to appear in Eric Mendelsohn's Schocken department store of 1929 and in the curved base of Howe

and Lescaze's Philadelphia Saving Fund Society Tower of 1931-2. Wright explored low circular forms in his houses, and Buckminster Fuller produced the most powerfully abstracted archetype of this phase in his tensegrity domes. At the same time, domes of very different structure and nature proliferated in banks and state capitals.

Louis I. Kahn's Richards Medical Towers initiated a shift of empathy to the next "helical" phase, and recalled a previous helical phase in being compared to the towers of San Gimignano. The imagery of Kahn's and my proposed City Tower with its undulating helical movement and Kurokawa's proposed Helix City can also be seen in retrospect as characteristic of this phase. The London Post Office Tower topped with its rotating restaurant, Goldberg's twin Marina Towers in Chicago, and Kahn's cylindrical forms at Dacca are some of the round or non-directional towers produced in this phase of empathy. John Portman's spectacular towers proliferated helical empathy from coast to coast.

Complexity of forms increased in the more eccentric and idiosyncratic expressions of "post-modernism," the current phase of "spiral empathy." The dematerialization of matter with light appeared in towers of mirrored glass and was dazzlingly celebrated

[4] *Carl G. Jung, "Aion: Research into the Phenomenology of the Self,"* The Collected Works of Carl Jung, *Vol. 9:2, Bollingen XX, trans. R.F.C. Hull, (New York: Pantheon, 1959), p. 248.*

in the faceted glass complexity of Philip Johnson and John Burgee's Pittsburgh Plate Glass Headquarters building. Distortions of scale appeared in furniture forms as buildings. Dissolution of space and time recurred in rampant eclecticism under its new name of "historicism." A segment of this empathy was, however, directed toward true historic preservation.

Two hopeful clues for a new phase of rebirth are the simple cube of Kahn's Exeter Library, which expands the ancient theme of "squaring the circle" to a cubing of the sphere, and the Kimbell Museum with its serene horizontality, its numinous light, and its connection to nature in inner and outer courtyards and in inner and outer roof vaults echoed in the long vault of waterfall.

Natural laws discovered about form in this century now affirm principles used by architects intuitively as aesthetic preference or mystical cult. The numinous edge between known and unknown has shifted. The mystical is now understood as fact and new areas of the unknown lure our intuition and imagination. The task is nothing less than that of assimilating the complexity of accumulated knowledge of this cycle in order to find its essence and give it a starkly simple simultaneity of form that appears effortless. The underlying abstraction of square and cubic symmetry is the next creative orientation and energy source after we find our tortuous way through the inward-directed phase of eclecticism.

Cycles of human orientation appear valid in correlation with hierarchies of natural cycles. Although these occur at different scales, encompass different time-spans, and embody scientific, biological, psychological, philosophical and aesthetic concepts, they can be seen as cycles within cycles, enriching a unified conceptual diagram. They can also be arranged in a variety of subsets.

Primordial sources for shifting states of mind can be found in the cycle of night and day (day's waking to consciousness and night's unconscious sleep) and in the longer cycle of the seasons. Summer is characterized by extroversion and out-going activities in the sun; fall brings a sense of nature's fruitful harvest and a turning inward; in winter there is a sense of hibernation and gestation; and in spring there is a strong sense of rebirth in the appearance of new life and growth.

Built up from such primitive sources are attitudes first of exploring, next of evaluating, then of assimilating, and finally of synthesizing. In history, the rounding out of human consciousness reveals correlating

shifts of energy toward discovery in different areas of knowledge or development, dominant first in technology, next in biology or the natural sciences, then in the arts, and finally in philosophy. Connections between the four functions of Carl Jung's typology of feeling, thinking, sensing and intuiting appear to correlate with these attitudes and interests: thinking/sensing with exploring and technology, sensing/feeling with evaluation and the natural sciences, feeling/intuiting with assimilation and the arts, and intuiting/thinking with synthesis and philosophy.

Carl Jung's cycle of "individuation,"[4] a process of creative analysis and development in the individual psyche, has an extraordinary correspondence with many of the abstracted cycles referred to here. It had been the correlation of Jung's cycle of individuation with the geometric and historic cycles that provided the convincing link for my cyclic theory. Jung's cycle progresses in four phases from "homo," the extroverted rotational tension between the individual and the collective on a conscious level, to "serpens," the helical vertical tension between the individual and the collective unconscious, then to "lapis," the spiralling tension between the individual

5 A.G. Tyng, Simultaneous Randomness and Order: The Fibonacci-Divine Proportion as a Universal Forming Principle, *publ. (on demand) (Ann Arbor: University Microfilms, 1975) Ph.D. diss.*

and the collective unconscious, and finally to "anthropos-rotundum," the sense of rebirth in the synthesis and momentary balancing of all tensions. The many polarities between each phase provide the pull to new sources of energy in the next phase.

The biological roots of the cycles of shifting human empathy may be found in the most fundamental living forms. The energies and configurations progressively built up in the rhythmic interplay of polarity and rotation result in the gradual intensification of structure and the flexible vitality that is a special achievement of "higher" living forms. Bilateral human beings evolved from numberless hierarchies of cycles of form, from the primordial ordering of atoms and molecules, through the cycles in the early stages of embryonic development from the bilateral, then rotational cleavages of the ovum, to the helical body stalk of 18 or 19 days, to the spiral embryo of about four weeks, to its ultimate bilateral form as a ten-week 2-inch fetus of potential human being.

There are tremendous leaps in the scale and complexity of life forms when their geometry is camouflaged by variations in color, motion and mysterious habitat. The life cycle of the butterfly, although obscured by lapses in time and hidden embryo shelters, is still clearly defined in four phases: the rotational symmetry of its eggs, the helical symmetry of its form as a caterpillar or larva, the spiral symmetry of the pupa or chrysalis, and its dramatic rebirth in a magnificent form of bilateral butterfly. The frog also follows a cycle from the rotational zygote to helical body stalk to spirally tapering tadpole to bilateral symmetry of the mature frog.

The creation of the first hierarchy in living form may have occurred in the structure of hemoglobin, the molecule that gives blood its red color. It is a beautiful example of forms within forms because it includes bilateral tetrahedron carbon atom bonds, rotational rings of pentagonal nitrogen bonds, helical alpha and beta helices, and the irregularly spiralling helices attached to each of four heme molecules. Yet its total form is ordered by the simple bilateral positioning of its four hemes in a larger tetrahedron. The complete form recalls its internal carbon atoms' tetrahedral bond; thus its inner multiple order has affinity with the single overall order.

The slightly asymmetric tetrahedron of the Deoxyhemoglobin form of hemoglobin offers an extraordinarily precise and fascinating geometric relationship. I have found that the distances between the four hemes of this cluster of 100,000 atoms, measured in inconceivably small angstrom units, have **relative** values of 1, 1, 1.413 (close to $\sqrt{2}$ or 1.414), 1.615 (close to the Divine Proportion or 1.618) and 1.49 ($\sqrt[4]{5}$). This is an unexpected demonstration of the occurrence in living form of relationships found in the Fibonacci-Divine Proportion matrix and in the laws of probability.

The thought that probability and creativity are connected may be deflating to the human ego. Yet, in exploring the subtle relations between randomness and order, between the probable and the improbable, one begins to have a profound respect for this connection. I have proposed that in the brain, the Fibonacci-Divine Proportion matrix is the key for processing information in perception, reception and conception.[5] For example, Deutsch,

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the bio-engineer, has found that 0.618 is the amplifier gain in multi-synaptic neuron chains with feedback, and that instability in the brain exists when this ratio is exceeded.[6] If 0.618 is the amplifier **gain**, the ratio of gain would be 1.618:1. When I pointed out to Deutsch this relation of amplifier gain to the Divine Proportion, he had not previously been aware of it.

Affirmed by many other examples in natural laws, the Fibonacci-Divine Proportion is the architect's alphabet for the archetypal language of geometry. To know one's ABCs is simply to know that the Fibonacci Summation Series begins with $1+1=2$, and that each successive term is the sum of the two preceding terms; 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, . . . The ratios between consecutive terms start with the two extremes of 1:1 and 2:1, shifting between these ratios from 1.5 (3:2) to 1.66 (5:3), from 1.60 (8:5) to 1.625 (13:8), becoming more and more consistently similar ratios. By the twelfth and thirteenth numbers of the series the ratio is 1.61805 (233:144), very close to the Divine Proportion of 1.61803.

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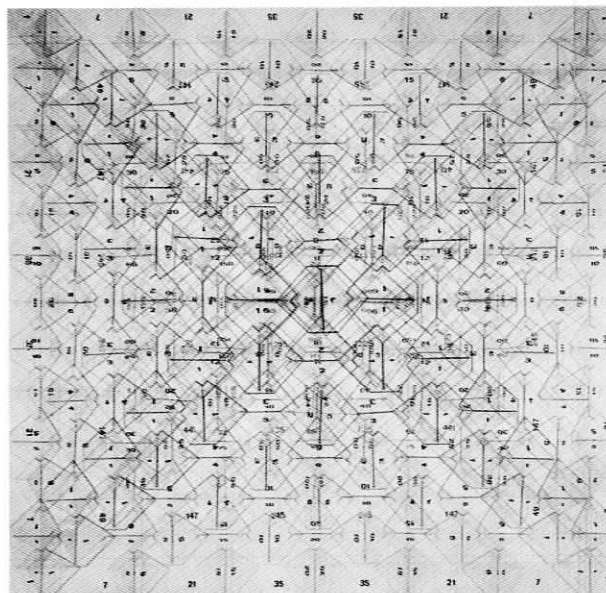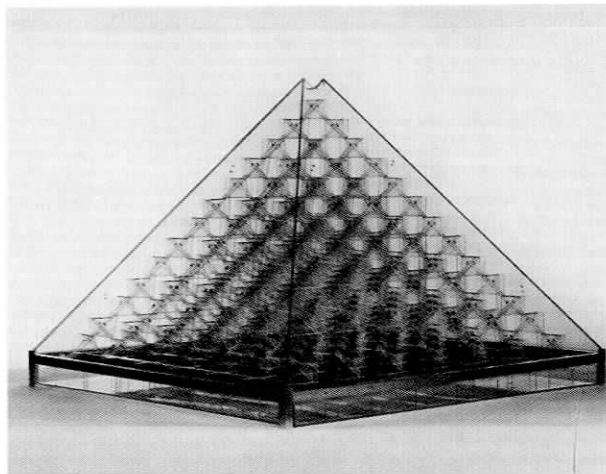
[8] *A.G. Tyng, Law of Close-Packing:*

When equal circles are close-packed within a plane in a larger circle, the Fibonacci ratios of areas of contained circles to area of containing circle of 1:2, 2:3, 3:5, and 5:8 produce symmetries that are bilateral, square, equilateral triangular, and pentagonal,– all the symmetries on the faces of the five Platonic Solids; when equal spheres are close-packed within a larger sphere, the ratios of spherical surfaces of contained spheres to containing sphere in Fibonacci ratios of 1:1 for cube and octahedron, 2:3 for tetrahedron, 13:8 for dodecahedron and 21:13 for icosahedron produce the symmetries of the five Platonic Solids, the only regular polyhedra possible in three-dimensional space; even when the ratios are approximate, no more equal circles or spheres can be contained than in those symmetries.

[9] *A.G. Tyng, The Super Pythagorean Theorem:*

Theorem 1: A Fibonacci Triangle is a triangle whose squared sides are consecutive terms of the Fibonacci Series.
Theorem 2: All Fibonacci Triangles are right-angled triangles since each number of the Fibonacci Series is the sum of the two preceding numbers.
Theorem 3: Circling (with each side as diameter) rather than squaring sides produces the same relative areas to each other as the areas of squared sides are to each other.
Theorem 4: In each Fibonacci Triangle a circle that circumscribes all three circles circumscribing its sides has an area that is the sum of the areas of the circle on the hypotenuse and the circle on the next longer side; the circumscribing circle of all three circles of a Fibonacci Triangle will equal a circle that circumscribes the hypotenuse of the next larger Fibonacci Triangle, establishing a continuous circular overlap in a sequence of Fibonacci Triangles.
Theorem 5: A sequence of Fibonacci Triangles is asymptotic to the Divine Proportion triangle whose circled sides are relative areas of 1, $\emptyset$, $\emptyset^2$ and are all circumscribed by a circle with an area of $\emptyset^3$.

[6] S. Deutsch, Models of the Nervous System, (New York: John Wiley, 1967), pp. 86-7.

[7] A.G. Tyng, "Geometric . . .," Zodiac 19, pp. 131-9.

This alphabet is embodied in the five Platonic Solids as the three-dimensional essence of the Fibonacci-Divine Proportion matrix. These solids are the only regular forms possible in three-dimensional space. In each regular solid, all the faces are the same and meet each other at the same angles. The five Platonic Solids were described by the ancients as the playthings of Baby Bacchus, the archetypal dice of which all things in the universe are made. These dice are, in fact, the improbable order of energy-efficient forms that produced life, and the improbable order of abstractions that underlie human creativity. Not until this century have we confirmed that the five solids embody relationships involved in the bonding of atoms that are the building blocks of both natural and synthetic matter.

The geometric cycle of three-dimensional forming principles includes the bilateral symmetry of the Simpler Solids–the cube, tetrahedron and octahedron–and the rotational symmetry of the Higher Solids–the dodecahedron and icosahedron. Extensions of these Higher Solids produce helical and spiral symmetry to complete the four phases of this three-dimensional cycle.[7] The cycle of bilateral, rotational, helical and spiral energy-form diagrams describes the archetypal sequence from simplicity to complexity, and from contained energy to entropy. Architects could not speak without this three-dimensional vocabulary of form.

Two "grammatical" rules which I have found connect the Platonic Solids and the Fibonacci-Divine Proportion matrix to two-dimensional abstraction. I have found a Fibonacci fitting of spheres and circles that result in the five solids and the basic symmetries of the square, equilateral triangle and pentagon. This fitting of spheres and circles can be described by a law of close-packing.[8] The other "grammatical" rule is a Super Pythagorean Theorem linking a sequence of Fibonacci Triangles within

a matrix of key two-dimensional "words." These triangles are essential in the archetypal language of architecture, yet, as far as I know, are not previously recognized as relating to the Fibonacci series. The first Fibonacci triangle is the half square (cut on its diagonal) and, when sides are squared in the Pythagorean Theorem, it is the "1, 1, 2" triangle. The next Fibonacci "1, 2, 3" triangle occurs as inner structure in the three Simpler Solids. The "2, 3, 5" triangle occurs in the double cube and the "3, 5, 8" triangle occurs in a Divine Proportion division of the equilateral triangle.

The Super Pythagorean Theorem is based on circling (with sides as diameters) instead of squaring the sides of triangles, but it produces the same relative values of areas. A larger circle encompassing the three circled sides of the "1, 1, 2" triangle is a circle with a relative area of 3 and is identical to the circle circumscribing the diagonal of the next Fibonacci "1, 2, 3" triangle. The same is true of the "1, 2, 3" triangle in relation to the "2, 3, 5" triangle. All Fibonacci triangles are linked in this way in a Fibonacci sequence of fitting and overlapping circular areas. The series of triangles in the Super Pythagorean Theorem leads, as does the Fibonacci numerical series, to the precise Divine Proportion occurring in the "1, $\emptyset$, $\emptyset^2$" triangle found in the Great Pyramid of Gizeh. The Super Pythagorean Theorem is stated in a series of five theorems.[9] It was from this Super Pythagorean Theorem that I derived a concept of overlapping, pivoting Fibonacci triangles for "The Structure of Intuition or a Flower" (1974).

Confirmation for the Fibonacci-Divine Proportion matrix as the most fundamental archetypal source is its role in the laws of probability. Pascal's triangular table of probability tabulates ratios of probable to improbable for repetition of an event that has two possible outcomes: *i.e.* heads or tails, yes or no, on or off, right or left. Cross-sections cut diagonally through cumulative events in Pascal's Triangle produce sums resulting in the Fibonacci series. As the summed slices are cut through more cumulative events, ratios between the sums get closer and closer to the Divine Proportion. I have proposed that **the Divine Proportion is the Probability Mean of the universe for all repeated events that have two possible outcomes.** The probable to improbable ratios in the Probability Pyramid can be seen as a model of probable and improbable thought processes, with improbable thought patterns as the ultimate abstraction of creativity. In the pyramidal model of probability in action, balls dropped into the top opening follow numbered pathways through either/or choices on each of 13 levels, landing on a number that describes a probable or less probable outcome. The Probability Pyramid, which appears deceptively simple and obvious in hindsight, is a half-octahedron defined by tetrahedrons arranged in a space-filling relationship. The tetrahedrons do not, however, fill up the entire space of the half-octahedron, but fill only 251 out of 561 possible tetrahedral spaces, a ratio of 1:2.235 (close to $\sqrt{5}$ or 2.236). This Probability Pyramid is an accelerated, squared Pascal Triangle and demonstrates processes of probability in time and space, including the improbable patterns of creative energy.

[10] S. Begley, "How the Brain Works," Newsweek (Feb. 7, 1983), p. 47.

[11] Edward De Bono, The Mechanism of Mind, (New York: Simon and Schuster, 1969), pp. 228-38.

[12] A.G. Tyng, Simultaneous Randomness and Order . . . , p. 141.

The probable path of dissolution of matter from architecture toward abstraction leads to underlying modes of creativity, to geometric archetypes, to three-dimensional Fibonacci fitting of spheres in the Platonic Solids, to two-dimensional Fibonacci fitting of circles in symmetries of square, equilateral triangle and pentagon, to overlapping fit of circles in the Super Pythagorean sequence of Fibonacci Triangles, to patterns of dots based on the Fibonacci series and to their role in laws of probability. The ultimate abstraction of improbably ordered dots suggests the flow of information bits in the creative process. They offer chain-linked patterns for sequences of thought or images, possibilities for new connectivity of previously unconnected information. These patterns speak of essential principles in architecture: ratio, proportion, hierarchy, symmetry, rhythm, scale and interconnective resonance. These are archetypal images of creativity, proportional patterns of creative flow and interchangeability.

A brain researcher, Dr. George Ojemann of the University of Washington, thought it odd that no site in the brain is responsible for both multiplication and division.[10] A fascinating property of the Fibonacci-Divine Proportion matrix is that multiplying and adding can be the same function, i.e. $\emptyset \times \emptyset^2 = \emptyset^3$ and $\emptyset + \emptyset^2 = \emptyset^3$, while dividing and subtracting can also be the same function, i.e. $\emptyset^3 \div \emptyset^2$ and $\emptyset^3 - \emptyset^2 = \emptyset$. Thus it occurred to me that these functions can be equivalent and interchangeable in the brain within a Fibonacci-Divine Proportion matrix. This matrix also offers a solution to the paradox that the same information in the brain can result in inhibition at one time and in excitation at another. This can occur in the inversion of the Divine Proportion ratio, i.e. 1.618/1 inverted to 1/1.618 (0.618). Thus the original information bit, or 1, says "yes" as 1.618 or "no" as 0.618, while maintaining a consistent Divine Proportion sequence. The squaring of numbers can also occur in the Fibonacci series. The sequence can be expressed as the sum of two squared Fibonacci numbers alternating with the subtraction of two squared Fibonacci numbers, as these patterns illustrate. Within this matrix, the creative possibilities for bridging across ideas, for producing insights and for simplifying complex relationships are staggering.

Processes of thought are described as "directional," going in or out of the brain, and in addition, as "lateral" thinking as discussed by De Bono.[11] Another kind of thinking is non-directional or daydreaming. "Sliding Thought" may occur as Divine Proportion slices through the Probability Pyramid (a model for connective possibilities of thought processes in the brain). The Divine Proportion slices may occur in any of four directions. Sliding thought in all four directions simultaneously may be experienced as a spectacular creative synthesis. These slices of sliding thought **connect patterns previously unconnected in time and space.** While they contain some portions of asymmetry, consciously created patterns are usually symmetric. It is apparent that these lopsided asymmetric slices of sliding thought have the potential for infinite Divine Proportion linkage between slices and between patterns within the slices. The brain may reassemble these asymmetric patterns, switching between various symmetries, each symmetry representing new connective patterns with new meaning. As the Probability Pyramid demonstrates, there is always a proportion of the less likely "improbable" occurring within the more likely "probable." Creative resonance is the improbable ordered linkage of improbable order. The powerful empathy evoked by a great work of art is its connectivity to a profound essence of inclusive proportional linkage through the greatest quantity of information bits in the brain.[12] Leonardo's Divine-Proportioned head is an appropriate symbol for the internal proportional processes of creativity.

Abstraction as essence reaches beyond the tangible forms of architecture to cyclic shifts in human orientation and the underlying geometry of creative energy; abstraction reaches beyond the psyche to its roots in natural laws of biological form; it reaches beyond visible nature to the scientific laws of bonding atoms and spiralling galaxies; abstraction offers archetypal patterns for what is probable and improbable in the universe. In the matrix of patterns in the brain beginning with 1 + 1, abstraction connects to sources of energy and meaning for the improbable creative process toward tangible architecture.

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ANTHONY CARADONNA

Space:

Free and limitless,

Tamed and defined

But uncapturable.

Space:

Twisting and turning

Movement

Into and between planes.

Space:

Spinning, swirling, whirling

Square and circle

Man and city.

A circular wall contains an outdoor sculpture garden on the street level and a museum on the two lower levels, separating them from the embassy and the ambassador's residence on the perimeter of the site. The circulation spine which penetrates the circle articulates the north-south axis and divides the exhibition areas of the museum from the theatre, library and bookstore.

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Site plan

Plan detail

JUAN GARCIA

RESEARCH CENTER, PRINCETON, NEW JERSEY

Third-year student project
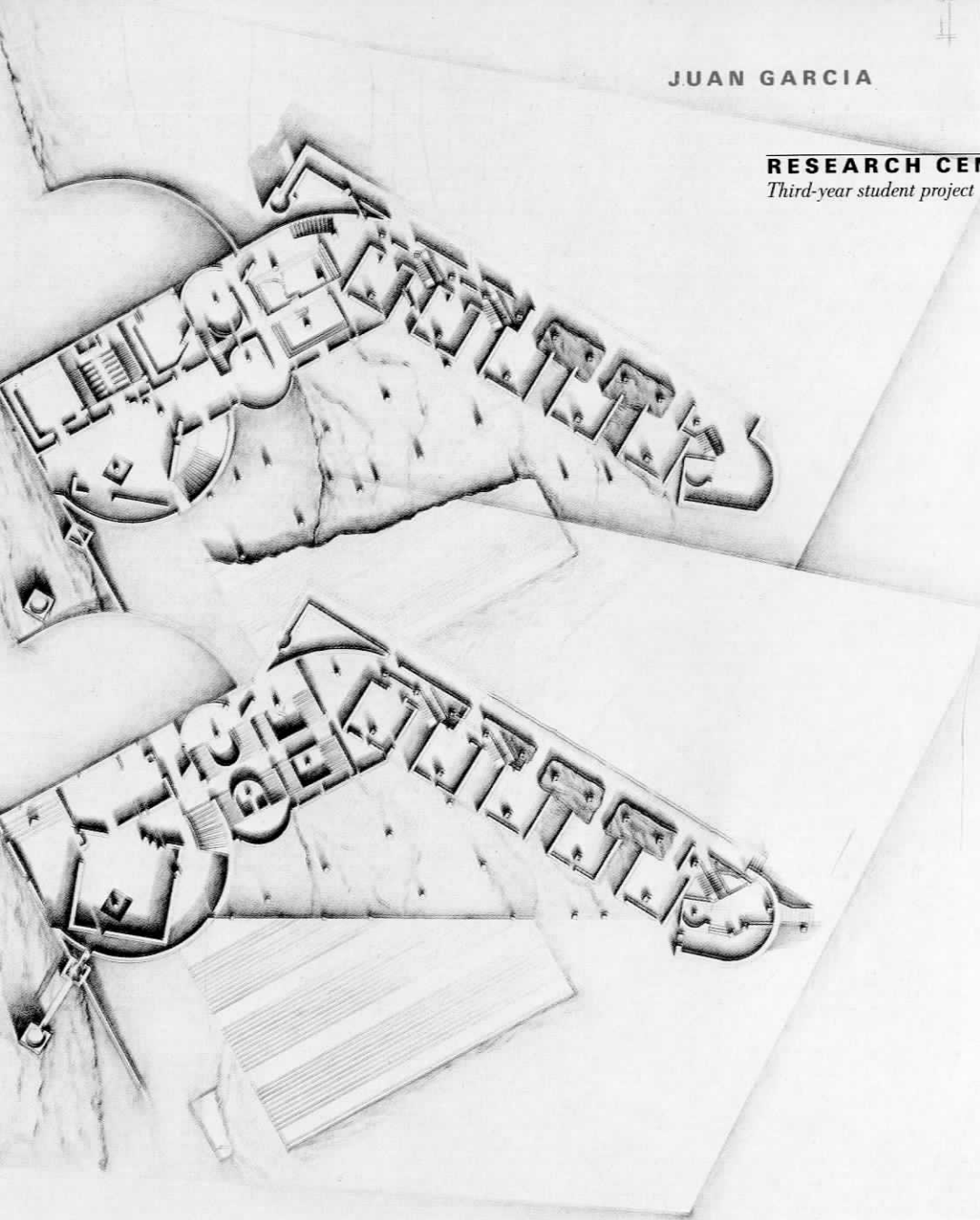
When ideas are enlightened from within they receive the strength required to become alive and real. It was my desire in this project to enlighten my own ideas of the site and the program, and thus to create geometrically a single concept. In Spanish the phrase *"dar a luz"* means "to give birth," while a direct translation to English means "to bear light"; the correlation between these two ideas creates a junction between the past and the future.

The Project:
The problem was to design a building for an industrial design firm's think tank, located in a heavily wooded area outside of Princeton. The project emerges from the point where two hills converge. This point marks the entrance to the complex and hence, symbolically, the initiation of a new life. The building is composed of three elements:

A cylinder sitting over the water, allowing a brook to pass through it, contains an auditorium, conference spaces, and a library.

A square shaft, blending with the landscape, houses the entrance to the complex, private work suites for the designers and the administrative offices.

A vertically shifted square plane, tilted along its horizontal axis, steps over the land, comprising an outdoor space within the complex and a roof that filters light both to the space inside the building and to the landscape outside, which has been retained with a minimum of intervention.

Two rules were applied throughout the design process: interaction among the elements which manifest their hierarchy, and decomposition by elimination such that the elements were modified while maintaining the visual integrity of the original form.

Plans
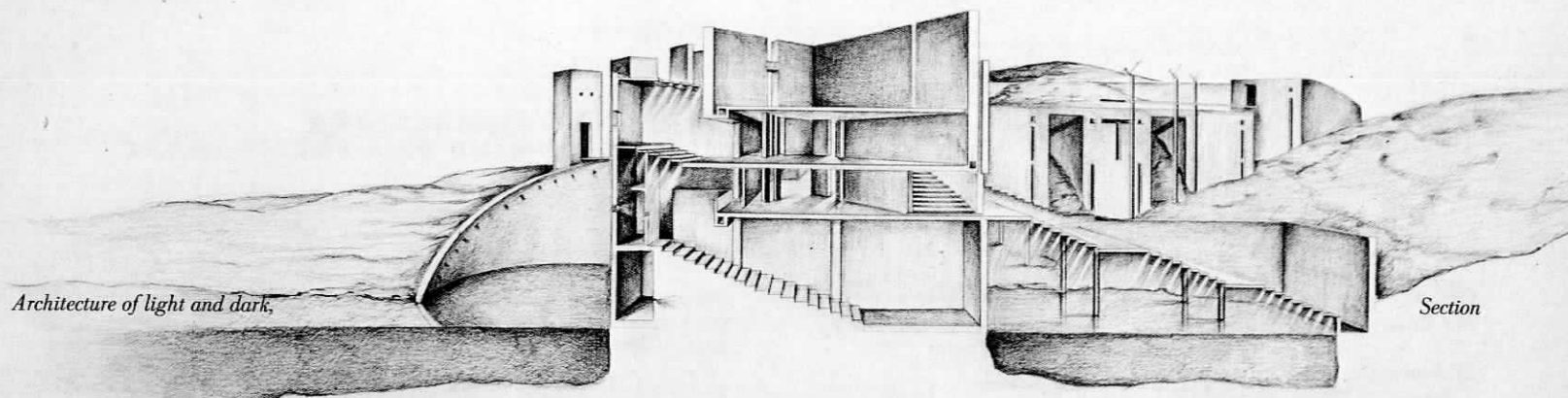
Architecture of light and dark,

Section

Architecture of earth and water,

Architecture of modular time.

Spaces that move with light within a geometrical skin,

Axonometric

Architecture of the eternal code.
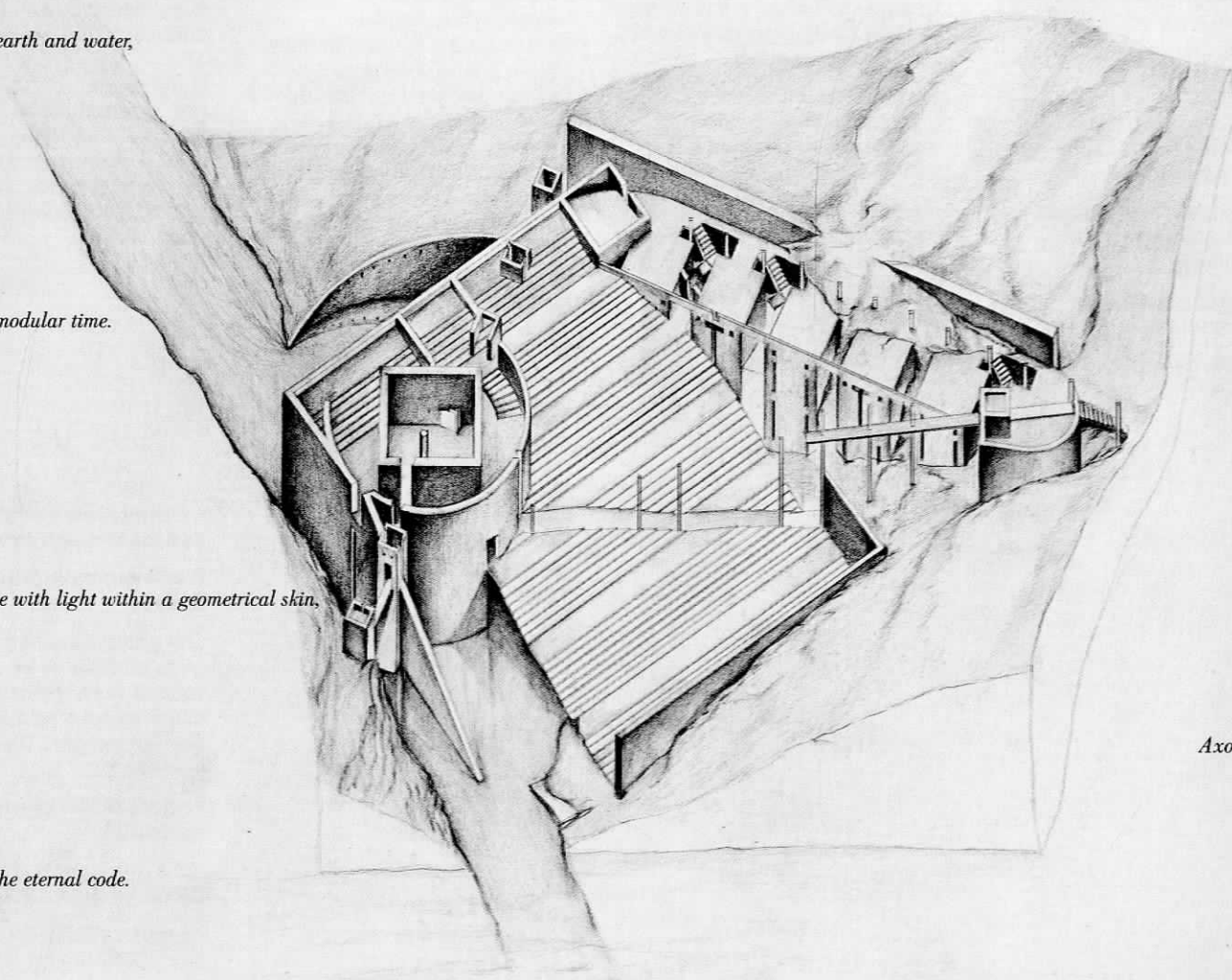
COGNITIVE ABSTRACTIONS AND THE FORMING OF A POETIC IMAGE

Part 1:
Six Cognitive Abstractions

A. Sensations.
I External visual images that are subconsciously abstracted to basic formal types which refer to platonic geometry. Some of these visual sensations are:

The accidental randomness of the moon's surface.

The egotistical presence of a European castle.

The idiosyncratic *adhocism* (unintended formally) of the aircraft carrier *Intrepid.*

The multi-layered exuberance in the ornamental patterns of L. Sullivan.

The spatial plasticity of Theo van Doesberg and De Stijl.

The metaphysical intangibles of Scarpa.

II External formal concepts are subconsciously abstracted to new meaning.

Integrity: can only be maintained through intervention or a threat to the code of an entity.

Order: does not imply static simplicity but dynamic complexity.

Unity: is achieved in the struggle to deny its appearance and to understand its rules.

Complexity: is the nature of interaction among different values, not by addition but by intersection.

Serenity: is the experience of poetic form in a metaphysical subconsciousness.

Beauty: is the sensation of the exuberance of complex perfection.

Meaning: is attained through the revelations which unfold during the creation, the experience, and the destruction of a form.

B. Imaginations—
Internal Sensations.
III Conscious transcendence allows one to forget, to go beyond the habits of design traced during years of simple forming, and to avoid any associations to current popular design images shared by contemporary architects. Pressure on the imagination forces a critical abstraction of unusual formal relationships and images.

IV Subconscious formal imagery of free visual desires gradually takes on importance in one's poetic sense. A conscious effort is made to determine a specific abstracted concept generated from desired imagery.

V Internal subconscious formal thought imposes a desire to regulate the loose and complicated images by adhering to formal abstracted ontological rules inspired from physics, chemistry and biology.

C. Passion.
VI Conscious associations between abstractions, keeping the soul in mind, guard the formal ontological sense, and thus intuitive abstraction of the eternal poetic image.

Part 2:
The Product Development
The four images represent a sequential development resulting from the six cognitive abstractions operating simultaneously.

I. Development of **Visual Syntax** through **Imagination:**

Free Imagery + Repressed Desires

The generating of geometric grids stimulates visually a response from the imagination. Imagination is receptive to desired imagery the moment it appears.

Ecstasy in the newness of the image.

Visual thought is desired first— Verbal thought second.

Complications are the result of this development.

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Gamal El-Zoghby is an architect living and working in New York. He is a Professor of Architecture at Pratt Institute. His work has been exhibited and published internationally.

II. Development of **Visual Grammar** through **Observation:**

Tight Imagery + Tamed Desires

By thinking visually, one determines the rules of visual logic and permits the image to become visually and perceptually coherent.

Integrity of parts and consistency of relationships are gained.

Complexity is the result of this development.

III. Development of **Visual Message** through **Reassociation** and **Revelation:**

Clear Imagery + Filtered Desires

By compressing visual fragments into a comprehensive moment, analogous types are enforced.

Clarity is achieved—The integrity of the whole is gained.

Complexity is reduced to a few local events.

Exuberance is minimized.

Maturity is the result of this development.

IV. Development of **Visual Poetry** through **Confirmation:**

Poetic Imagery + Latent Desires

By relaxing the mind and allowing the soul to take over consciousness, one becomes linked to poetic imagery through the intuitive abstraction.

The poetic image is the exuberance of clear complexity.

Poetry is the result of this development.

CAPTURING ARCHITECTURE IN WORDS

"Would now the wind but had a body:

but all the things that most exasperate

and outrage mortal man, all these

things are bodiless, but only bodiless

as objects, not as agents." Herman

Melville, Moby Dick (Chapter 135,

The Chase, Third Day).

44

Open Architecture. How or who or what is that? Or rather, how should we think, plan, and build in a world which is daily becoming more tattered? Should we fear these tatters, suppress them and flee into the safe world of architecture? Apart from the fact that suppression requires energy and intelligence, which we would rather use for other things, it does not exist anymore, this safe world of architecture, and never will again.

Therefore, we do not believe in the architectural dogmas which try to gull us into thinking that truth and beauty in architecture can only be achieved if one follows the old school.

There is no truth. And no beauty in architecture.

We do not believe the city planners who try to put us back into the 19th century and—not coincidentally—always speak about closing off. Closing off building complexes, closing off the street complexes, closing off the squares.

But we do not want any closed,

confined square, any closed,

confined house, any closed,

confined streets, any closed,

confined minds, any closed,

confined philosophy.

We do not believe in functional functionaries and their architects. Nor in complacent politicians and their architects. Nor the real-estate speculators and their architects. Nor the monument protectors and their architects. We do not believe in any of these architects. We do not believe anyone or anything. Because everybody is right, but everything is wrong: an aspect of open architecture.

The concept of "open system" is a characterization of complex, spatial, interlacing volumes, transitions, situations, and their possible variations. As if the building could be seen with X-ray eyes, we began to draw views and cross-sections on top of each other. This resulted in cross-sectional diagrams which are sequentially thought out (experiential) diagrams of the paths through the building. The contractions and expansions within the building and the connections became sharp and clear in the design. But in the completed building they can never all be seen, only sensed.

•30,00

•20,50

•11,50

•2,00

*Apartment complex,
section*

0 1 2 3 4 5   10m   21

The discussion circles regarding "open architecture" and "ent-würf" (design) became discussion spirals for us. We divided the German word "entwürf" into the prefix "ent" and the root word "würf."[1] "Ent" is used as in entscheiden (decide) or entwickeln (develop) or entschließen (determine). "Würf" derives from the word for "throw" or "give birth."

Without knowing where it could lead us, we begin to condense and contract the process of design. That is, we hold long discussions about the project without thinking about spatial consequences. And then suddenly the sketch is there, on the paper, on the table, and at the same time the working model emerges.

This is how it works: Coop Himmelblau is a team. During the sketching, architecture is captured in words which explain the drawing. The project is experienced, and the experiential moment of design is communicated. (We cannot prove it, but we strongly suspect that the more intensely the designer experiences the design the more experiential the building will be.)

And this is the moment when architecture is so vital, when architecture can be sensed, is the moment of "entwürf." At this moment all the circumstantial pressures crumble; causality is overturned.

Architecture is now.

[1] Translator's note: "ent" indicates "establishment of or entry into a new state, or abandonment of an old state." Cassell's German and English Dictionary (London: Cassell and Company Ltd., 1984).

Open House, 1983. Photo by Gerald Zugmann, Vienna.
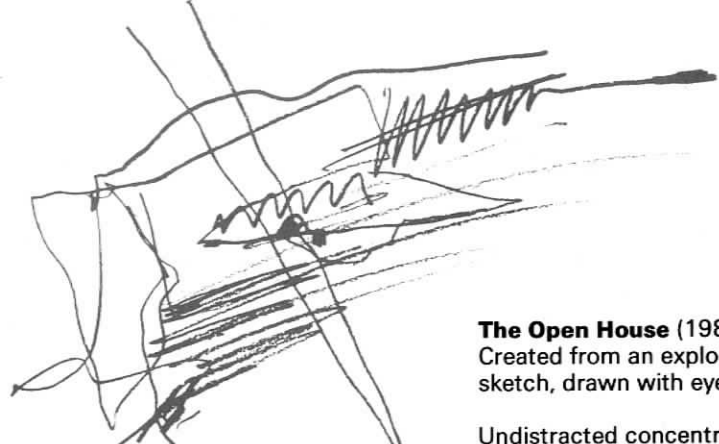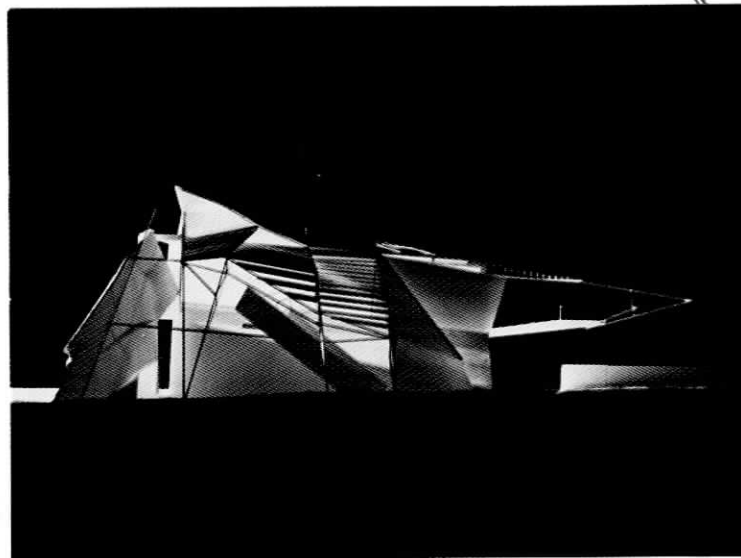
The Open House (1983): Created from an explosive-like sketch, drawn with eyes closed.

Undistracted concentration.

The hand as a seismograph of those feelings created by the space.

It was not the details which were important at that moment but the rays of the light and shadow, brightness and darkness, height and width, whiteness and vaulting, the view and the air.

The current of energy in the sketch is translated into statics and construction. The building itself—resting on three points and taut—almost floats. The construction of the taut elements makes a double-glazed skin possible. Protection of the building brings about a double-shelled construction. Suitable for its passive energy concept as well as the ever-possible alteration. There is no predetermined division of the living area. That could result after the completion of the house or never—that, too, is open architecture.

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Coop Himmelblau is an architectural group founded in Vienna in 1968 by Wolf D. Prix, Helmut Swiczinsky and Rainer Michael Holzer. Mr. Prix and Mr. Swiczinsky have continued the group's exhibitions, buildings, installations, and explorations since 1971.

Over the years we have come to realize that architecture serves primarily a spiritual role, standing between ourselves and the cosmos, helping us establish our relationship to the larger order of things. The Egyptian pyramid brought the Ka, the vital life force, into the earthly realm; the proportions of the Greek orders represented the human separation from nature; the stained glass of the Gothic cathedral brought God's luminous presence into the human soul; and the geometry of Renaissance architecture was central to Western European humanism.

In modern architecture, Louis Sullivan spoke of the will to power in the building. Frank Lloyd Wright asked, "What would be the honor of the brick?" Le Corbusier described his Cartesian realizations in his poem, "Homage to the Right Angle." Louis Kahn used the metaphor of Silence and Light to describe the passage from potential to realization. And Mies wrote, "Architecture is the real battleground of the spirit."

Over the twenty years we have been in New York, many architects have become, for a moment, centers of self-promotion. The flash of attention is exciting, and is perhaps one reason to choose to live in New York. But during that time, very few architects stand out as having consistently devoted themselves to a deeper and ultimately spiritual exploration. John Hejduk, Dean of the Irwin S. Chanin School of Architecture at the Cooper Union, has been one of those few. We interviewed Dean Hejduk in his office on September 14, 1983. We have edited that interview to present a small part of it here.

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Mimi
What do you see as the task and responsibility of the architect? What is architecture?

Hejduk
As you know, most of what the architect has by tradition been known to provide probably can be provided today by others, more efficiently and to the point. What has always interested me is not what the architect can provide that others can also provide (which is a sort of parallelism), but that which only the architect can provide. And I believe strongly **now**, more than ever, that only the architect can provide that which affects the spirit. Spirit is a huge, amorphic word, but anything less, or any pursuit or study or investigation that doesn't move to that central issue is—I was going to say irrelevant—but it's just . . .

Mimi
Not architecture?

Hejduk
That's right, it's not architecture. The issue of spirit is necessary because if we lose the spirit, then we've lost everything. Everybody else can do the rest. More than ever, I see the issue of Humanitas as extremely important. I guess you and John have been working on that issue for many years.

John
What do you mean by Humanitas?

A CONVERSATION WITH JOHN HEJDUK

Hejduk
Humanitas— the humanities. It encompasses a lot. A beautiful book has recently come out by Alberto Perez-Gomez, *Architecture and the Crisis of Modern Science*. He brings to the fore the issue that once they started separating myth from knowledge, once the scientists moved in on the situation and insisted that explanation could be only in terms of the so-called facts, it was the beginning of the end.

I went to Greece this year. My wife Gloria and I had a revelation. We saw the statues in the archaeological museum. The Greeks had tombs of the people, say a family of mother, father, and children. They also had the mythological figures. We had a revelation that these mythological figures **were**, they simply could not have been imagined. They were unimaginable; rather they **existed**. I'm absolutely convinced that just as the mother, the father and the child existed, so the mythological figures existed. And that's what I think is important, whatever way you want to look at it. You can believe it or not believe it, but I believe it. They could not have been conjured up any more than the mother or father could have been.

Mimi
Would that be in terms of Jungian archetypes? That this thing is there on some archetypal level and people come into contact with it and make an image to represent it?

Hejduk
Yes, it's Jungian. The indefinable aspects of architecture have always interested me—and the definable aspects less so.

Mimi
I think that unless architecture embodies the archetypes of the collective unconscious, it has no meaning for people. That is a difference between building and architecture, or architecture with a little "a" and Architecture with a capital "A."

Hejduk
The problem is that you can't really teach **this approach** to architecture the way you can teach facts. My own teaching over the years has been purely by osmosis. I try very hard not to draw something for somebody, you know what I mean?
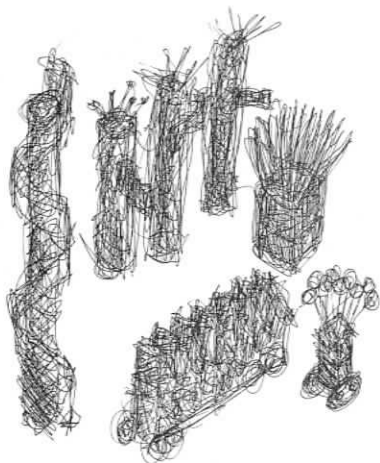
*Berlin Masque,
sketch*

John
Do you see the sense of spirit as integrated with the physical world, or as something transcendent?

Hejduk
I've given that a lot of thought. I started reading all kinds of things, and I read Andre Gide, who is one I have a deep respect for. He has a confrontation with Maritain, in which Maritain is trying to convert him or maybe he is trying to ask him not to publish a certain book. It always intrigued me. They meet for the last time and Maritain, who realizes he cannot convince Gide, says, "I shall then be obliged to leave you disappointed?" and Gide says, "**At first**." What Gide means is that Maritain is really delighted that he has a devil in his midst whom he cannot convert. Then Gide says, "I cannot separate mind and body, neither in life nor in death." I always believed that until recently, but I don't believe that anymore, because I shave every morning and I see my aging, my physical aging. It's a phenomenon that is occurring. But I also discovered that my mind, my inside—whatever that is, my soul—is as young if not younger than it was when I was 17, when I was just discovering things.

So what that means is the possibility of transcension, that there can be a separation of mind and body, after death or whatever. All of a sudden you realize people before you, thinkers, have also come to conclusions like this. And this is not because we're romantics and want to believe it as we approach death. I think from a realistic point of view, from a scientific point of view, there's possible evidence for this.

Mimi
You would enjoy reading *The Tibetan Book of the Dead*. It's a complete codification of the separation of the soul from the body after death, and how the ego tries to hang on and wants to be incorporated, incorporeal. It can be read on many levels, so it is also a metaphor for waking consciousness and life.

Hejduk
This whole problem of what the East means for us is very important. The West is hanging on by its teeth in a certain way.

Mimi
This gets into the psychology of architecture. You can see the work of a student, famous architect, historical architect, or people of a given culture as a portrait of the psyche of that person or that culture, and you can begin to see how they view the world, how they view themselves, how solidified they are in ego and identity or how fluid, how static or how dynamic.

Hejduk
Peter Eisenman gave a talk here recently. He said he wanted to turn things inside out to look at them in a new way. I said, "That would frighten the hell out of me, because I can imagine us turned inside out physically. We'd become very vulnerable with our organs hanging out. Our skin would be internalized. It's like a horror story." It may come to that, but I said, "I basically disagree with you, Peter, I want to be turned inside in, not inside out."

Eisenman then suggested that there isn't any composition any more. I said, "You take composition away from me, and you're taking a lot, because if I have a dot, and I want to move it, I want to have the option to move it by intuition. I want the freedom to make that move. If you tell me I can't make that move because everything has become banal and factual, then I'm frightened."

These are issues among very intelligent people who are in conflict and I think that's good. The other architects sit out there and don't even want to admit that anything is happening.

Mimi
Over the years you have been one of the people who have made drawing a more important part of architecture. How do you distinguish between drawing and architecture?

Hejduk
I don't make any separations. If I make a drawing, that's architecture. If I make a model, that's architecture. If I build a building, that's architecture. I don't work towards a building. I work on whatever I'm working on at the time, and that's architecture.

Mimi
How do you distinguish what you do as an architect and what a painter does?

Hejduk

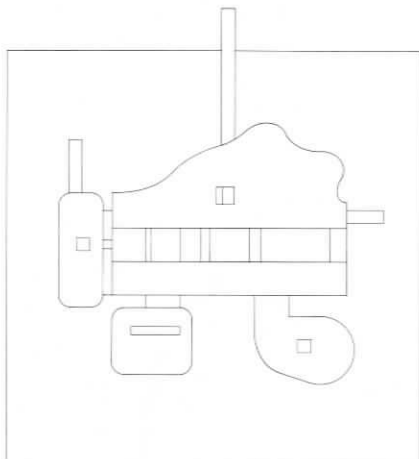A painter is purer. He has less options.

> **Mimi**
> Would you say your work is more material?

Hejduk

No, I want to capture **the spirit** of the material. One of the big revelations to me was Kahn's Yale British Studies Museum with its stainless steel skin. The steel on that building is not material, it's a mystical experience. He has captured the spirit of the material and that's profound. So I'm jealous. I envy it and I want to know how to do it. When I want to make a drawing, I salivate. I want to taste it.

I'm good at building, by the way. When I say that, it's not ego. I know how, but I've not put my mind to it, simply because I've focused on other things.

Wall House, elevation

> **John**
> You once said that no real modern architect would draw in perspective. I interpreted that to mean that perspective represents the human being standing at a certain point and having a point of view, which is a Renaissance idea and is no longer relevant to our condition. Is that what you meant?

Hejduk

Yes, that's exactly what I meant. Perspective is too fixed. So I turned to isometric. Then I eventually found the same problem with isometric.

> **John**
> You mean you still have a front and back with isometric, even though the lines don't vanish towards the back?

Hejduk

Yes, and so now it's just pure planar section. In exploring projection systems while working on my Wall Houses, I found that ultimately a whole representation could be enfolded into a single line. Then, in projecting it in a certain way, it again appears. One consequence of this exploration is that I suspect ultimately the universe is contained in a cube.

Berlin Masque, elevation sketch

> **John**
> The physicist David Bohm refers to a process called enfolding, where, for example, the future might be enfolded into the present.

Hejduk

My work with projection systems is my contribution number one. Contribution number two had to do with the disappearance of the line of the present. We conventionally experience a division between the past and the future: one can go in either direction of a dividing line. But Teilhard de Chardin shows us that anything that goes back disappears and never can be closed. And anything that goes forward, you speculate upon. It was with that realization that I developed the Wall House.

But the important part for me, the discovery, was the space, the threshold; that going over present time momentarily has no time at all. And then what occurred, which is the wildest part, was that they increased, although the projects got smaller in square feet, from 1200 to 400 to 200. And then you know what happened? They began to disappear into a point, in other words, it was an absolute unravelling. These are the two things that I have been working on or towards for twenty years. They have to do with a space, but not a traditional architectural and projection system. Now, I only draw in planar elevation, I've even eliminated projection systems. First perspective left, now isometric is gone. It's fun. You're getting closer to that surface.

> **John**
> I wanted to touch on Mondrian. What did he mean to you and what did you get from his book?

Hejduk

First there's the language. Then I received from Mondrian what I received from Kahn, although I didn't meet Mondrian, while I did meet Kahn. That is a spiritual passion for what you are doing. For them involvement was not abstract, but the whole body and soul was, in a certain way, in what they did, whatever that happened to be. It took me years to read Mondrian's book, and I always thought that outside of the spiritual thing, it was very abstract. Then a few years ago, a friend took me to the tulip fields in Holland, and I found out it wasn't abstract. In Holland, they throw away the flowers; they make them for the bulbs.

And that gave me a clue which I didn't have before. The point of Mondrian is not the surface, the lines and planes. He's an indigenous painter, he's a painter organic to his land. The secret of Mondrian lies in the earth, in the sand and the clay. It is the quality of the earth that determines the tulips. They can only grow these tulips in this kind of sand and earth, a condition at one spot in Holland, and the color and the flowers were secondary to the earth.

Mimi

It's fascinating . . .

Hejduk

Yes, fascinating. And when I got that, I had two things, I knew what Mondrian **really** was about, the spiritual aspect and also the idea of place. It was his home.

I was also reading Gide and Proust, and there was a parallelism being fed into my own architectural education from their work. Gide because he extracted and reduced the material into ninety pages, and yet the stuff was opaque. I was on the line of reduction and opacity for a long time. Then in the early '60s when I was in my mid-30s and I was teaching at Yale, I would read Proust's *Remembrance of Things Past* while I was on the train going up there, and I realized that, my God, there was another way of doing it. You could actually compact **in** instead of extracting **out**. And you keep on loading and you get, you know, twelve volumes of Proust and yet it's clear. So from a compaction and overload, you got clarity in one of the French writers, and in the other one, you extracted out and you got opacity. So those two approaches have been intriguing me since that time.

Mimi

How do you relate those insights to architecture?

Hejduk

I've just done a project called *The Victims of the Gestapo*. It's a tower where the poets go and cry for the lost letter. The tower has an alphabet with the "E" taken out. You realize that when one letter disappears, your language is really affected.

John

There's a particular feeling you have in experiencing the loss? And that feeling can then be translated into the architectural form?

Berlin Masque, perspective sketch

Hejduk

Yes, that's it, and it's a very strange thing, because also in this case it relates to the victims of the Gestapo. Missing the letter "E" makes you think: what does it mean if you lose one letter, if you lose one person? The tower is open to the sky, and there's an optometrist. People come in and he has them read the letters of the alphabet. The letters are on pieces of metal, and as you read them, the pieces of metal come up, one by one, closing off the opening. When you are finished, you are entombed by the letters of the alphabet. What I'm saying is that letters and words and literature now become important for me like painting because of their political-social aesthetic. I can't make any separations of any of these things, and I see now that the architect must invent new programs for our time in order to survive.

Mimi

Last spring at an AIA panel with the other deans of the New York schools of architecture, you mentioned the importance of the infusion of women into architecture. What effect does this infusion have, and what do you see as the relationship between women in architecture as people and the feminine principle?

Hejduk

Well, I'm not so informed on these things, but all I know is that within this school, with the numerical increase in women students and faculty, there's been a major change. I've been a great anti-categorizer of things into men, into women, into divisions. But this other thing, which I think is the most important for me, is the change due to women. I want to know what this change means, what's behind it. I don't yet know it to its depth.

Mimi

How do you experience it?

Hejduk

There's a beautiful book, I don't know if you read it, Mimi, by an East German writer named Christa Wolf. It's called *No Place on Earth*. It's the first time I have read a book where I was inside a woman. And the fact that she is a woman has something to do with the work. When I talk about this, people say, "How dare you say things like this? You can't tell which is a woman's architecture and which is a man's." They miss the point, because that's surface. It's important to know who's done it. I believe in life figures. I don't believe in that abstract notion that says the physical person is not involved in the work. You can't make that separation, the work is integral to the personality. But the point here is that **psychic** difference between male and female, that's what's interesting.

I hope we will see changes from this influx of women. It better happen fast, because if it doesn't, there are problems for us. They will help invent new programs. I'm not interested in the old programs that are now irrelevant. There are certain programs that are essential and we should have them. But every one of them has to be questioned in the sense of its architectural and spiritual ramification.

It's time for letting go. One always has been there, but one didn't know it. These are the issues that possess me. I have a lot of hope. If I didn't have hope, I'd give up. I wouldn't want to live in any other time.

Mimi Lobell is Associate Professor of Architecture at Pratt Institute. She has lectured and published extensively on myth and symbol in world architecture. John Lobell is Professor of Architecture at Pratt Institute. He has published numerous articles and the book Between Silence and Light. Spirit in the Architecture of Louis I. Kahn.

PJA

What is the relationship between your personal environment, the environment of New York City and your work?

Cage

One is, I think, either liberated or oppressed by the environment. We're conscious now that the house is not separate from the outside. When I studied Zen Buddhism with Suzuki he said, "I can see how you might practice Zen and enjoy living if you were in the country, but I am not sure you can do it in the city." I had learned from the experience of some friends, that it is not possible to escape from the 20th century even if you go to live in western Ireland or northern California. Airplanes fly over, refrigerators start to shake or something happens that breaks up any kind of pleasure of the space. My commitment and goal has been to find a quiet mind in a noisy place. I have done everything I could to extend this attitude to my music and all aspects of my experience. I listen to the sounds of the city all the time. What I have come to love about them is their impredictability. In fact, my piece #433[1] consists of all of that sound and could be of any length. [Sitting here now], we have a most continuous and beautiful performance of it. I think in one way or another we have to solve the problem of living in the 20th century. For me, this is a solution. Of course, there could be others . . .

PJA

I am very surprised not to see a large piano or other musical instruments in your apartment.

Cage

That's because we have all the sounds from the outside. There's no need for a piano.

PJA

Given this approach, how do you look at structure?

Cage

I look at structure as a whole, divided into parts. That's all. The structure of a human being differs from the structure of a horse because they have different parts. Broken down into parts, the human being has two legs, whereas the horse has four.

PJA

But what is the structure of the world we experience? Is there a structure to the "noise" we hear in your piece #433?

Cage

That's not a structure, that's a process. You can give up your interest in structure and gain an interest in process. In other words, I would think that a concern with process would take the place of an interest in structure, although structure is definitely an aspect of organization. I am trying to distinguish between organization and nature. I don't know if you can match organization to human intention and suggest that nature is without such. But if you fly over the West, or the East in winter (but the West is better because there are so many parts that aren't populated), you see different kinds of designs in the unpopulated areas than in populated areas. In the populated areas you see things that we would associate with structure, and in the unpopulated areas we see what we call biomorphic forms which somehow seem chaotic to us.

PJA

Do you think that there is an underlying structure in the national forests?

Cage

No. But we may use our inclination towards structure to look at nature, but nature doesn't do that.

PJA

So our inclination is to impose our own structure or forms on reality?

Cage

Right. Otherwise things go haywire from an organizational point of view. So it comes back to the basis of the Zen Buddhist philosophy, namely Mind. If the Mind is going to be a quiet Mind, it has to accept the whole of creation rather than only the parts that it likes. For instance, if it likes the structured parts, what is it going to do with its unstructured parts?

PJA

Throw them out.

Cage
And by throwing them out we ruin the environment.

PJA
That is very close to what we are positing about abstraction. One may take a whole and abstract certain parts out of that whole; this can happen whether you keep in the natural or the structural.

Cage
Suzuki told a story in his class. He went to the board and drew an oval with two parallel lines halfway up the left-hand side, and said, "This is the structure of the Mind and those two parallel lines are the ego." You've probably read enough Oriental texts to know that they sometimes capitalize the letter "M" in "Mind" and sometimes use a little "m." The ego is part of the circle of the big "M," and the big "M" includes the little "m." Isn't that beautiful? At the top of the circle is the world of relativity which is perceived by the ego through its senses. At the bottom of the circle is what Meister Eckhart called the "ground," or some people call "god." In terms of relativity we could call [it] the "absolute" which is perceived by the ego through dreams, the subconscious, and the collective unconscious. Ultimately you get to what Suzuki called "no-mindedness." Now these are not separate things: they are not to be compartmentalized, they are all together. Everyone is dealing with this all of the time. If we ignore some of it, it doesn't do us any good, it's still there. Through its likes and dislikes, the ego has the capacity to cut itself off from its experience whether it comes to it through the senses or through dreams. Zen does not cut itself off; it lets Mind, with a capital "M," flow through the mind with a little "m."

PJA
So you're saying that "abstraction" is only a small part of our mental capability and that when you hear the sounds from Sixth Avenue, you are taking the whole of it and not separating or "abstracting" from it in any way.

Cage
Right, and I am using it as music since it is coming to me through my ears.

PJA
So is that a definition of music: anything heard through one's ears?

Cage
I can't think of a better one. That distinguishes music from painting, don't you think?

PJA
How would you then distinguish music from speech?

Cage
I think we have to then speak of "intention." If you use sound to put an idea across, it's not music anymore.

If you listen to sound with preconceptions, it cannot be music, but something to criticize. Two people can listen to the same tape differently; this comes from Wittgenstein. In other words, the meaning of something is not objective, but subjective. Every now and then Suzuki would smile and say "pure subjectivity."

$2R+13.14$ Where R=Ryoanji

PJA
You mentioned the analogy of flying over the countryside and that the natural forms seem to exhibit a degree of randomness which perhaps the man-made forms don't. Is this a product of our consciousness? In other words, couldn't one find the same randomness in man-made forms as well: would you necessarily make a distinction between the man-made and the natural environment?

Cage
One could cultivate an involvement with nature as have the Japanese, who practice with brush strokes and sumi. What they control with their hands when they draw comes very close to something in nature. In other words, you could move toward nature consciously. This is something which I'm doing.

PJA
Then you can't ever **be** nature?

Cage
You can't be separate from it. If you are, you become very specialized. I know of a practice of a friend who would close the door to his study and concentrate his attention on his work. After a certain time each day no one could get in. He was simply alone and he concentrated on his work. That's exactly the opposite from "wanting" the flow of experience. He had cut himself off, and was concerned only with his attachment to his work.

PJA
In embracing the diverse phenomena of the world, do you, as an artist, become a filter through which things move?

Cage
I'm not sure I am even that. The common denominator of all my work is non-intention, whether it is determinate or indeterminate.

PJA
But you do operate: something comes in, comes through you, and you perform an operation on that material as it flows out of you. Isn't that "intentional"?

Cage
I use the "*I Ching*" as a discipline of the ego, to free the ego from **its** likes and dislikes, so that Mind with a big "M" can flow through it. Next is to notate so that someone else can do it: this is important because it has to do with the society. Indeterminacy is not making perfectly clear what the work is. For example, instead of giving people a photograph, I give them cameras, so to speak, with which they can take their own photographs. I think that interpenetration of the interior and exterior characterizes 20th-century architecture. Isn't that true?

PJA
Certainly, considering the architecture of Frank Lloyd Wright...

R_1^2 Where R=Ryoanji

Cage
I mean you can connect the most aesthetically opposed architects of the 20th century with the umbrella of interpenetration. Don't you think? If I were thinking of the most delightful piece of architecture that I know of, it would not be the Taj Mahal, but the Farnsworth House near Chicago by Mies, which you can look under and over and through. You can almost imagine that it doesn't exist. If you say it doesn't work, who cares? The idea is beautifully expressed. For me it seems to be the peak unless you move over to the position of Buckminster Fuller. Now you're in a situation which is much larger and much more humane than anything dear Mies had in mind, because it comprises a clearly considered view of the future, the survival of future generations and, as Bucky would say, "success on the planet." If we continue as if Bucky didn't exist, we won't continue. His notion that a house should weigh nothing is more important than Mies' view that the house should be invisible, but be very heavy in its invisibility. I visited Mies in his apartment in Chicago which was just stunning.

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R^2_1 *Where R=Ryoanji*

PJA
In his complex on Lake Shore Drive?

Cage
Yes. There was a very long, thick piece of marble in the room that came out of the wall with no support whatsoever. None. You can't imagine what a delight it was to see. The answer to the problem was very simple: we went into the room on the other side of the wall, and the rest of the marble was projected on the other side. It was balanced between the two rooms. That solution is luxurious. Bucky's way, on the other hand, is comprehensive in terms of human needs.

PJA
In the Farnsworth House, there's a definite separation from nature in the way the house is lifted off of the ground.

Cage
But not being on the ground also connects with Bucky's notion that we are now living, not on the ground, but in the air and that we belong in the air. In a lecture he used to give, he would point out that if you start from where civilization seems to have begun in the Near East and if you go toward Europe, you go against the wind because the winds all go to the West. If you go toward the Far East, you go with the wind. So people going toward Europe developed ideas that go against nature. People going the other way developed ideas that were in accord with nature. These two different tendencies of going "with" and "against" the wind meet in America. In their confluence, they have produced a movement into the air; and that's what we're living in now. We have moved into the air.

PJA
At the Whitney a number of years ago, you exhibited lithographs of your scores. You also show your graphic work in may galleries around the country. As architects, we are exploring the relationship between preliminary sketches, drawings and the final project. What is the relationship between your graphic work and your music?

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Cage
It is a dialogue. Our experience is characterized now by our ability to bring differences together. We call it collage and it doesn't bother us. I am looking at your face now and at your glasses and I see reflections of the things around us in the room. This is collage.

PJA
There is currently a sentiment among some architects to try to recapture "meaning" through form. Architects, probably spurred by public opinion, are trying to regain "a sense of place." We see similar things happening in music with the advent of the term "New Romanticism," for example. How do you feel about these recent developments?

Cage
I think that some people are concerned with history and historical changes. A great deal of this has to do with influence and taste. Similarly, my father used to want to change the kind of car we had, and today people want to change their computers. It's style and fad; it's how to keep people busy buying things. I really think that the important question is the one that I have been talking about: about the mind. The mind really isn't concerned with such things. It would seem to me that if one were concerned with "place," one should take a "Fuller" attitude of the place being a spaceship. I mean if we continue with the earth divided against itself, we're going to destroy ourselves.

*John Cage is a composer, artist, and author living and working in New York.
Since the 1930s, after studying architecture in Europe, he has established
himself as an influential member of the avant garde, collaborating with artists
such as Merce Cunningham, Nam June Paik, Robert Rauschenberg, and
David Tudor.*

IS AS IT

If you were to pull anything which is an abstraction by the tail—if there could be such a tail—what would you have and what would have escaped?—ugh to the necessity for this line of questioning. After all, spacetime does not exist.

Abstracted out of itself, thread by thread. An abstraction, this is what comes to be when any question is posed by blank or in blank. All the various aspects— the lights and shadows seen as each and whichever-of the enormously moveable armature (with a core of flexibility only) of an increasingly worked-out (worked-through) articulateness. Facets of articulateness, wide-ranging, far afield. The appropriateness of which wisp ... falling into (which) place or not quite. Logos and Graphisme (each all tail) bite each other's necks. Any part of it that is chosen or picked up is an abstraction; even it itself, as it is in the world, is an abstraction. Is as it. Atmospheric resemblances. Spacetime does exist,

but only as an abstraction. Reduce "it" to "is" (to accomplish this mustn't you expand rather than reduce?), only then immediately to reduce all "is" to an "it" whose surroundings smell of the "is" expansion— anyway, in either case, the other, all the rest, always expands. The renascent abstractor. The tail is that which, even without body, almost without body, thirsts to be a line, consecutiveness, a linearity, practically anyway at all, by which to be held: at point A, at the point of a sword, or point blank.

Instantaneously and repeatedly, Blank serves as a station for our senses, making possible an impression of continuance. Subject comes to be formed in much the same way. And so, Blank comes to be found thoroughly interspersed throughout Subject, forming an integral part of any act. When trying to bring it into focus, it must be remembered that Blank is widely dispersed, capable of behaving in many different ways at once, and itself plays a fundamental role in the act of focusing.
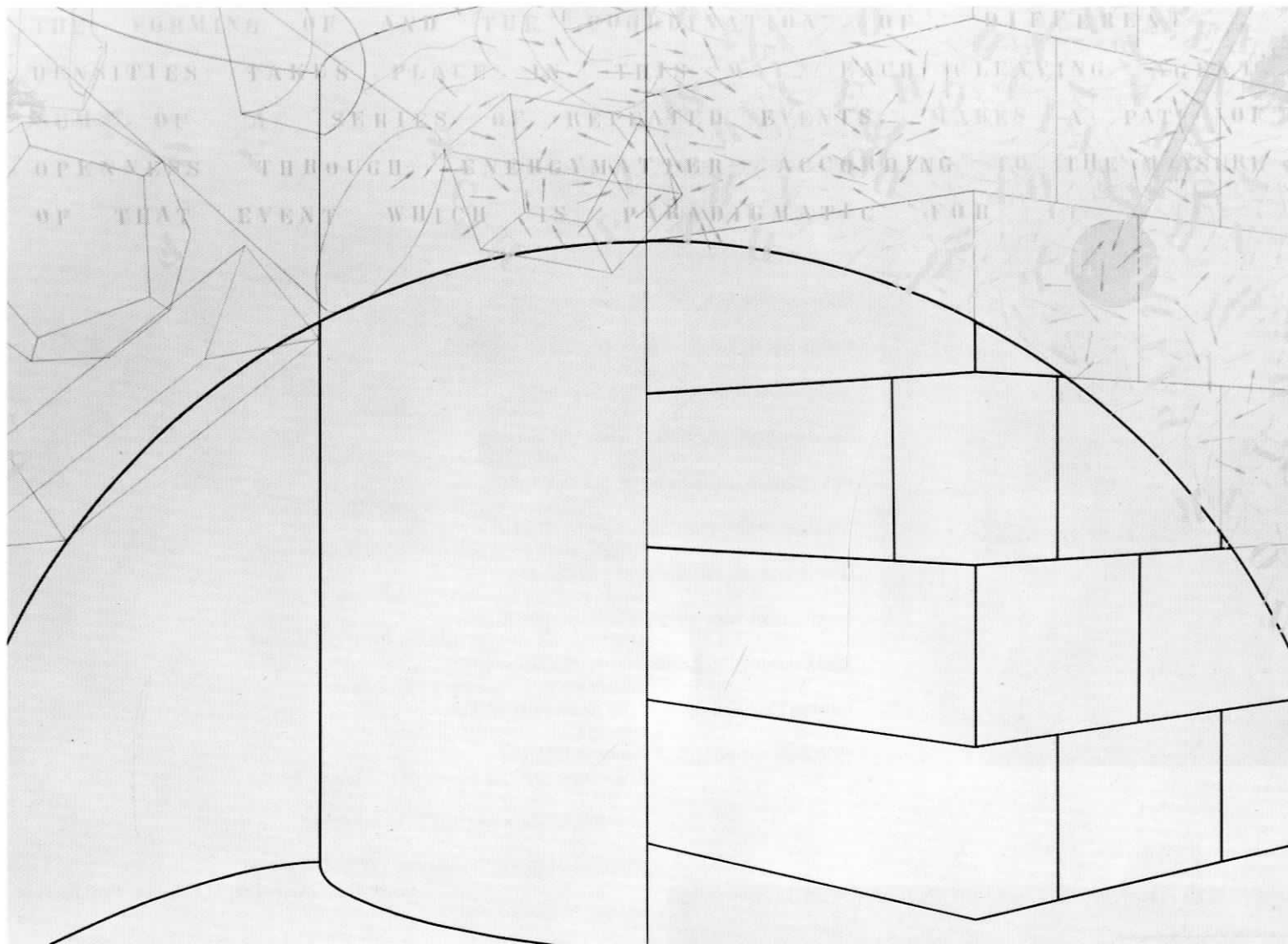
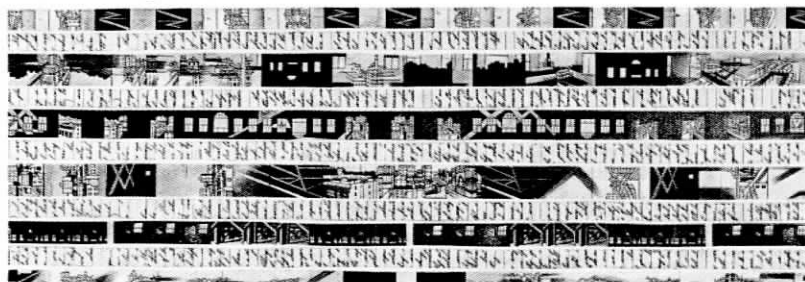Odalisque or Blank
Measure, *1984.*
Photo by Jon Abbott.

*Arakawa is an artist and Madeline Gins is a poet. They are both living and
working in New York City.*

RECENT WORK

World Within and Among Us. Outdoor installation, Three Rivers Arts Festival, Pittsburgh, 1985.

Inside/Outside Strip Designs.

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We each walk down the same streets
seeing the same buildings and terrain. Yet
our experiences of these physical places
differ depending on what we experience
inside ourselves. I interweave these physical
and psychological realities to create
"woven environments." Different worlds,
not normally seen as one, are overlaid
transparently, as in a hologram. Thus,
inside spaces (studio and gallery) are
interwoven with outside environments (city
and country). In addition, my private world
(which I record daily in my journal) is woven
(through drawings of the city) into the

external world we all share. Structural
beams blend with neighborhood contexts—
attics, rooftops, and backyards are meshed
with specific responses from a gallery or
other artspace.
The language I have developed consists of
floor-to-ceiling transparent fabric and
vinyl panels which contain drawn/sewn
images of indoor and outdoor environments.
Hand-made strips contain images of various
environs, as well as writing from my journal
and drawn/written responses from the
viewers.
The strips are the fibers of the piece. Mylar
and fabric backdrops create a further
layering of multiple worlds. While the strips
act as "slices of realities," the panels
represent "frameworks" in our lives. The
strips visually float in space, as the panels
fade into backdrops. The installation and
accompanying artist/viewer interchange are
a metaphoric synthesis of what occurs on
many levels every day in our lives. The
effect is complex, yet calming.

Susan Togut received her M.F.A. from Pratt Institute in 1983 and is an artist living and working in Brooklyn, N.Y. She participated in the Artpark Artist-in-Residence program, Lewiston, N.Y. in 1984 and has recently exhibited as part of the Three Rivers Arts Festival, Pittsburgh, Pa.

RECENT WORK

The houses in my work have little to do specifically with architecture; rather, they are both formal and psychological symbols. The house is a symbol of security, of identity, and of remembering one's past. It functions as a bonsai tree does in Japanese households: a reminder of the totality of the forest

Untitled, 1984

Wild Palms, 1985
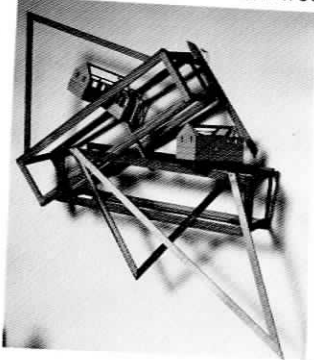
through the use of a small model, a physical and richly spiritual symbol of wholeness.

The houses in my work are frequently in violent motion and disarray, as is our fast-paced, technology-minded culture. The internal structures of the houses are exposed. In a real house this structure is composed of studs, sills, plates, cross-bracing, and bridging constructed at regular intervals. Since I am making sculpture, I don't standardize any of the framing. The houses are constructivist in that they are manipulated spatially in a non-naturalistic way.

I have made several varieties of "house-train," noting at the beginning the similarity of shape between the long wing of the L-shaped house I was building and a train engine. Trains evoke romantic ideas of

House-Train Derailed, 1985

travelling America's countryside; they are a richly narrative three-dimensional line, crossing distance and time from the hi-tech of a northern town to the stillest of southern backwaters. I enjoy putting constructions into a configuration, a "story" about architecture which exists in our perceptions of physical and cultural changes. A story is so many things simultaneously: an architectural division, a configuration of elements, a journalistic description, a fiction.

Robin Hurst is an artist living and exhibiting in New York. She received her BFA from Virginia Commonwealth University in 1978.

The following is an edited transcript of a colloquium titled "Architecture and Abstraction," held on February 21, 1985 at Pratt Institute, and was cleared for publication with the participants. The colloquium was sponsored by the Pratt Journal of Architecture and the Pratt Institute School of Architecture.

Hollander

When we try to discuss questions like the ones posed this evening, "What is architecture?" and "What is abstraction?," it is very important that we all try to use these terms in the same way; otherwise we may become embroiled in disagreements which appear to be about our notions of reality, but which are, in fact, merely semantic. I would like to begin the discussion this evening by posing the following questions. What does the word "abstraction" in relation to architecture mean to you? In what ways do you find yourself using the word "abstraction" in referring to your work? Does the process of "abstraction" play a significant role in your design process?

Pommer

"As used in connection with visual methods of expression, the term 'abstract' is extremely relative. 'To abstract' something implies one of those mental activities, in contrast to emotional spontaneity, through which certain aesthetic values are isolated from the world of reality. However, when such values were realized visually and applied as purely constructive means, they became real.

Thus the abstract was transformed into the real, thereby illustrating the relativity of the term 'abstract.'"

That comes from a statement in the magazine *De Stijl* in 1926 by Theo van Doesberg. He sees abstraction as a process of withdrawing art from reality until it stands in contrast to it and assumes its own reality. Painting at that time was representational, so the process of abstraction in that medium seemed to be clear by contrast. But architecture is not primarily representational; it is usually thought to be in some way abstract. Another problem is that architecture has the reality of art, but also the material reality of building, and you can't really abstract much away from that. For both of these reasons, discussions of abstraction and architecture become very difficult.

In the 1920s, however, there was little desire to talk about abstraction in architecture, in good part because architects didn't have to. The contrast with the world of reality of which van Doesberg wrote came automatically with every building you conceived in glass and steel and without ornament. The new buildings stood out from the traditional architecture, and by that means alone could be equated with the new abstract painting and its rejection of the world outside. Mies van der Rohe in the '20s always showed his glass skyscrapers set against the old stone city

below. Le Corbusier set his new city smashing through Paris, so the distinction was radically clear. They also had an ideology, a set of beliefs almost taken for granted that equated the new stripped-down forms with the collective society and the machine age.

In the 1960s, with the new wave of abstraction in the work of Eisenman, Hejduk, Meier, and Graves, there was no longer an old architecture to rise against as in the '20s – the International Style was now everywhere. So these architects tried to elevate abstraction into a condition valid in itself, rather than by a radical contrast to the world outside. Their work was supposed to have some mysterious essence significant in itself and not abstracted from anything. This is really a contradiction of the definition of abstraction and led to many difficulties. They also had no ideology to which many could subscribe.

Instead they formulated the belief that the abstractions of space, line and form had cultural value in themselves. You could talk about the thickening of space, or the rotation of space. Space was some sort of Thing, and it had some mysterious essence that gave it cultural viability.

More specifically, what did the architects do to overcome these contradictions and restore meaning to abstractions that no

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Allan Wexler is an artist/architect living and working in New York City, and Professor of Design at the Parsons School of Design. He has exhibited widely and is represented by the Ronald Feldman Gallery in New York.

longer stood in contrast to the world? Eisenman responded by trying to invent ideologies out of the air. First he spoke of Noam Chomsky's "deep structure" as the justification of his own architecture; then he talked about the Holocaust and the Nuclear Age as the basis for his non-Humanist architecture. But not many listened. You can't invent ideologies as easily as forms; people have to believe them. Richard Meier tried to re-invest abstract architecture with specificity by making it refer to particular sites and particular functions. But it is not easy to make the universal machine into the particular house. Does the reference of the Bronx Developmental Center to the apartment houses across the highway really emerge with much force? Michael Graves tried to solve the problem by half-abandoning abstraction. He re-established the contrast by setting abstraction in contrast to the conventionally representational elements of classicism. But now the contrast was no longer that of van Doesberg, between art and nature or the larger world of reality, but between one convention and another: between Modernity and Classicism or Abstraction and Humanism.

Wexler

What interests me is not abstraction but transformation. We abstract reality in order to simplify it, in order to understand it, and then to control it. Through abstraction we are able to change reality . . . . Abstraction allows me to recreate the things around me now, and to recreate the things around me that were in my past. For instance, the smell of freshly painted enamel reminds me of my childhood because my grandparents painted their

kitchen every spring. In my work now, I use enamel paint. I like the smell of fresh wood. Is this abstraction or is this reality? I'm not sure.

Libeskind

We have come here for a colloquium on certain topics in architecture, and it's very symptomatic of today that certain code words can be used to legitimize in very obscure ways both intellectual and cultural institutions and political beliefs . . . . This is not the definition of what this colloquium is all about. We must try to drop the code words and see what they say. They are involved in something quite terrifying. In order to talk about abstraction, we have to be much more abstract. We have to talk in second-level abstraction in order to make abstraction comprehensible, and if that's not comprehensible enough we have to talk in third-level abstraction, and maybe then things will become clear.

Armajani

I think if we are going to discuss abstraction, it should be based on certain concrete assumptions. It should be based on geography and on anthropology. I think art, history, or history of architecture in themselves cannot provide us with a yardstick to tackle the problem of abstraction.

Abraham

I see abstraction as nothing more than the process of representation through the mode of language. So when I make architecture, I think in architecture. But when I theorize, when I question what I do, then I enter the domain of other languages: literature, philosophy, painting, cinema, etc.; languages which become a philosophical challenge for the formulation of ideas. As Blanchot said, "It is not a question of abusing litera-

[1] *Maurice Blanchot, The Gaze of Orpheus and Other Literary Essays, "Literature and the Right to Death" (Barrytown, NY: Station Hill Press, 1981), pp. 22-23.*

ture, but rather of trying to understand it and to see why we can only understand it by disparaging it. It has been noted with amazement that the question 'What is literature?' has received only meaningless answers. But what is even stranger is that something about the very form of such a question takes away all its seriousness. People can and do ask 'What is poetry?,' 'What is art?,' and even 'What is the novel?' But the literature which is both poem and novel seems to be the element of emptiness present in all these serious things, and to which reflection, with its own gravity, cannot direct itself without losing its seriousness. If reflection, imposing as it is, approaches literature, literature becomes a caustic force, capable of destroying the very capacity in itself and in reflection to be imposing. If reflection withdraws, then literature once again becomes something important, essential, more important than the philosophy, the religion or the life of the world which it embraces. But if reflection, shocked by this vast power, returns to this force and asks it what is it, it is immediately penetrated by a corrosive, volatile element and can only scorn a Thing so vain, so vague, and so impure, and in this scorn and this vanity be consumed in turn, . . ."[1]

Armajani

I don't think literature on architecture is architecture. I don't think literature on art is art.

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Abraham

When I said that the term literature is exchangeable, [I] meant that it dealt with language. We cannot even make an attempt to talk about abstraction if we don't confront the physical world with the rules of language, with syntax, with grammar, with all the consequences of that confrontation. So abstraction is not floating around like a golden cloud, that we feel lucky if we can catch it, and describe it, and put it in our pocket. But it is a continuous process of questioning, a process of criticism. It depends on one's own critical approach toward architecture, literature, painting, sculpture. [It depends on which] mechanism one uses to achieve that abstraction, to penetrate the appearance of the world and reveal the occurrence of the world. . . .

One can only talk about abstraction as a process, not as a result. It is a process to challenge the reality of perception through the reality of representation. When one perceives objects, one can only perceive their appearance, (and they would resist revealing their origins) unless we create images of these objects through the representation of language. This may be the most universal meaning of abstraction.

Libeskind

When questions such as the one concerning the meaning of abstraction are posed, they are perhaps, in my book, the ultimate questions of the Western logos. I would just like to warn everyone that when the word "abstraction" is being used here, it is not being used in the same sense. It is like the word "reason," like the word "interest." The word "interest" derives from the Latin "inter est." What is in between, and what is in between is a particular form of tension to reality. Call it whatever you want. You can call reality trash, you can call it architecture, you can call it the world, you can call it economic chaos. But one would then have to engage oneself in the full differentiation of the kind of tension that is involved, for example, in architecture and in art. . . . To me, the way in which a code word like "abstraction" is used today is simply to discredit that which has no place yet in the manageable stock of manipulable potentialities. So that which is abstract has not yet been made into a stock, or into a stockpiling which can be used to secure an insecurable future. . . . Therefore whenever someone tells me that my work is abstract, it is always a way of saying that of course it does not engage itself in the real. For example, it is apparently more real to spend 30 million dollars and make a building on Madison Avenue than to commit oneself to the unmanipulable. But I think one is really not compelled by reality; one is already participant, but at various levels of access in this participation. . . .

Abraham

Einstein asked himself two questions in his life which were rather narrative; he didn't start out with an abstract statement of the problem. He tried to imagine what would happen if he caught up with a wave of light, and how objects would behave in a free-falling elevator. These are very concrete images, perhaps images a man further from convention would not attempt to visualize, but they are very striking images. He ended up with a formula of three letters and one number. If there's any answer to abstraction, this is the answer.

∎

Audience

I have a problem with the idea of abstract architecture. I think that abstraction is a process of extraction and that the moment you begin to express that thing which you have abstracted, you leave the realm of abstraction and enter the world of representation; they are very separate.

Libeskind

Surely your "representation" is a very high form of abstraction, isn't it? We know in the history of the world, especially the non-Western world, that abstraction is not necessarily in the form of representation. I would say it is rather the reverse of what you're saying, that abstraction is a disease of representation. But one can say it the other way around, that representation itself is a perverse form of abstraction—perverse because it grounds in itself something which is unfathered and rather groundless. I think that this is a point which Raimund was making through the Blanchot argument; that abstraction is tied with emotional ground and groundlessness. . . . Abstraction, as it is used, does have to do with groundlessness, but it is a groundlessness which is actually related to one's own uncertain and illegitimate existence, because one can say that one is only smelling and seeing. But even organic, physiological mechanisms are groundless for those who have studied their development: the senses, too, disclose a forgotten destiny.

Daniel Libeskind is an architect who is the recipient of numerous fellowships and awards including the senior Fulbright-Hays Fellowship and the Stone Lion at the Venice Biennale. Mr. Libeskind formerly headed the Department of Architecture at the Cranbrook Academy of Art. He has exhibited and published extensively, including his newest monograph, Theatrum Mundi, AA, London.

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Wexler

We live in this place called the world. Various things affect us. As architects, as potters, as sculptors, as photographers we see and touch these things, they become part of us. Then they come out in a new form. Perhaps art/architecture is shit. This is of course a necessary part of life.

Abraham

It's clear that whatever we do is digested, but my question is how it's digested. . . . I am fascinated with the abstract dimension of literature. You have a limited number of letters, a limited number of syllables, a limited number of words. If you [were to] analyze a trivial text in the *New York Post* you'd probably find many words which Shakespeare used. So why Shakespeare? Shakespeare has confronted that language, that digested material, material analogous to bricks, stone, or marble, with the most abstract notion man has ever invented: syntax. There is a different syntax in every language and in architecture that syntax is geometry, but geometry itself can never be architecture because it has no memory. Geometry can only deliver memory, geometry always remains geometry. So a circle, to quote in a transformative sense Gertrude Stein, "is a circle is a circle is a circle." It doesn't change its character. But when the circle is formed with stone, with concrete, with steel, then it has memory. . . . The only way one can define architectural space is as continuous conflict between the ideal world of geometry and the physiological world of material and of our senses. The issue is the degree of abstraction. It is one's ability to be persistent in that confrontation, that one never yields to the physiological world of utility.

Libeskind

Raimund brought mathematics to mind. . . . Mathematics is simultaneously Myth and Mystery . . . . Niels Bohr, during the formulation of the theory of relativity, spoke explicitly about the fact that scientists can calculate and know exactly that the calculations are coherent, but have no idea what they could possibly refer to, and that the idea of reference actually occurred retrospectively in modern physics: a cause which is an outcome of its own results.

Armajani

There is also the notion of postulation in science. The structure of modern science is not based on the continuum of logic and reason.

Libeskind

I think, Siah, what you're saying is true, that it is a matter of postulation. But I ultimately don't think it's a matter of human postulation. In other words I don't think when the Greeks examined their conditions of reality, very early on, when they said *is and is not*, they were simply postulating a condition of their subjectivity. I would say that there is something other in reality which is not controllable. Therefore, all discussions about reality, just like all discussions of abstraction, are ultimately absurd. One is already participating in something which already has an amplitude which is unmanageable.

■

Audience

I don't understand how abstraction is useful today.

Abraham

That's a very curious question . . . . I had said before that I don't believe that abstraction is a commodity which can be used. It has no quality, and that is something we haven't even talked about.

Libeskind

It is especially in a totalitarian climate that one questions something which has to do with utility, or with lack of utility. I think it is the one thing which cannot be swallowed by a consuming society. Therefore, it is the one thing that must be eliminated from discourse, because it is perhaps the one thing that breaks an entire chain of reasoning, and without this particular condition, the entire chain is irrational. Everything that one is engaged in, from drawing straight lines, to calculating, to building buildings, and to making money, hangs on an untenable condition. I would just like to point this out because it's not easy to face. That kind of accusation has been made over and over again. It is the accusation of all realism against abstraction, it is the denial of abstraction, it is the pejorative use of abstraction as reductionism, and of course whether it is Stalin or Hitler or anybody else, it is the prime target for silence and control.

Pommer

The idea that, if you abstract architecture or art efficiently, you can pull it away from the appropriation of the oppressors or the capitalist exploiters, was a common belief in the '70s. It was part of the conceptual art movement which thought that by making things proof against use—so abstract that no one could use them—you would remove the taint of capitalist exploitation. We know very well

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that nothing can be kept from the buyers. It doesn't matter really if it's abstract or not. I think the whole business of appropriation is a totally phony issue and has nothing to do with abstraction or non-abstraction. . . .

Abraham
I don't believe one can talk casually about "use"; I believe it is a crucial phenomenon and a crucial philosophical issue in architecture. Architecture cannot carry any narrative messages, but it can be identified by use. The sculptor is not obliged to confront his formal manifestations with use, [as] the architect does. When I say "confrontation," that means the architect can also deny use, but this denial has to be manifested in his architecture. If the form arrives at the level of universality at which it can encompass use, embrace use without yielding to use, that is what I would call architecture. . . . Ultimately, the root of architecture is not the primitive hut as Mr. Ryckwert tried to tell us in his book *Adam's House in Paradise*, but it is the tomb, it is the house for the dead. There was no reason to build a tomb other than to symbolize death and to deal with the paradoxical notion [of] approaching an eternal condition, of nothingness. . . . I believe there cannot be a casual argument about use; use versus form is life versus death. Use deals with life and death. When use disappears it is signified by architecture: architecture becomes its signifier.

∎

Audience
You [Siah] mention the "context" in which an act of creation may take place, and list "location" and "place" as criteria to which an object can relate. There are, however, other forces which influence creation, namely, historical, intellectual or

ideological intents, as well as political forces. So when you mention the site or context of the work, there are actually many layers of consideration which can be brought into play. Thus, when you mention public art and call for a formal response to a specific site, are you not then denying other realms of activity or meaning?

Armajani
I would like to establish some parameters in order to be able to answer your question. First of all, as a public artist I am here to accommodate; this is based upon social needs. So the idea of site, place and location, in themselves, do not project anything. As a public artist I am not involved in creating something unusual. I'm not here in order to shock or intimidate or control the viewer and the participant. As Walter Benjamin said, "The aura of the participants should be respected."

Libeskind
You claim that it is the role of society to accommodate itself to the non-artist and therefore to identify what you're calling a willful expression with the refuse of society. I think you're on an incredibly dangerous intellectual course if you accept the fact that society is to legislate what is accommodating in terms of what you call neighborliness. Because, after all, the kitchen and the backyard and all those sort of small things are ultimately extendable right into the right or left and therefore into the center of power. Therefore, I don't really buy the argument that public art is neutral, and by becoming neutral accommodates the best of all possible worlds. . . . I think there is an underlying tone in your argument, Siah, against universality, or always grounding that universal in something like a consensus of reconciliation.

Armajani
The problem with universality is that no matter how history is interpreted, the past achievements could become oppressive. It is presumptuous on my part to think that I could build a structure that would be meaningful in America and also in South America, Asia, Africa, and Europe. I think that it is oppressive, and this is an aspect of universality that one can do without.

Abraham
There is no such thing as public art and there is no such thing as public architecture; there's the art of architecture, sculpture, painting, etc. From the moment it becomes public it becomes consumed.

Armajani
When we talk about culture and democracy, we are talking about the possibilities that art, architecture, philosophy, and political systems become public. If a country is called democratic, then the architecture, which is based upon the same assumptions, must be public. So what is the meaning of cultural democracy? This is what I have been trying to get at from the very beginning tonight.

Libeskind
I am much more interested in who it is that constitutes the public, who is actually beyond, in those marginal areas, which are, of course, marginal only from the point of view of power. I would say that there is much more to participation than the kind of participation that has been reduced to merely a yes or no in terms of voting, or in terms of what you're appropriating as aesthetic liking or disliking or accommodating or not accommodating. It was Nietzsche who noted that horizons appear and disappear as a function of the Will to Power, and that on es-

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pecially good days, even abstraction is possible.

Abraham
I think one cannot walk away tonight without making a clear statement about the necessity for our spiritual survival, to protect the autonomy of art against any society, totalitarian or democratic. Before anybody becomes a citizen, he has to be an individual. It ultimately deals with our individual survival, and depends upon an almost anarchistic autonomy, so that unless we have the freedom to express ourselves through the means of our imagination, we are all dead.

Audience
I believe that you must see yourself in a collective situation.

Abraham
How can you survive if you don't consider yourself singular? There are certain dimensions in human existence which can never become collective, and if we give that up, if we delete our power of being individual in terms of what we make, then we have lost our existential world.

Pommer
I would like to bring the discussion about the individual and the collective back to the topic of abstraction. Abstraction early in this century was indeed often associated with collective or socialist ideals of society. But it also carried contradictory meanings of extreme originality, of the independence of the artist from the weight of history, of collectivity in the temporal sense. My point is that you really cannot tie abstraction to any political approach, neither to individualism nor collectivism, except in certain very limited historical situations.

■

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Libeskind
One cannot homogenize or dissolve representation, because in fact what is witnessed here today is the conflict of representation, just as there is in politics a conflict of interpretation. The conflict of representation has to do with the fullness of human experience. It has to do with the fact that there is a stability to human experience, that there is a truth. It is not a matter of statistical agreement or argumentation. When you give an answer to the question, "What is the meaning of architecture?," when you try to prove that there is reality as an *a priori*, that is a trick and, as such, absurd. Either one is a participant of reality or one is a fool. . . . I would like to make a distinction that if anything is truly human it is not disposable, cannot find its element in a mortal or alterable condition; it can only be involved in that which ultimately cannot be manipulated, or if it is directed, it is not an event from the human side. I think everyone has an experience in architecture (and anything else for that matter) that necessitates humility. To put it in the Christian, ethical, or the ultimate Heraclitean way, that *hubris* and pride of representation should be extinguished as one would extinguish a conflagration of being.

I think the last comment I would make here is that there is a general helplessness and a need when it comes to using language itself: "abstraction," "representation," "architecture,"

"reality," and the "real" vs. the "unreal." For the banality of language is that it reduces the irreducible, the unsayable, to the commonplace. Or turns the primordial abyss into the muteness of consciousness and history. From there, voidness and emptiness finally spread to become all in all. If I were to say anything, it is to realize the situation one is really in, despite the extraordinary attempt to create the illusion of total fulfillment. This is perhaps a very ancient and universal wisdom. It's there in Zoroastrianism, it's there in Confucian thought and Buddhism, it's there in the very origins of Greek thought and it's there in the older and what we consider primitive societies . . . . Perhaps there are things to be heard in places that have not been audible for a very, very long time. We may be talking of a period of 3,000 years which is almost being extinguished. After all, in terms of world history 3,000 years is not a very long time. One should not be shocked that 3,000 years of provocation, of a provocative attitude towards dwelling, would be coming to an end, as I think it is.
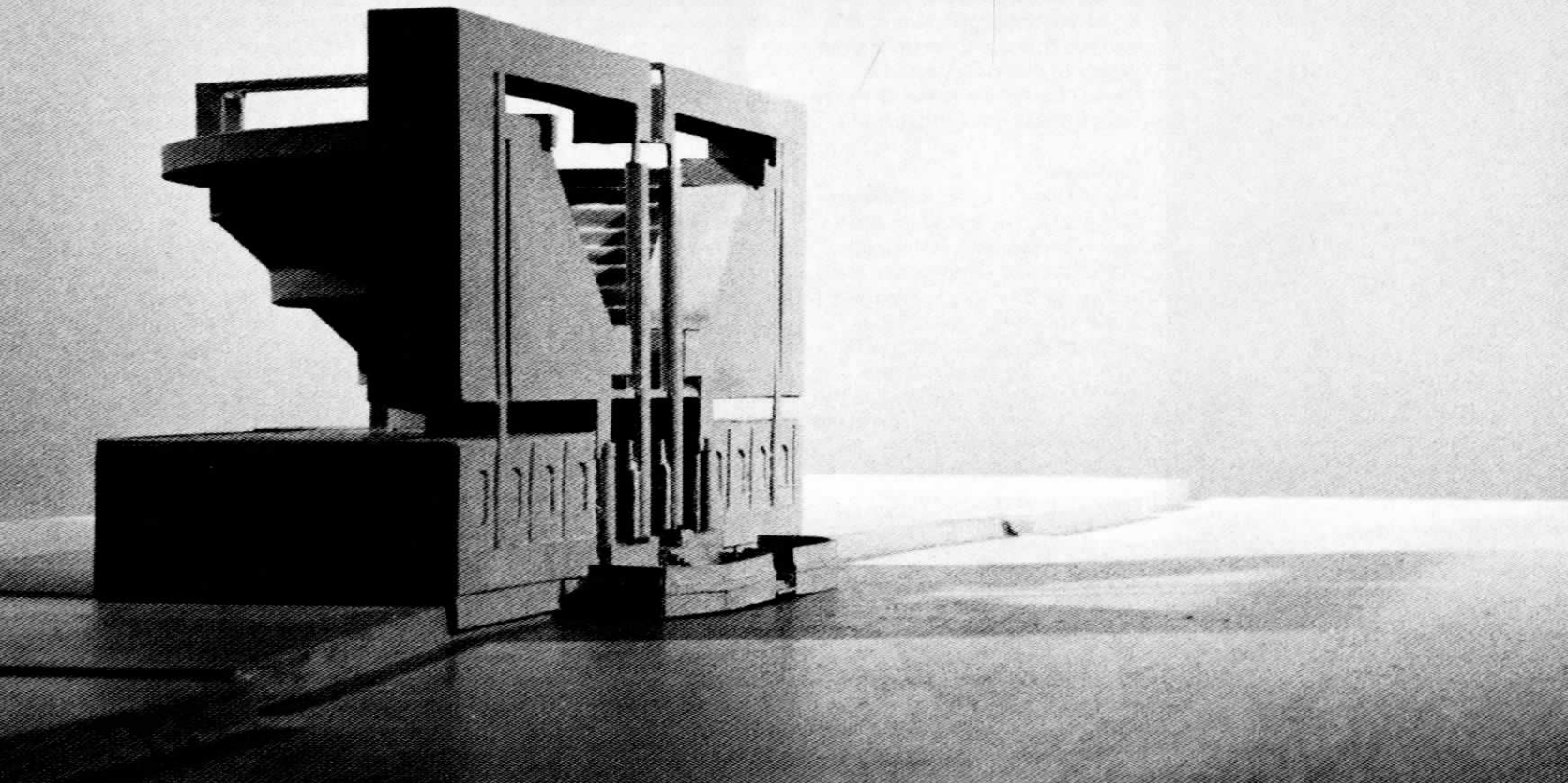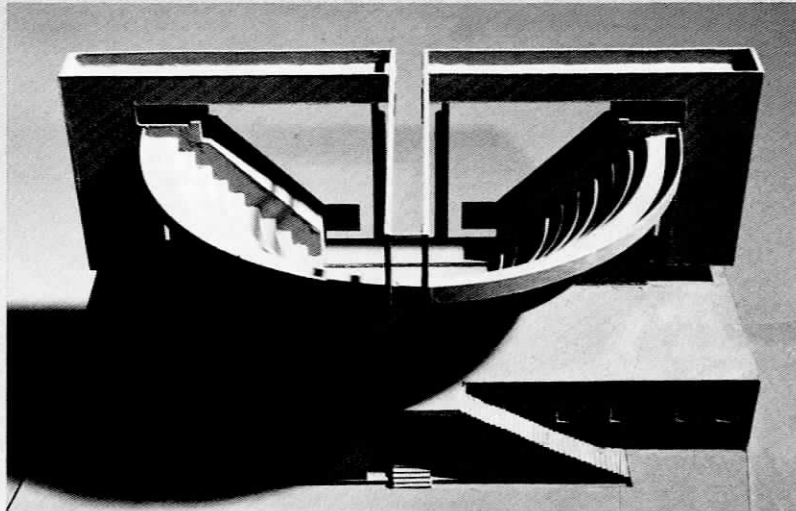
Pommer
Listening to this tense discussion tonight has made me think that some more painful issues lie concealed beneath abstraction. It is something we identify culturally and historically with modernism. And it has the further meanings of collectivity, utopia, and the machine paradise. But now abstraction, modernism and all their linked ideas are slipping away from us. Now we can begin to think about them and fight over their meanings. I think that is one reason our discussion has been so strained—it is painful to see so much that was promising fade away.
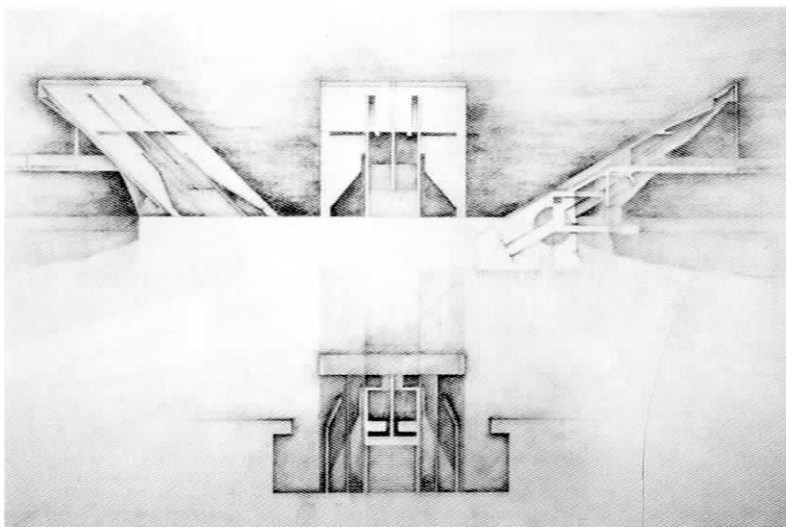
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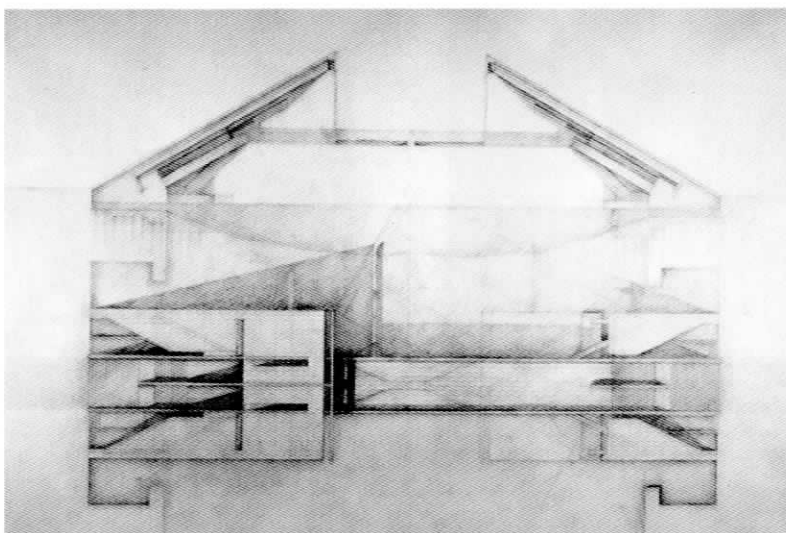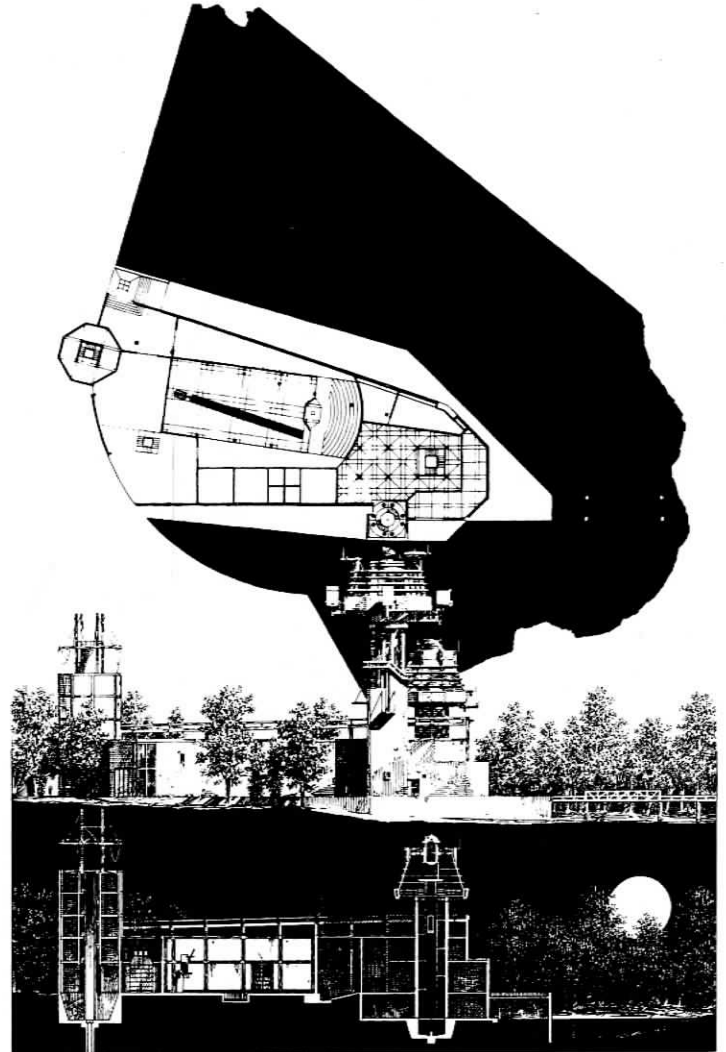**CA' VENIER DEI LEONI**

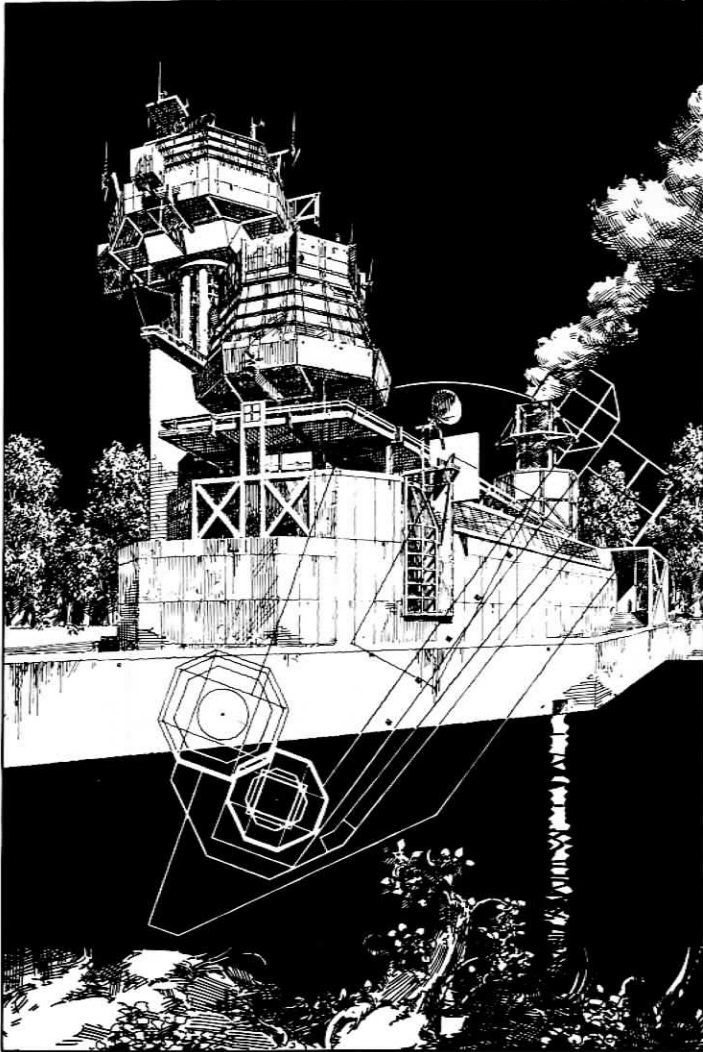*Project for the 1985 Venice Biennale*

CENTER FOR NEW TECHNOLOGY

The Competition request for a
"center for innovative technol-
ogy," a think-tank for future in-
dustrial and military purposes,
has been transformed into a
Center for New Technology,
whose purpose is the coordina-
tion of present technological
and natural processes.

The Center is a complex of cen-
tralized tower forms, providing
spaces for intensive, individual
research. The linear forms are
spaces providing communal
links between the towers and
the meeting rooms, offices and
laboratories designated for
collective work.

Design is an intuitive leap from
meditations on the task at hand
to its truest form. The first
sketches are of crucial signifi-
cance and indicate the basic
form and content for all further
development. This is what is
meant by architectural **research**.

At the center of all research is
light, playing with the force of
law upon and through forms of
every kind. Light alone is the es-
sential link between the techno-
logical and the natural, the key
to mysteries and clarities alike.

Research makes leaps into
darkness, without the assurance
of certitude or success, or into
light, which also has the capac-
ity to consume. The marriage
of modern technology with na-
ture is not at all Romantic, but
a stern alliance in a common
cause.
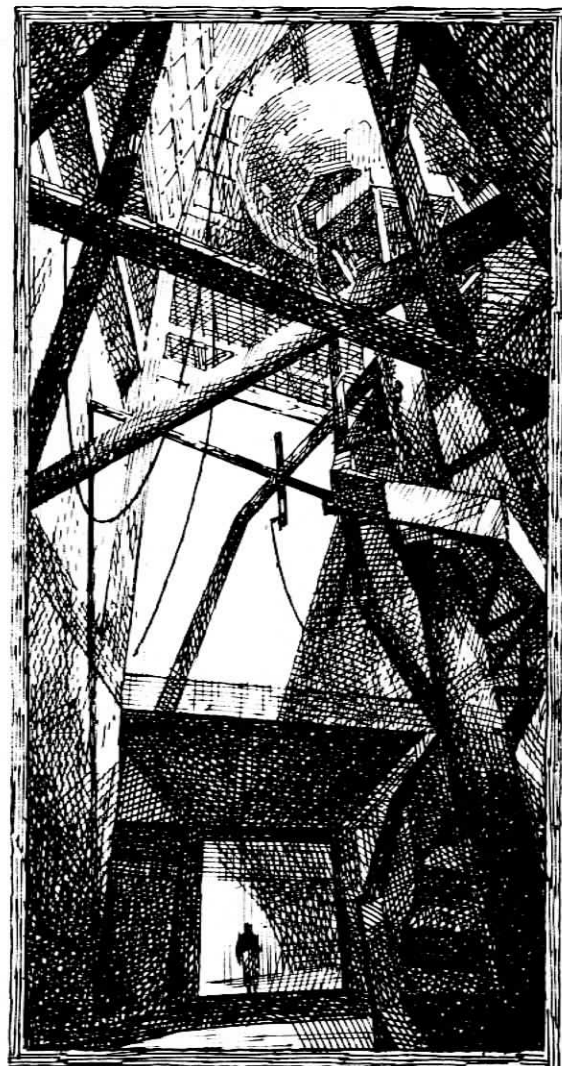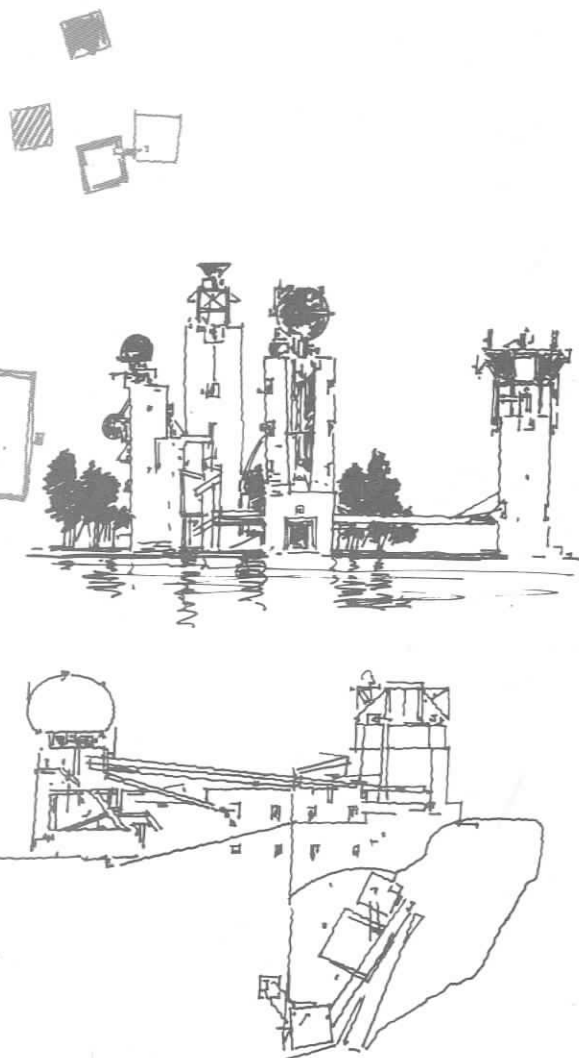
Lebbeus Woods is Associate Professor of Design at the Pratt Institute Graduate School of Architecture. He has exhibited and lectured extensively throughout the United States and Europe. Professor Woods is currently working on a book to be published by the Architectural Association in the Fall of 1985.

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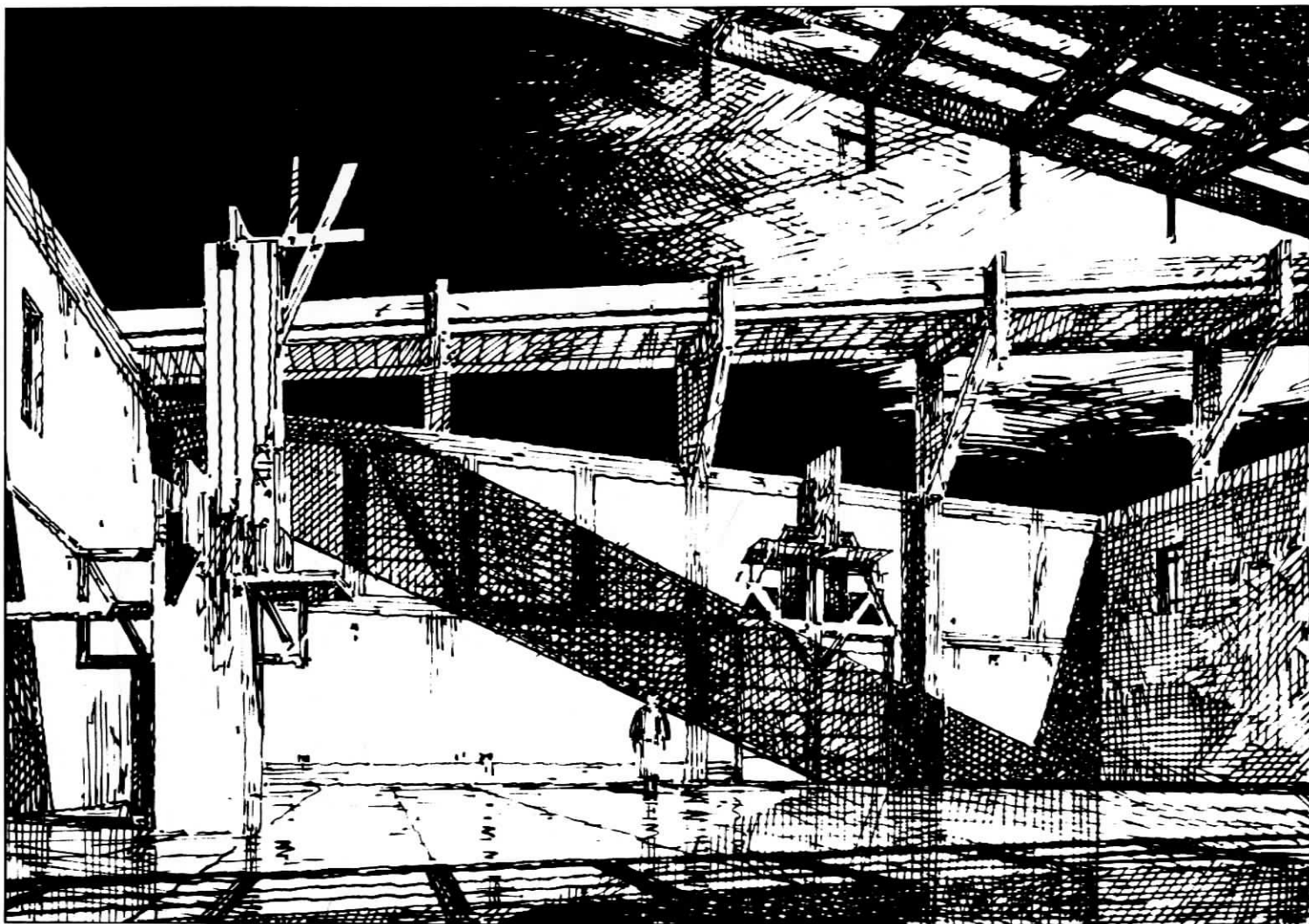
CENTER FOR INNOVATIVE TECHNOLOGY
Fourth-year student project

This building attempts to escape the mechanistic character which, historically, structures of a similar programmatic definition have sought. It stands as an architectural creation to house innovative technology rather than to serve as its symbol. Technology remains the uncelebrated means toward the actualization of an holistic image.

The Center for Innovative Technology emerged out of a systematic search for new visions through sketching. A series of small spontaneously-drawn images was produced in an attempt to reveal personal architectonic visions. During this process, the architect must isolate himself and become abstracted from the social context.

The process was an inward search for the discovery of unique compositions which can be seen as new spatial organizations of images residing within the depths of the self, images which signify a personality, a culture, and a set of processed past experiences. The initial vision, which was of two linear elements and a centralized structure at the point of their collision, was not questioned. This vision was trusted and further clarified and developed through the repetition of the sketch.

One enters the building at the beginning of a long corridor which leads to a reception space cantilevering above an access road. At the center are the archives, the primary and secondary conference rooms, and the telecommunications tower. Above the second long corridor, adjacent to the conference rooms, are the administrative offices. Isolated at the end of that corridor is the building for laboratories and research.

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Sketches

Site plan
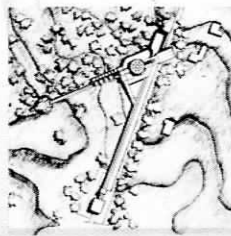
FROM MALEVICH AND ROTHKO

Prologue

When I say "from Malevich **and** Rothko" rather than "from Malevich **to** Rothko," I am not speaking of an historical and objective progression, but of an insight born and re-born. The history of painting includes everything that was ever in it, and, beyond a particular work, it also contains certain refrains. Both of these men were 20th-century artists and naturally expressed themselves within the vocabulary initiated in their moment. They were **modern** artists by birth and nurture. Their insights, although couched in new terminology, were shared–with certain artistic temperaments of the past, with us, and with those to come.

When Mallarmé declared that the sole duty of the poet is the "Orphic explanation of the Earth,"[1] he reiterated his conviction that there are two languages: the one practical, and the other, poetic. Orpheus is the bearer of poetry and art. This complicated myth, whatever else it means, speaks primarily of the power of art. Orpheus' voice made even the stones move. When he was killed and dismembered by the Maenads, his head was thrown into the river, where it floated and continued to murmur. The Orphic explanation of the earth is a long chant passed from generation to generation. Its language is metaphor. Intimation. The myth speaks of both the singer and the song, but the song is the thing. It survives. When I speak of Malevich and Rothko, I speak of artists who were aware of the "other" language, the Orphic language; a language that transcends temporal existence; a language aspiring through eternity to express a certain insight.

One of the needs that has been most apparent in the modern period is the need to resurrect the Orphic explanation; to talk of innermost things; to restore a mythic dimension to experience; to find the unity that metaphor provides. By "mythic," I mean a dimension beyond calendar time and geometric space–the dimension that only the imagination can know. The Orpheus myth is both temporal and spatial. Orpheus descends, ascends, floats, and his song fills all spaces. Artists in the Orphic family feel the need to move the stones themselves. They move into and beyond other spaces, providing an intimation of infinity–a concept that only the imagination can grasp.

Boundlessness has long been a challenge to painters–to express it **within bounds**. It is a paradox that certain temperaments cannot resist. In the 20th century the need became acute and was expressed in a new idiom by artists throughout the century. Malevich thought of his journey as a passage through a "boundless desert."[2] Rothko spoke of the ideas and plans that existed in his mind at the start as "simply the doorway through which one left the world in which they occur."[3] His awareness of his Orphic heritage was clear: "I exclude no emotion from being actual and therefore pertinent. I take the liberty to play on any string of my existence."[4]
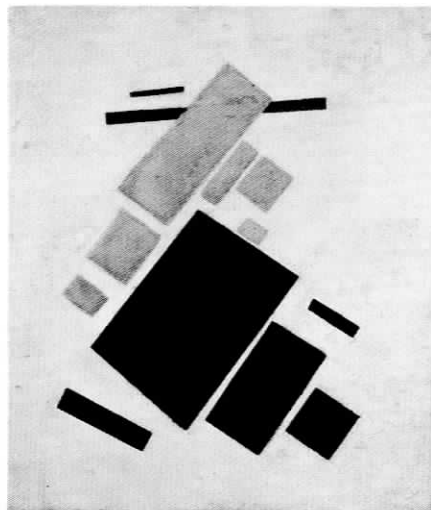
Both painters assumed that art is an expressive language that contributes to knowledge. Painting is one kind of a reading of universal experience, and although it may be, as Malraux thought, a tacit language, it is language: the language of metaphor. "Writers," warned the philosopher Merleau-Ponty, "must not underestimate the painter's labor and study, that effort which is so like an effort of thought and which allows us to speak of a language of painting."[5]

Both Malevich and Rothko had an insight concerning the imagination: that it could know boundlessness and that boundlessness was, in fact, characteristic of the spatializing imagination. In attempting to use the bounds of their art, painting, to express boundlessness, each brought a new voice to a long 19th-century reverie that includes Baudelaire dreaming of vastness, and willing, as he wrote, to "plunge to Hell or Heaven–any abyss will do–deep in the Unknown to find the new!"[6] and includes Mallarmé who planned to write a work entitled "Sumptuous Allegories of Nothingness" and reached for the "rays of absolute purity."[7] Emptiness and vastness, as familiar psychological experiences associated with pure feeling, became the challenge to these plastic artists.

Malevich

Malevich's release from tradition and his path to the unknown were celebrated in many ways. In 1916, he wrote to the composer and painter Matiushin that "an aspiration towards space is in fact lodged in man and his consciousness, a longing 'to break away from the globe of the earth.'"[8] In 1919, for the catalog of the Tenth State Exhibition in Moscow, he exultantly urged his readers to "Swim! the white free abyss, infinity is before you."[9] Several times, in the texts in which he tried to explain his leap into a new idiom, he had mentioned that he wanted to arrive at the "desert" of pure feeling. Desert, sea, sky–the spaces most intimately lived by the imagination as infinity.

Kasimir Malevich.
Suprematist Composi-
tion: Airplane Flying.
1914.
Oil on canvas,
22⅞″ x 19″.
Collection, The Museum
of Modern Art, New
York. Purchase.

[1] Stéphane Mallarmé,
"Autobiography,"
Mallarmé: Selected
Prose Poems, Essays,
and Letters,
ed. Bradford Cook
(Baltimore: Johns
Hopkins Press, 1956),
p. 15.

[2] Larissa A. Zhadova,
Malevich Suprematism
and Revolution in
Russian Art 1910 - 1930
(New York: Thames and
Hudson, 1982), p. 124.

[3] Dore Ashton. About
Rothko (New York:
Oxford University Press,
1983), p. 3.

[4] Ibid., p. 134.

[5] Maurice Merleau-
Ponty, Signs (Evanston,
IL: Northwestern Univer-
sity Press, 1964), p. 55.

For a long time, all of Europe had been poised for the re-evaluation that Nietzsche had called for. The artists, poets and musicians that Malevich came to know in Moscow during his student years had been exposed to countless points of view and were dismantling their own stale traditions. Like many Europeans, these artists felt the need to shake off the constricting bonds of civilization. They re-asserted the need to go back to the simplest beginnings. The poet Alexei Krychenik was working toward the articulation of a "transrational" language. In his sense of language lay wondrous thoughts:

"The word has a double life. Sometimes it grows like a plant and produces a mass of sonorous crystals–then the sound lives its own life and the side of reason lives in the shadow; sometimes the word puts itself in the service of reason and docilely executes its orders . . . . It is a battle of two universes in the heart of the word which gives language a double life: two circles of wandering stars . . . ."[12]

How did he arrive at the ambition, as he wrote in one letter, to "set everything back to zero "?[10] The element of catharsis is everywhere in his intense years. It is a matter of temperament. Malevich was buffeted by the excitement of his time. He was lured in many directions before he had the conversion experience of the black square. His need was to express an intuition of lived space–lived, that is, in the imagination–or, in other terms, the Orphic explanation of the earth. He schooled himself in various notions of space. He knew of mathematics through looking at Renaissance perspective and of the cosmic through knowing the late 19th-century symbolists who had already intimated extensions beyond the vanishing point. But his space was to be mythic: the space in which measured time and measured space intersect. "At the present moment," he wrote in 1919, "man's path lies across space. Suprematism is the semaphore of light in its infinite abyss."[11]

Malevich saw his opportunity. If the word could be unmoored and left to float free of its conventional meaning, so could a form or a color.

In the beginning, around 1913 and 1914, Malevich used his knowledge of Cubist and Futurist paintings and simply disoriented his viewer by making irrational juxtapositions. In 1913, he wrote to Matiushin:

"We have arrived at beyond-reason-ness. I don't know whether you agree with me or not, but I am beginning to understand that in this beyond-reason there is also a strict law which gives pictures their right to exist. And not one line should be drawn without the consciousness of its law, then only are we alive."[13]

6 *Charles Baudelaire.*
Les Fleurs du Mal.
trans. Richard Howard
(Boston: David R.
Godine. 1982), p. 157.

7 *Cook, p. 92.*

8 *Zhadova, p. 124.*

9 *Zhadova, p. 283.*

10 *Zhadova, p. 123.*

11 *Zhadova, p. 282.*

12 *Alexei Krychenik.*
Manifesto for The State
of Time, *trans. from*
the French by Dore
Ashton (1916).

13 *Charlotte Douglas.*
Swans of Other Worlds:
Kasimir Malevich and
the Origins of Ab-
straction in Russia
(Ann Arbor, MI: UMI
Research Press, 1976),
p. 52.

Kasimir Malevich.
Suprematist Composi-
tion. (1916-17?)
Oil on canvas,
38½" x 26⅛"
Collection, The Museum
of Modern Art, New York.

This pushing beyond the art of individual expression to an abstraction called a law was one of the paradoxical developments of modern art during the early years. Kandinsky, whose writings were known to Malevich and his friends, had already intimated that beyond the imitative functions of painting there was an abstract principle and that eventually it would be intelligible. "There are artists who even today experience abstract form as something quite precise,"[14] he wrote, and he quotes his friend Arnold Schoenberg: "Every combination of notes, every advance is possible, but I am beginning to feel that there are definite rules and conditions which incline me to the use of this or that dissonance."[15] Malevich instinctively converted the impulse to the absurd and alogical into a **passing beyond**— a phrase so often encountered in the diction of the time. Once the objects were freed of their designated shape and place, they were subject to other laws and, indeed, would be wafted away, banished in a very short time. The crucial experience for a painter would be with a new feeling for space.

One after another, the men and women in Malevich's circle discovered the lure of space. As the poet Khlebnikov put it: "Our questions are addressed to empty space, where man has not yet been."[16] There was a lot of talk about the fourth dimension, and an almost religious attitude toward non-Euclidian geometry developed. Matiushin explained, "The first question concerned space, 'where' and 'where to'? . . . What interested us painters in terms of measurement was the question of space. The former method of visual representation did not satisfy us."[17] For Malevich, the new mathematics and physics were attractive, but his

temperament was both more forceful and more lyrical than that of his confreres. A great intoxication was expressed in his radical gesture once he had cleared out his canvases and gone into the desert of feeling. Once he had divested his paintings of things altogether, and sought forms that were neutral, Malevich had sprung free, and throughout his comments one senses a great exhilaration, an ecstatic triumph: "I have destroyed the ring of the horizon and stepped out of the circle of things."[18] For him the square became "the embryo of all possibilities"[19] and those possibilities would take him beyond zero.

Despite the prevailing scorn for the mysticism that had lodged in Russian art after the turn of the century, and despite the avowals of scientific interest on the part of Malevich and those who followed him into what he called Suprematism, there is ample evidence that Malevich himself craved the mystical experience of transcending. He claimed that he was interested in depicting a sense of universal space as derived from the most varied scientific sources, but his prose invariably lightened as he tried to describe his quest. He wanted to describe a direct, unmediated painterly experience: "It transports me to a boundless desert, where one perceives around one the creative points of the universe."[20] The Orphic explanation of the universe rings out in a 1916 letter:

"But we will discover something else, we will disclose on earth that which cannot be disclosed in heaven . . . we will pass by a thousand poles, just as we pass over billions of grains of sand on the shore of a sea or river. Space is greater than heaven, stronger and more powerful, and our new book is the teaching of the desert's space."[21]

Malevich's objectless world is in fact a reading of the universe. In his paintings he maintained, "Each form is free and individual. Each form is a world."[22] Such a vision is one of the Orphic refrains.

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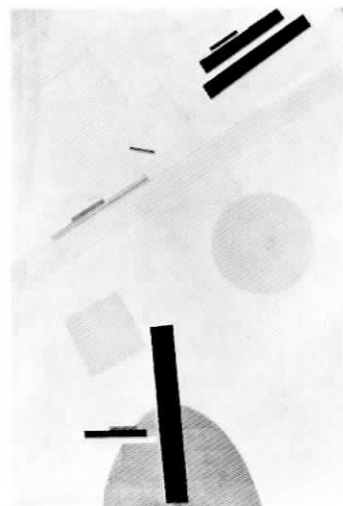
[14] *Wassily Kandinsky, Concerning the Spiritual in Art* (New York: Wittenborn, 1947), p. 48.

[15] *Ibid.*, p. 35.

[16] *Zhadova*, p. 41.

[17] *Ibid.*, p. 32.

[18] *Ibid.*, p. 53.

[19] *Douglas*, p. 64.

[20] *Zhadova*, p. 124.

[21] *Ibid.*, p. 125.

[22] *Douglas*, p. 60.

[23] *Ashton*, p. 45.

[24] *Friedrich Nietzsche, The Birth of Tragedy and The Case of Wagner, trans. Walter Kaufmann* (New York: Random House, 1967), p. 103.

[25] *Ibid.*, p. 34.

[26] *Ibid.*, p. 59.

[27] *Ibid.*, p. 60.

Rothko

Rothko was born in 1903, the year after Malevich settled down in art school in Moscow. Except for their both having been born in Russia, few circumstances in their lives were comparable. And yet, in the immanent art history of the modern period, they can stand side by side in spirit.

In the beginning, Rothko saw instinctively that neither the formal Western tradition nor the Expressionist tradition of the early 20th century suited his temperament. From children's art, to primitivism, to the mythic was the path that Rothko resorted to in a world increasingly alien to his temperament. In myth was an origin and beyond. From surrealism he took the liberty to move into reverie, and reverie brought him to ancient mythic themes, drawn often from Greek drama. In explaining one of his works of 1943, he said,

"The picture deals not with the particular anecdote, but rather with the Spirit of Myth, which is generic to all myths of all times. It involves a pantheism in which man, bird, beast and tree–the known as well as the knowable–merge into a single tragic idea."[23]

Rothko had been deeply moved by his reading of Nietzsche, particularly by *The Birth of Tragedy*; which has the significant words in the subtitle, "the spirit of music." Nietzsche's notion, that civilization–institutions and conventions–is the enemy of culture, was congenial to Rothko's spirit. Nietzsche's drive to restore affect to human life and to defeat the forces of stale logic and materialism appealed immensely to Rothko. He began, toward 1940, to clarify his principles and to understand that painting could be a kind of knowledge in which conventional logic played no role. He agreed with Nietzsche's citation of Schopenhauer that there could be a "direct knowledge of the nature of the world unknown to . . . reason."[24] Nietzsche preceded Freud and Jung in asserting that we dream in images:

"Thus the aesthetically sensitive man stands in the same relation to the reality of dreams as the philosopher does to the reality of existence; he is a close and willing observer, for these images afford him an interpretation of life, and by reflecting on these processes he trains himself for life."[25]

Such an interpretation of life is the interpretation of Orpheus in the shifting spaces of the imagination.

Like Malevich, Rothko was present at a moment when many felt distressed by conflicts and flinched from demands inimical to their art. Rothko increasingly withdrew and sought to clear his art of extraneous concerns. Like Malevich, he experienced a deep need to find other spaces, to **vacate the world**. Nietzsche had said that the rapture of the Dionysian state leads to a "chasm of oblivion" that separates the world of "everyday reality" from mythic reality.[26] Nietzsche's Dionysian man resembled Hamlet, he said, for

"Both have once looked truly into the essence of things, they have gained knowledge, and nausea inhibits action; for their action could not change anything in the eternal nature of things; they feel it to be ridiculous or humiliating that they should be asked to set right a world that is out of joint."[27]

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28 *Ashton, p. 119.*

29 *Ibid., p. 3.*

30 *Ibid., p. 144.*

31 *Ibid., p. 135.*

32 *Ibid., p. 188.*

33 *Ibid., p. 135.*

34 *Zhadova, p. 124.*

35 *Vincent van Gogh, The Complete Letters of Vincent van Gogh, Vol. III (Greenwich, CT: New York Graphic Society, 1958), p. 25.*

36 *Ashton, p. 122.*

37 *Ibid., p. 158.*

38 *Ibid., p. 163.*

39 *Ibid., p. 171.*

Rothko keenly felt his presence in a "world that is out of joint." This feeling was associated with what, during the years of the Second World War, many American artists had called the bankruptcy of modern art. Interestingly enough, it was during the First World War that Suprematism was launched. Both Suprematism and Abstract Expressionism declared the meaninglessness of previous values. Rothko said,

"I belong to a generation in which every artist studied the human figure. It was with the utmost reluctance that I found this figure could not serve my purposes. . .none of us could use the figure without mutilating it. If I couldn't find ways of dealing with nature without mutilating it, I felt I had to find other ways to deal with human values." [28]

His works of the early 1940s dealt with dreams and the origins of the world. The figure was banished. Turning away, as Malevich had done when he worked with alogic, from the conventions of Western reason, Rothko soon found himself in another universe, the one he had longed to find: he had found "the doorway through which one left the world." [29] He worked, much as had Malevich, to clear his way and rid himself, as he said, of all obstacles, which by the late 1940s included even myth. Once his forms were unmoored from references, no matter how occult, to things already known, he entered the same ecstatic state of mind as Malevich had when he discovered his "semaphore of light in its in-

finite abyss." Also, like Malevich, he was concerned with the law or the principle. He began to speak of painting as a language: "Painting, like every other art, is a language by which you communicate something about the world." [30] He insisted, as had Malevich, that there could be a new language, and that the **thought** of a painter would be expressed in the painting—"a painting is not about experience, it is an ex-

perience." [31] He said, "Men with their minds produced a view of a world, transforming our vision of things." [32]
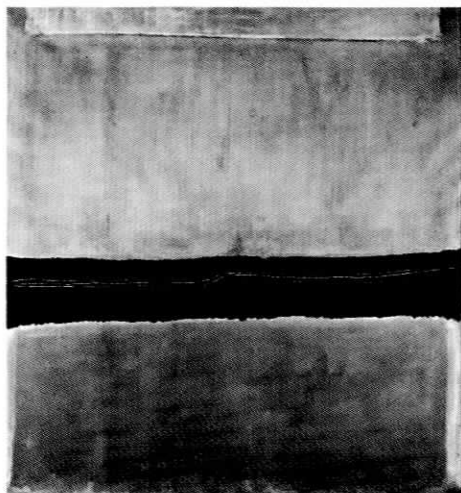
Rothko's vision of things was expressed, finally, in a clearing away, a beyond-things. He spoke of his forms as actors in a drama, and, like Malevich, endowed each individual form with the character of an entire world. As a painter he rejected the four-hundred-year tradition of re-presentation:

"In our inheritance we have space, a box in which things are going on. In my work there is no box: I do not work with space. There is a form without the box, and possibly a more convincing kind of form." [33]

Here is the same kind of experience Malevich described when he said that "a suspended surface of painted color on a sheet of white canvas imparts direct to our consciousness a strong sensation of space." [34] It was another kind of space, of course: a space worked by imagination alone, a space of infinities which Rothko sometimes called transcendent. Such intimations of space occur throughout the history of art. There were always those who hungered for infinities. The silences and vastness of boundlessness. Out of the per-

[40] Kasimir Malevich,
Essays on Art: 1915 -
1933, trans. Xenia
Glowacki-Prus, ed. Troels
Andersen, The Docu-
ments of Modern Art,
Vol. 16 (New York:
George Wittenborn,
1968), p. 98.

[41] Ashton, p. 179.

[42] Ibid., p. 5.

spective box into infinity. Some, like Rothko, sought their removal in terms of color and radiance, and in a way it was a modern choice, and in a way it was an ancient choice. Think of the Byzantine churches, their exteriors all blank, their interiors alight. In its modern sense, it was, perhaps, as van Gogh thought, a way of restoring lost values:

"I want to paint men and women with that something of the eternal which the halo used to symbolize, and which we seek to convey by the actual radiance and vibration of our coloring."[35]

For Rothko, the "something of the eternal" became a vision of immersion in light, no matter how dim or latent or bright. Where Malevich, after the Revolution, turned to

the dream of mitigation of the environment through architecture, Rothko turned to the ancient conception of walls. In his maturity, he turned to mural cycles. He had said in the early 1950s that he painted large pictures "precisely because I want to be very intimate and human. To paint a small picture is to place yourself outside your experience."[36] The murals were to allow him to plunge into the spaces, to be surrounded by an environment that would move him and the others. When he received a commission from Harvard, he explained that he wanted a possibility of "translating pictorial concepts into murals which would serve as an image for a public place."[37] Since Rothko always chose his words carefully for publication, his diction here is important. He starts with pictorial concepts—individual paintings. They are to be translated into murals. Notice his love for the prefix **trans**-. These murals are plural but they will serve as **an** image for a public place.

This was to be realized when he received the 1964 commission for the Houston Chapel. It provided him with the opportunity to feel and think of a grand synthesis, an intersec-

tion of all his ideas and feelings in a world he created of measured light and space. He had before been ravished by the Byzantine church at Torcello with its blank exterior and its glorious interior where there is nothing outer and the walls are merely keepers of the treasures within. He had loved Fra Angelico who painted the monks' cells in austere, utterly simple colors in order to assist in the solitary quest for transcen-

dence. He would return to his old idea of passing beyond convention. As he had said in the 1950s, "If I must place my trust somewhere, I would invest it in the psyche of sensitive observers who are free of the conventions of understanding."[38] He mentioned his reading of the fathers of the church who were not far from the Orphic, and not far either from certain of the ideals expressed by Malevich. Gregory of Nazianzus, for instance, saw creation as "a system and compound of earth and sky and all that is in them."[39]

The will to sink into a whole, a dissolution into the universe, guided his hand. The elements would breathe in these dark visions, would maintain their pulsation under the final surface of his panels so that light would flow from one to the other, unimpeded by detail. He had gone beyond the world of substances to a world of values and his intoxication, his raptness, was great. The experience of removing the self into a pure world of feeling was ecstatic (**ex**-: out of; static). Malevich had said, "Whoever feels painting, sees the object to a lesser degree."[40] Here, there were no objects as such, only shifting surfaces and flow. An objectless language. "I wanted to paint both the finite and the infinite," Rothko said.[41]

Rothko had said that he looked forward to the day when an artist would be judged by the sum total of his life's work. He always spoke of his work as an "ellipse."[42] The whole work, then, becomes a grand metaphor for existence, an Orphic explanation.

Dore Ashton is Professor of Art History at Cooper Union. Professor Ashton has written over eighteen books on art history and criticism.

## ENTRIES TO THE VENICE BIENNALE
Fifth-year student project

The Ca' Venier dei Leoni was originally intended to be a magnificent palace along Venice's Grand Canal but was left unfinished, with only a foundation and ground floor, at the end of the 18th century. In the 1930s, the interior was completed for residential use, and in 1958 it was converted into a museum by Peggy Guggenheim. This site represents the last chance to design a palace on the Grand Canal and a rare opportunity to combine architecture, history and imagination. In accepting the Ca' Venier's incomplete condition, a renewed will to develop the city and enlarge the museum arises, while the strong pre-existing elements suggest an opportunity to contribute not only to the Venetian context but also to new architectonic operations. In much reconstruction, buildings are not seen as fragments within a cultural continuum, but as singular monuments—an attitude which locates the real transition between past and future in recovery and r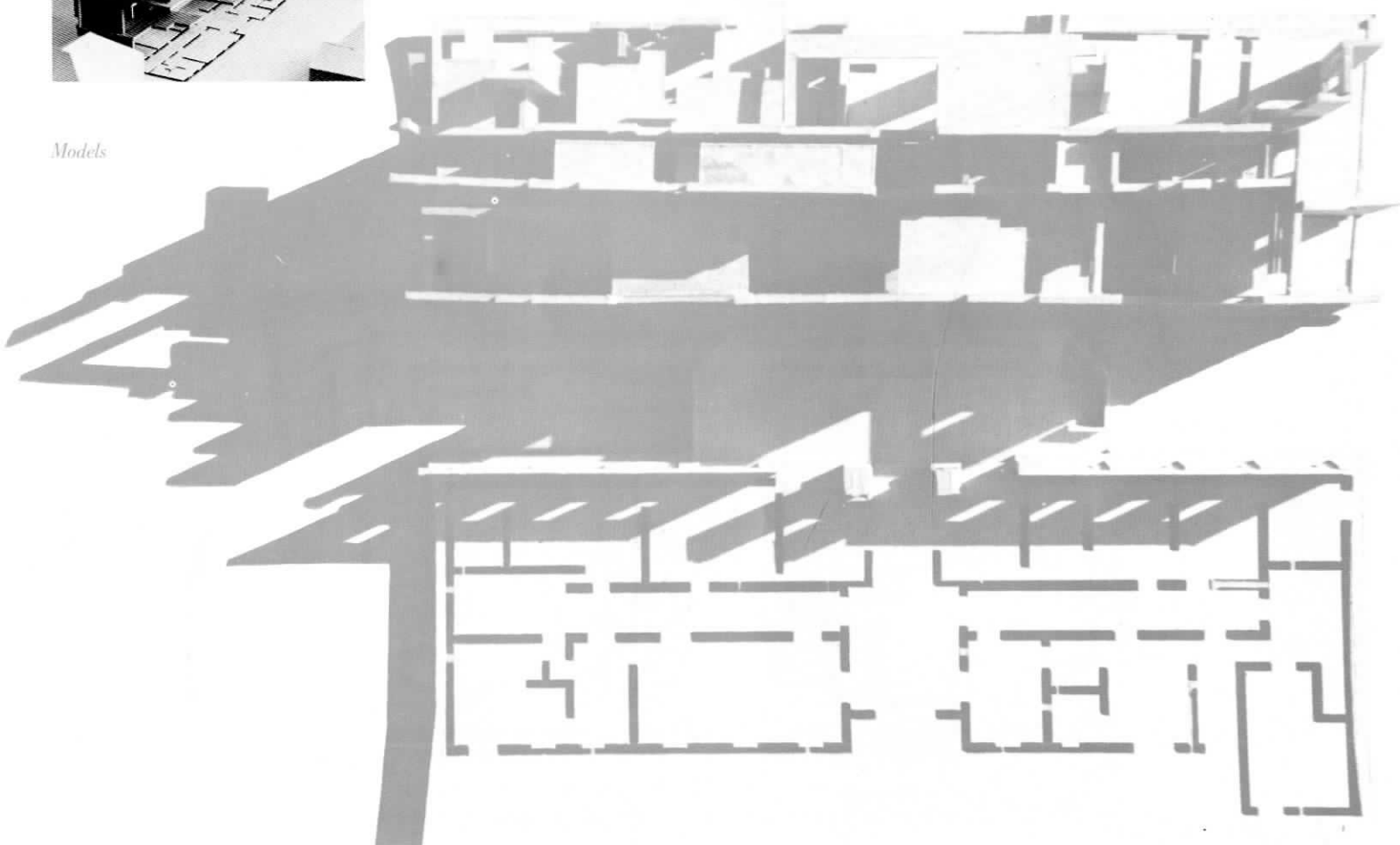estoration. In this competition, the suggested hypothesis of completion gives rise to new and different directions for an operation rich in history and innovation.
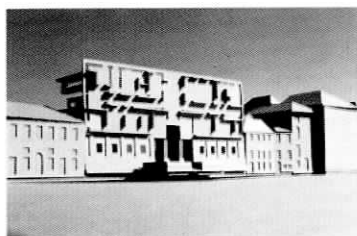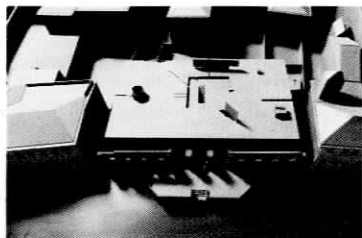
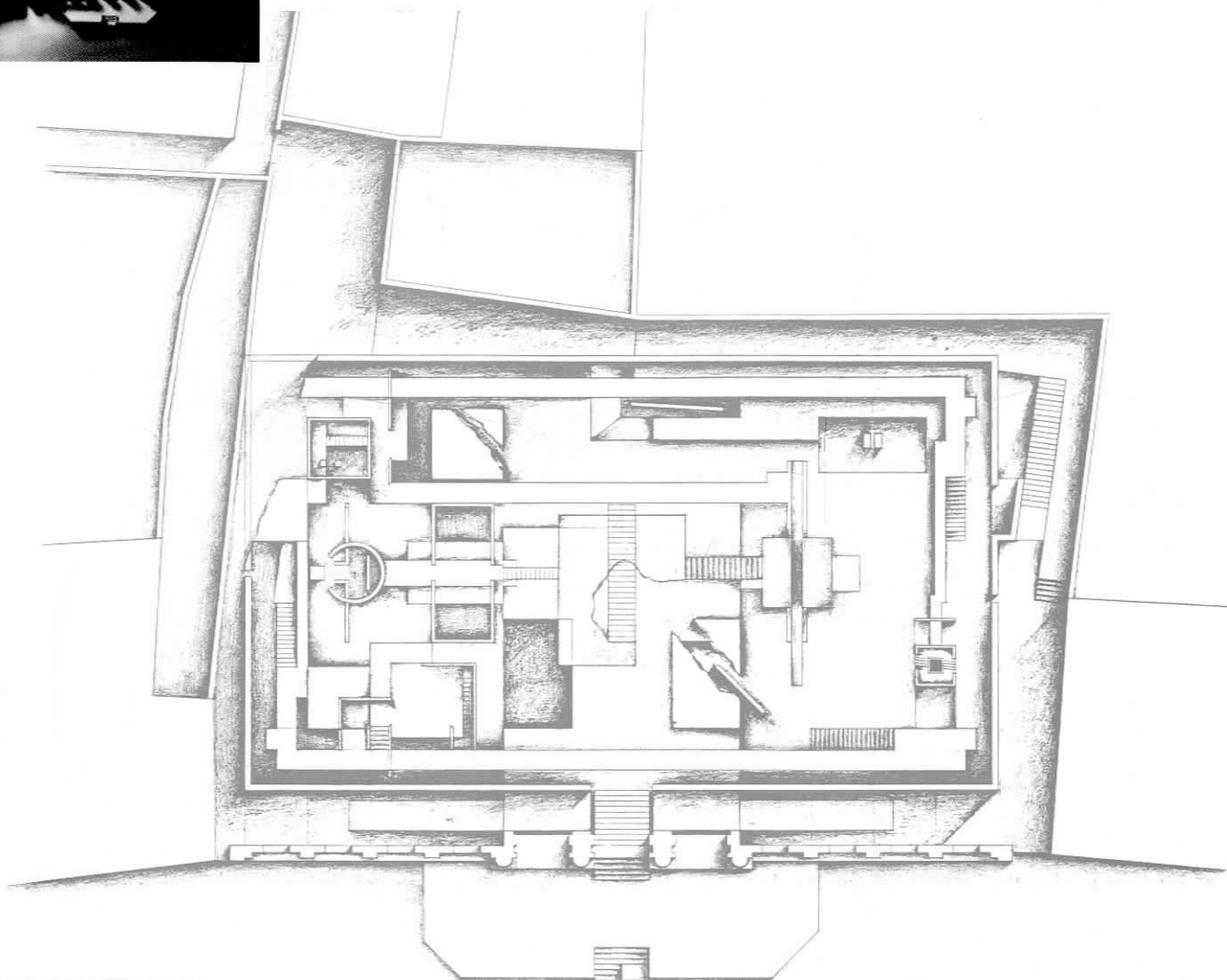*Section*
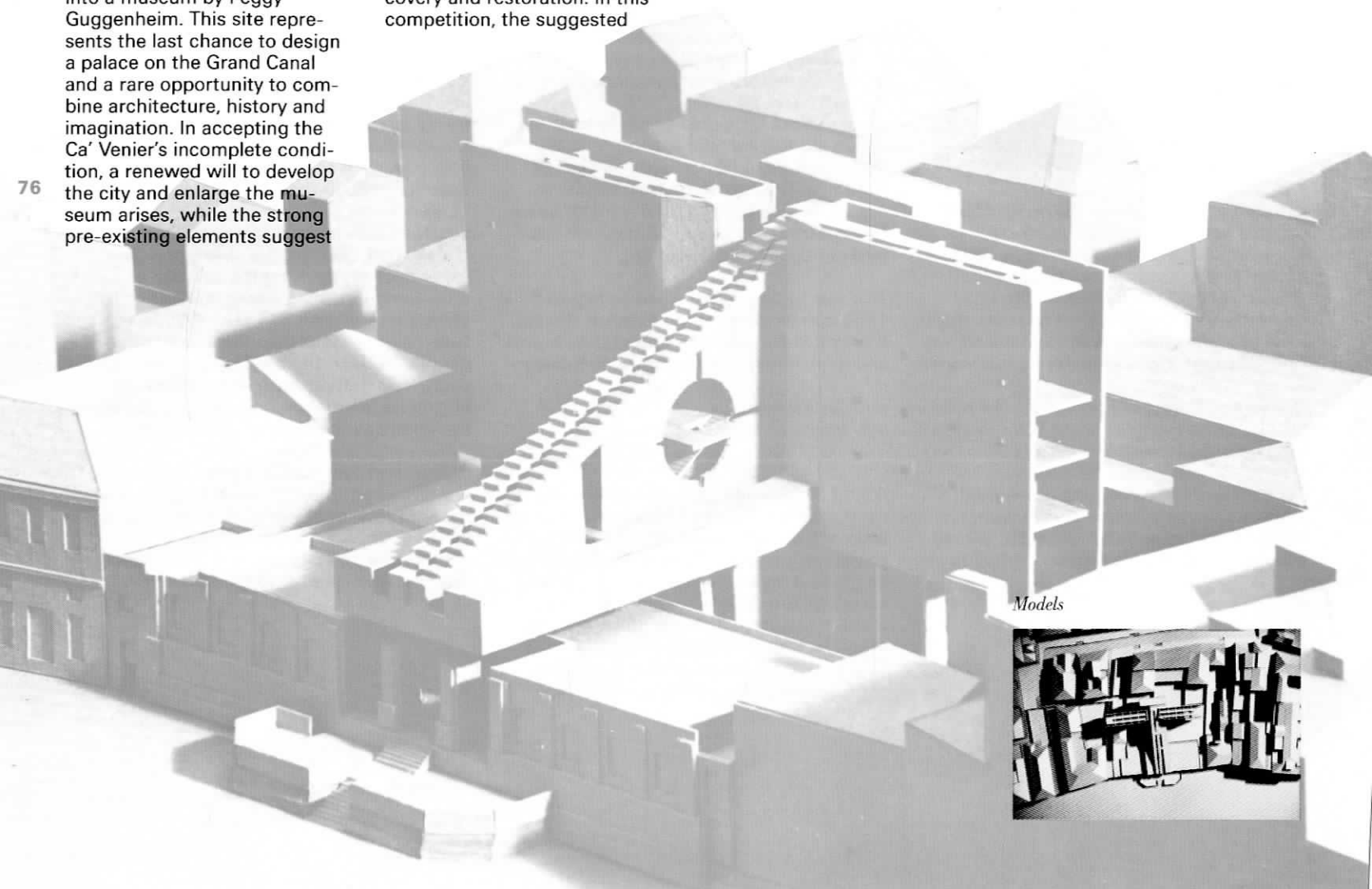
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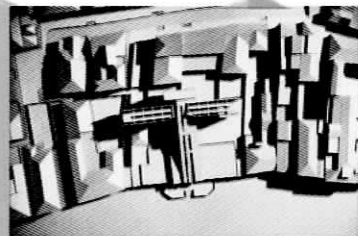
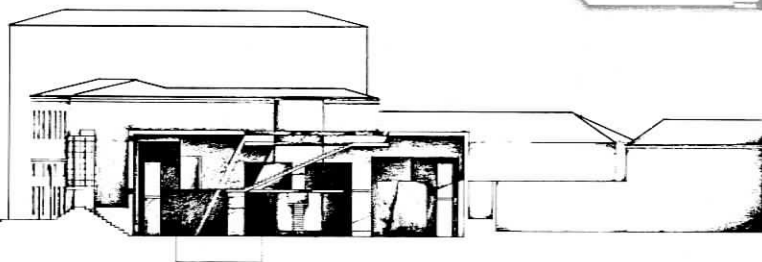*Fourth-year student project*
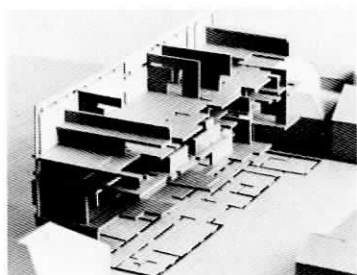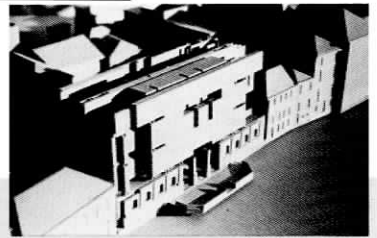

Models

Fourth-year student project
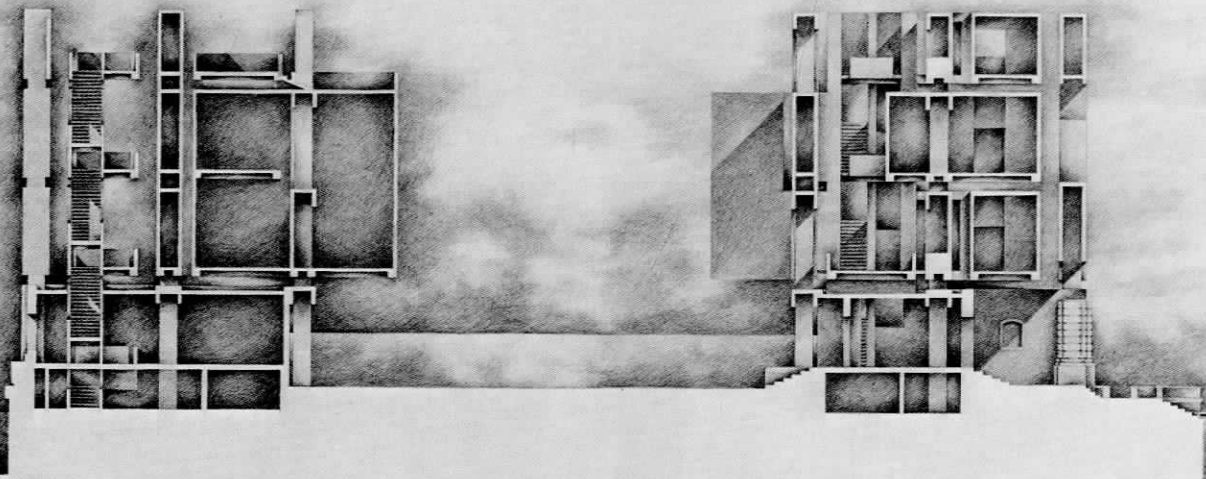

Model

Plan

Section

Fourth-year student project

Model

Sections

Site plan
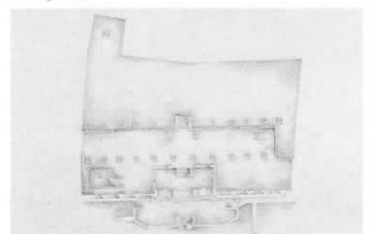
ROCCA DI NOALE
Fifth-year student project
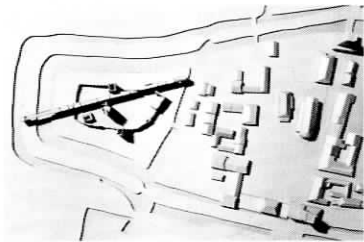
Models

Noale, an 8th-century walled city, was at one time a part of the Venetian Empire. The Rocca di Noale, which predated the city, was originally a grand fortress, later a cemetery, and is now an abandoned ruin, existing only as a monument to the past. A redefinition of the fortress links it to the city, using the typological elements of wall and tower. The primary intervention, a wall which serves as a museum, was placed on axis with an existing tower in the city. The wall creates an open linear system which provides the opportunity to move in either direction, and which is placed in direct confrontation with the closed circular system of the medieval fortress. A clear juxtaposition is thus established between the indigenous condition and a rational intervention.
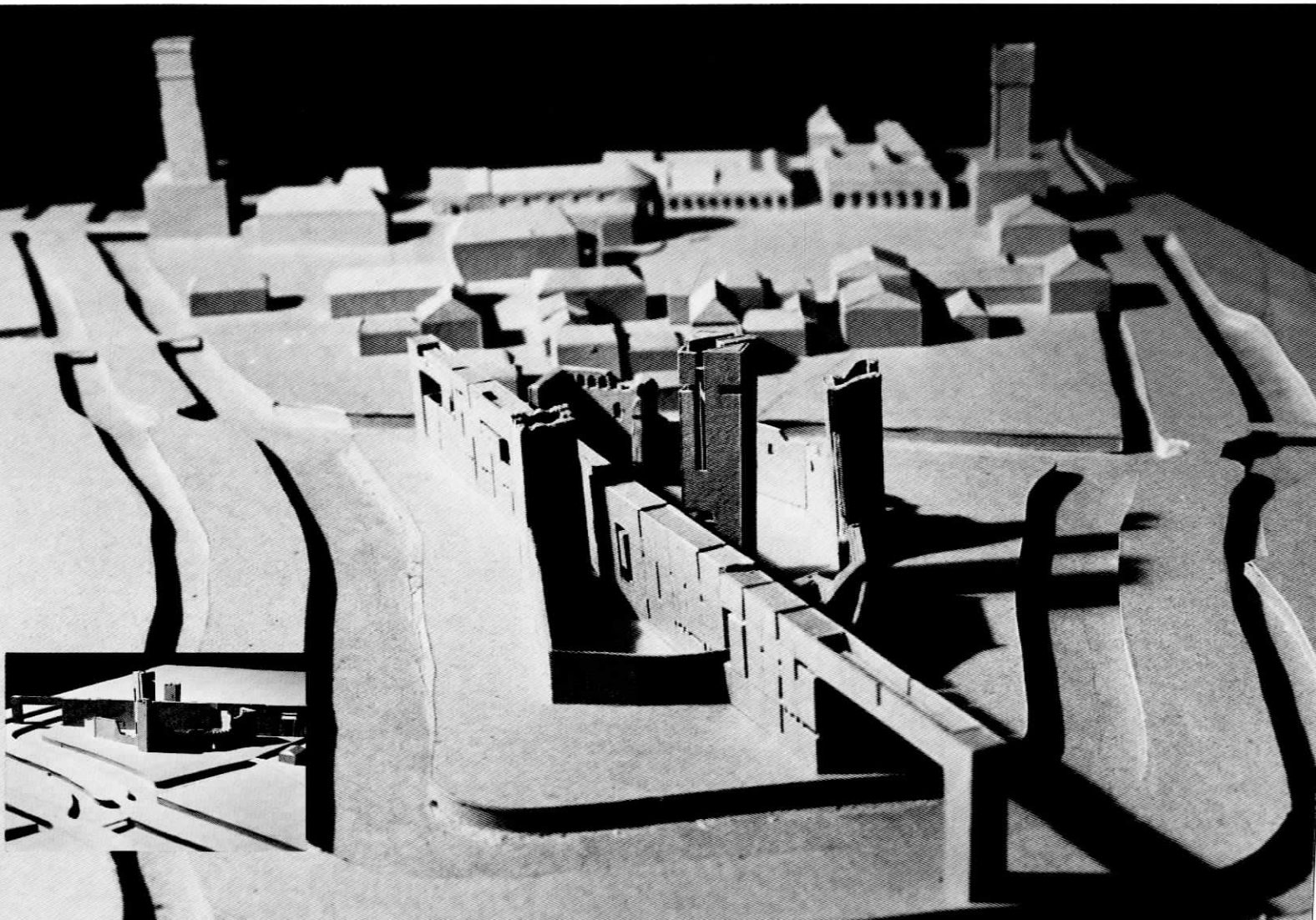
CENTER FOR INDUSTRIAL DESIGN
Fourth-year student project

The design center is composed of two conference facilities, sited on hilltops connected by a bridge, and a series of individual studios which begin at the center of the bridge and proceed down the valley toward the water. The studios are sanctuaries where one descends, safely enveloped in the earth's darkness. The walkway above continues to reflect the linear rhythm established by the studios until the journey is interrupted by a semi-public meditative space, yet the path continues, becoming an incomplete bridge leading over a body of water which can only be crossed by the mind. The whole project becomes, therefore, a metaphor for the design process itself.

Section

Site plan
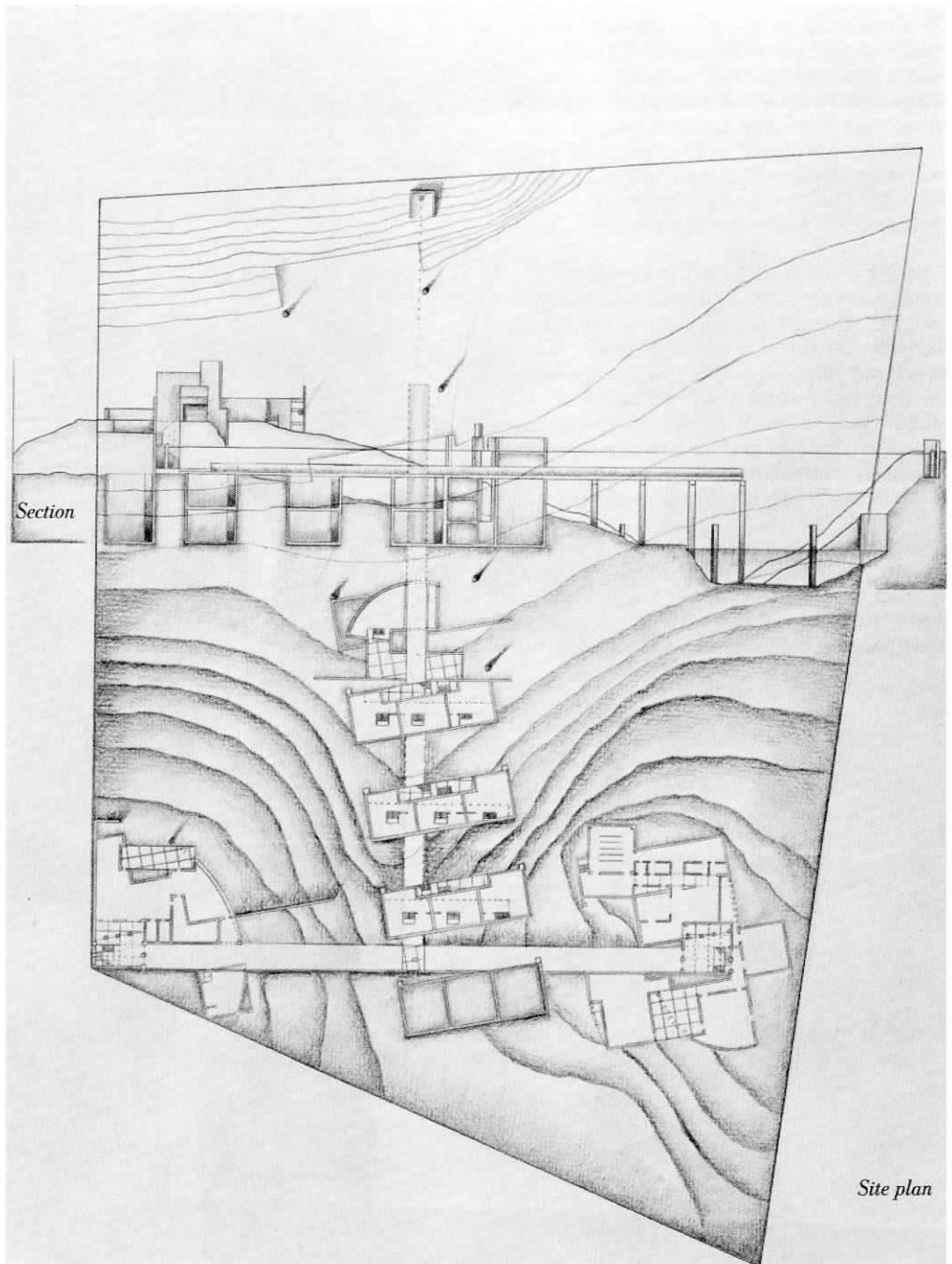
PROJECT FOR CASTELBONO, SICILY
Fifth-year student project

Site plan

This project is the result of the overlap of two systems: the topography of the land, and a geometrical order dictated by the most significant architecture existing in the town. Geometrically, Castelbono is based on the proportion of a perfect square. The square is defined at three points by the King's castle, the monastery, and the King's gardens; the fourth point is undefined.

The theatre is located at the center of the square, which falls in close proximity to the edge of town. Thus, the theatre attempts to re-establish the connection between the town and the agricultural land, which was recently severed by the construction of a major road. Because the theatre stands beside the road and opposite the town, participants in the cultural events here will enjoy a more direct relationship with the land.

The project consists of three major elements: a theatre, an open courtyard and a market, in addition to a wall that carries water from the courtyard to an underground cave located in the middle of the fields.

82

Perspective

Plan

ANTHONY CARADONNA

PIAZZA DI BADOERE
Fourth-year student project

Badoere is a small village in the Veneto region of Italy. The village's main piazza is redefined by an architectural intervention whose form is derived from the ordering devices inherent in the arcade existing on the perimeter of the piazza. Steps leading down from the arcade define a circular plaza which serves as a market in the morning and as a social gathering place in the evening.
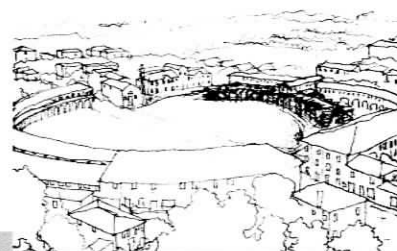
Perspective
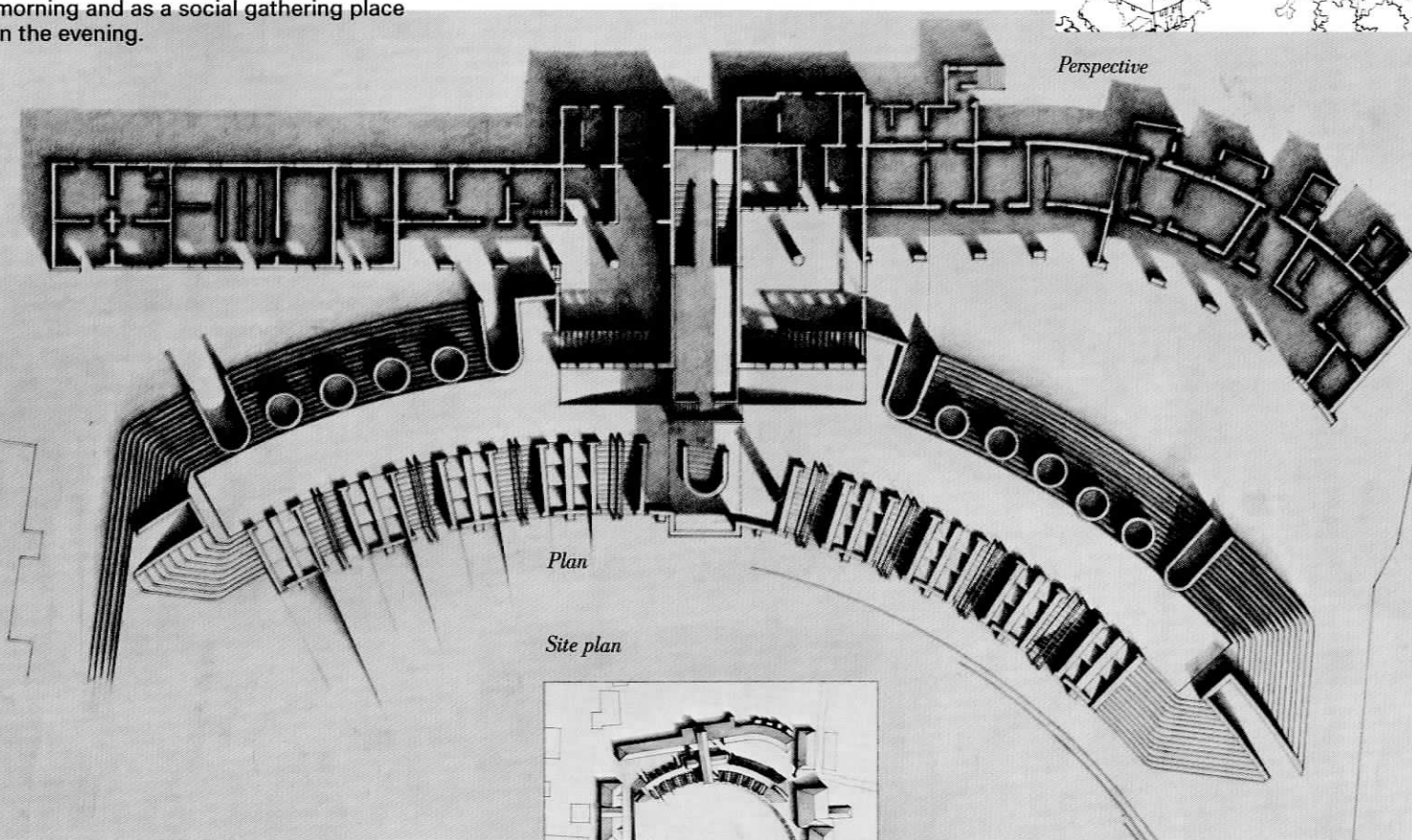
Plan

Site plan
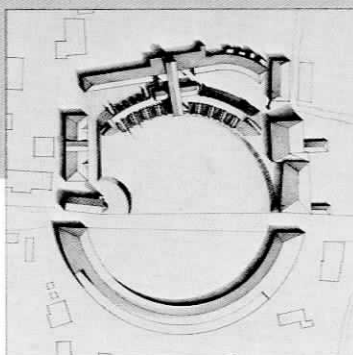
ROBERT CHOEFF

PROJECT FOR UNION SQUARE, NEW YORK
Fifth-year student project

Section

84

Plan
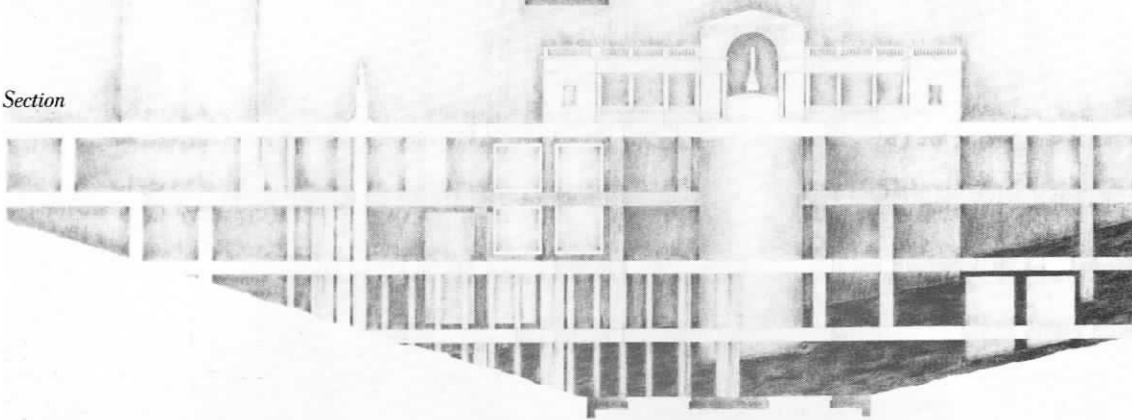
Union Square, created by the collision between the diagonal path of Broadway and the orthogonal grid of Manhattan, is a site where the architect, equipped with the tools of an archaeologist, is able to restructure a space and reveal its history. The site was excavated in order to rediscover the subway networks running below. Then, volumes were projected down into the void at the positions of the late-19th-century monuments which cover the existing surface of the Square. Finally, the site was unified by the superimposition of a three-dimensional grid on the surface which reflects the relative positions of other indigenous elements. The project became an excavation of history, an archaeology of the city.
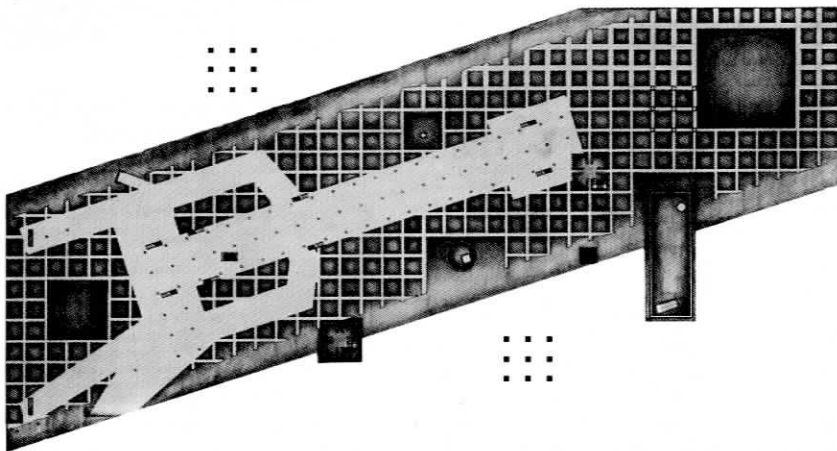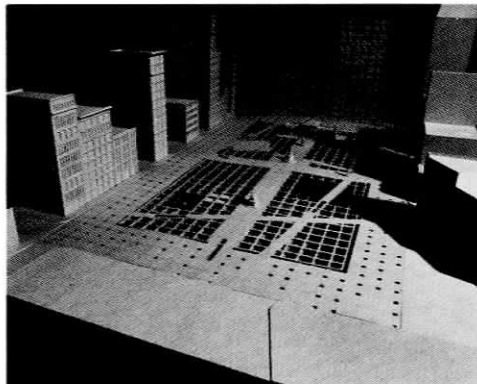
RICHARD SERRA AND THE CRISIS OF PUBLIC ART

The question of the relationship between art and public spaces has existed in one form or another ever since art and public spaces have existed. The earliest known works of art possessed a magical utility and the precincts they occupied were by definition sacred; one thinks of the ancient pagan Tuam stone in Ireland, of Stonehenge in England, of the pyramids of Egypt, of the great seaward-gazing heads on Easter Island. The first cities in history are said to have been necropoli, whose tombs were works of art on a majestic scale (by an irony undiminished over the centuries, mankind has always perversely chosen to house the dead more grandly than the living); as true cities slowly grew up around these tombs and flourished as centers of commerce and government, certain areas in them were set aside for ritual activities, the chief function of which was to secure the well-being of the community. Every Greek city, for example, had its acropolis, or "highest city," which served both as a refuge in time of war and as a continuous seat of worship. The most celebrated of these acropoli, that of Athens, at one period had so many statues crowding its rocky surface that a special hole had to be dug there for the burial of old, out-moded gods and goddesses.

Public art as we speak of it today developed out of an art devoted to religious and political purposes that for some thousands of years were scarcely distinguishable from one another. In comparatively recent times, both in the Old World and the New, religion and government have tended to acquire separate identities, with the result that public art has become increasingly laicized. From being imposed on the citizenry from above, whether by popes, kings, or other rulers, public art emerged as the more or less uneasy servant of private donors, who for a variety of reasons (some of them far from purely philanthropic) bestowed upon their fellow-citizens works of art and architecture– statues, fountains, memorial arches, museums, concert halls, and the like–that perpetuated the donors' names and, with luck, mitigated the bleakness of the environments in which they were placed. In most cases, the community would accept these benefactions without complaint and even with gratitude. If in the passage of time a statue or fountain fell out of favor, it was either moved to a remote site or demolished; until the last decade or so, few people doubted

that works of art, once in the possession of a given community, could be dealt with in any way that the community saw fit.

As we approach the twenty-first century, our attitudes towards public art are undergoing a radical change. It has become a commonplace for government on all levels to assume responsibility for the creation of public art. Government bodies, presumably representing the will of the people, commission public art and then find themselves in a position to receive praise or blame much as private donors have always done. The controversy over Richard Serra's steel construction, "Tilted Arc," in Foley Square, is a case in point. For more important even than the question of whether it is an appropriate function of government to foster art is the question, still considered novel in some quarters, of whether the artist from whom a work of art has been purchased is entitled to retain a considerable measure of control over its destiny. Is a work of public art belonging to the government–that is, belonging to the people whose taxes have paid for it–capable of being removed or destroyed according to the wishes of government? The General Services Administration, which commissioned Serra's piece, has said yes; Serra has said no. Years of litigation may lie ahead.

Brendan Gill is a critic for The New Yorker *magazine. He is also the Chairman of the Board of The Institute for Art and Urban Resources (P.S.1) and the Chairman Emeritus of the Landmarks Conservancy.*

The sculpture entitled "Tilted Arc," by Richard Serra, was constructed as part of the Art-in-Architecture program of the General Services Administration. Through this program, ½ of 1% is set aside from government building contracts for the creation of public art. "Tilted Arc" was installed in the open space in front of 26 Federal Plaza in Manhattan after a lengthy artist-selection process—contracts, testing, making of models, and finally construction: a process that began in 1979, and ended with the erection of this piece in 1981. "Tilted Arc" has been in place for four years. It has always been controversial. Recently, the regional administrator of the General Services Administration requested that a public hearing "be held in response to numerous public expressions as to the most effective use of the plaza located in front of the Jacob K. Javits Federal Building."[1]

This development raises many questions I am not going to address except in a glancing way, because they each warrant a lengthy debate. But they should be touched on.

First of all, does the work of art have to be popular to be protected? I think it is a truism to say that much new art is controversial. It has certainly been true throughout history, but it is absolutely characteristic of the Modern era in which Impressionism, Cubism, and Abstract Expressionism were born. Popularity is a relative thing and cannot be judged so soon after a work is finished.

We must assume that the authorities are interested in protecting "Tilted Arc" and that they would measure the significance of this piece according to the same test as they would measure all works of art. The real questions are: When do you apply the test and when do you ask whether the piece is any good? An instructive parallel might be the National Register of Historic Places, which enables the public interest to be represented in the designation of a landmark and stipulates that a building cannot be considered until it is at least 50 years old. It is felt that this interval gives the community an opportunity to judge the epoch at a close. It allows the subject to be judged by the cool eyes of those a generation or

two removed. They are unimpressed by the intrusion the work may have represented once, and guided instead by its position in a body of work, and possibly in the work of an era.

In this case, a group of committees and arts administrators selected the artist and the context with excruciating bureaucratic exactitude. The process was approved in advance and took two years. It was thought to be fair and balanced. But this is like many other situations where decisions are made scrupulously by the book. They are decided so far in advance and through such a complex process that they appear to have come out of nowhere, perhaps without the input of entire segments of the society who are affected—those who are unfamiliar with the process and, therefore, those for whom there is no place to register a human reaction at the time the change takes place. The whole process of consulting the community is well-intended, but imperfect.

Does a work of art have to be conventionally beautiful to be considered an aesthetic success? Recent history would illustrate not. Dissonant music, abstract painting, non-lyric poetry, all started out, strictly speaking, anti-beautiful. But they have worked their way into our eyes and ears and other senses, and into our familiarity. They therefore possess the beauty of the familiar, not to mention their own formal beauty, that by now has become respectable and established. They say that Debussy was the last artist to work at a time when to be *avant garde* was to be beautiful. If that were once true, it is not true now when graceful shapes and gossamer layers are returning to architectural design, when soft colors and representational forms have been reintroduced in all the art forms. The surging revalidation of the classically beautiful puts at risk that which is not beautiful in conventional terms. We all know many statues, paintings, and buildings that would be long gone if they had been put on trial as soon after they were finished as this one has been. In fact, some of them never become beautiful. Picasso's "Guernica" was neither pleasing nor beautiful at first, and it is not to some now. It is simply a heroic artistic statement about civil war. But no one would dream of destroying it.

Another question: Does the status of "Tilted Arc" as a work of art protect it from being destroyed, but not from being removed, as is

[1] *Remarks given on March 6, 1985 at a public hearing on the "Tilted Arc" outdoor sculpture, conducted by the General Services Administration, p. 3 of the transcript.*

[2] *Wallace Stevens*, The Necessary Angel, (*New York: Vintage Books, 1951*), p. 30.

[3] *Ibid.*, p. 29.

[4] *José Ortega y Gasset*, The Dehumanization of Art, (*Princeton: Princeton University Press, 1948*), p. 52.

being suggested in this instance? Or is this piece, because it was conceived for the site, destroyed if it is moved? The government has a contract with Serra which definitely states that the piece is "permanent" and Serra has stated over and over again that if it is moved it is destroyed. The most interesting aspect of what is going on today in many art forms is work that has to do with anchoring a place as a place. Serra designed this sculpture for this space, and perhaps it cannot go anywhere else, because the context does not exist anywhere else. In an urban design sense, "Tilted Arc" rescues that Plaza and those facades by giving the site a vehement orientation. It was a wasteland before.

What is the role of the artist in modern life? In the words of Wallace Stevens, the role of the artist is "to discover the possible work of art in the real world, and extract it,"[2] so it can become visible to others. It is to fulfill "himself only as he sees his imagination become the light and the mind of others."[3] In short, to help people live their lives. Ortega y Gasset also wrote about the role of the artist in modern life. In *The Dehumanization of Art*, he stated that, "Art which—like science and politics—used to be very near the axis of enthusiasm, that backbone of our person, has moved toward the outer rings. It has lost none of its attributes, but it has become a minor issue...a thing without consequence."[4] One senses that the situation has changed; that the absence of art, or the isolation of it, **and thus the absence of a well-designed and meaningful environment**, has become a pressing problem. That is what makes "Tilted Arc" so hotly debated, and that's what makes the job of artists of key importance at this time, because it is nothing less than an attempt to humanize the environment.

So how ever far out of the mainstream the arts may have been, they now seem to be on their way back into our everyday life. The great activity of the first three-quarters of the 20th century was to compartmentalize everything and scientize everything. The great activity of the last quarter is to knit it together again, to make it beautiful, and to humanize it. It is not a revival or a retreat to a lost period from the past, but an attempt to get into the future. It is an attempt to build on the past, and accept the imperative of this time, which is different from any other.

Adele Chatfield-Taylor is the Director of the Design Arts Program of the National Endowment for the Arts. She was formerly the Executive Director of the New York Landmarks Preservation Foundation and Professor of Architecture at Columbia University.

Photo by Anne Chauvet

PJA
What is your intention in creating sculpture for public spaces?

Serra
I'm interested in the critical dialogue that works of art have in context. I'm not solely interested in the object itself or its contained formal dimension. I think, in terms of sculpture, the relationship to other relationships, and the relationship between things is crucial. If the work can criticize the structure in which it is placed, or offer a dialogue with the context, then it is successful. If the work has no resonance outside of its own internal formal dialogue, then I don't find it as consequential. I'm not interested in illustrating or depicting, but in making comparisons possible, and I think the way to evoke those comparisons, particularly with architecture, is to use the same methods, tools, materials, and scale. It's very difficult to criticize your own language in your own language. Sculpture can't criticize sculpture. Every language has a structure about which one can say nothing critical in that language. There must be another language dealing with the structure of the first and possessing a new structure to criticize the first. The result is that sculpture not only criticizes the architecture but the ideology of that architecture.

PJA
Would "Tilted Arc" retain any meaning if it were removed from its context?

Serra
If the work is removed, it will be destroyed. The empty plaza will symbolize a broken contract. The plaza can then be compared to a dish that has a crack—you can glue it back together—but you still have a dish with a crack in it. We're going to have a crack in the freedom of expression, a crack in the first amendment, a crack in democracy, and a literal crack in the plaza. It will always be there. It's a hard place for another artist to work but I'm sure someone will do the government's bidding. The government is trying to define what an artist is by stating that an artist must enhance, an artist must create something safe and appropriate. The government is looking for a safe, appropriate solution which is almost invariably the most paranoid condition.

PJA
What do you feel is not appropriate about your piece?

Serra
An appropriate solution, in terms of what the government understands, would have been contextualization, to augment the context. I think that they would have preferred a patriotic symbol of federalism. As soon as you work in subservience to a given context, you're affirming what already exists. And what exists in this instance is profoundly mediocre. I'm surprised that they allowed the Vietnam Veterans' Memorial to go up, because that is probably a non-appropriate solution in terms of what they had in mind: yet it ends up being one of the most meaningful statements in public sculpture.

PJA
You've said that you're not interested in urban design, but rather in the experience of the object as opposed to the object itself. This seems to relate to the idea of imageability. People recognize signs easily, so that can become the way artists and architects go about creating objects.

Serra
This is where I disagree with architects as of late. "You got any hot symbols?" "Yeah, right up my sleeve." What are they talking about? You don't consciously go out and make a symbol. If you think you are going to, by using an existing sign, or by altering that sign, or enlarging it, then it probably doesn't end up signifying what it did to begin with anyway. So the way that you are consuming and recycling it for further distribution diminishes the character of its original iconography. I am not interested in the idealization of the perennial monuments of art history, emptied of their historical function and meaning, being served up by artists and architects who need to legitimize their aesthetic production by glorifying past historical achievements . . . I like Aldo Rossi because he takes a chimney or a column as an abstraction, not a temporal icon. They are not popular culture recycled. This selection of types becomes an indigenous component of his work. It's similar to saying that everyone has the right to the device of a right angle.

PJA

How do you develop a particular form? What about the site dictates or suggests a particular form as opposed to another form that might serve a similar purpose?

Serra

Through the study of a site, I come to learn **how** to see it. The particular form of a sculpture emerges from the condition of the site. The inclusion of my work makes one recognize the site and allows for a dialogue with the larger context. Site specificity is a method of **re-representing** what's there, not of **representation**. I'm interested in the sculpture's relation to the context and in an analysis of the context **via** the sculpture.

There are a few basic components to deal with—a plane, a straight line, a curve, and a cube. I've set out to deal with properties that are integral to sculpture: weight, mass, gravitational field. In that sense, you could say that I'm a very conservative sculptor—in that I understand the potential of the medium. Take the notion of balance—every sculptor has to deal with it. How one deals with it becomes how one has defined that aspect—different sculptors define balance differently: Brancusi, Giacometti, Calder, for example. If you're interested in sculptural properties and that is your vocabulary, you can utilize it to see into space and place.

I'm working with a vocabulary that enables me to see. My interest in the curve is so fundamental that it sounds simple-minded. I am interested in the difference between a concavity and a convexity and I have to build pieces to enable myself to understand what that means. I do understand that people who think they know what it means, do not. The people who want to pay attention to that problem, or those who see the implications of that problem, are very few. And yet, every now and then, I find someone who really understands how to perceive something that's been conceived to be perceived. I don't think it's easy to look at sculpture. I think it's quite difficult.

PJA

One thing that has affected us is the idea of the responsibility of the artist to the public. I was just wondering if you felt that the . . .

Serra

I have a responsibility to **art**. I have a responsibility to create art in public spaces and to make that experience available to people. In the Federal Plaza, the government asked me to do exactly that. They didn't establish a Picnic-in-Architecture program or a Music-in-Architecture program or a Bench-in-Architecture program. They asked for a sculpture in their plaza. That means something. It implies art. I thought they were interested in art. Obviously they were not.

PJA

In most private construction, the client and the user are the same person, but not in a lot of public works. In this situation, the schism is shown openly: the client is the government which is supposed to represent the public . . .

Serra

And the public is supposed to respect the freedom of expression and the diversity of that expression. Not once in the contract is the notion of the user mentioned. If the public is really going to decide what to put in front of their buildings, what do you think we are going to have? I don't think you're going to have signs and symbols that represent creative expression.

PJA

Do you feel that any paradoxes arise in this? You're saying that you're getting away from the object and that what is important is the perception of the experience of the object.

Serra

How you understand the nearest contained space, or path, or enclosure, or boundary, has a lot to do with how you organize—how you're going to perceive, conceive, and structure that space. It has to do with what's in that space. I think that weight, in orientation to mass and gravity, can reorganize your thoughts about a given context.

I keep thinking of a very simple phenomenon that struck me when I was a little kid. I used to walk to the beach every day, down to the end of the jetty and back the other way, and it always struck me as being completely significant that the ocean was on the left when I was going down, and when I turned around, it was on the right, and I had a totally different experience just from turning around and walking the other way. I always thought that was very curious. I always thought there were two different places. Everybody **knows** that you don't have the·same experience in turnabout—your relation to the sun has completely changed, left/right brain coordinates are off—**everything** is different. In fact, you probably have a side you favor as you walk. You probably think differently in each direction. Your anticipation and memory change. To me, that's a sculptural concept. If a sculpture allows for that experience, it implies self-awareness. The content of the work is that the viewer looks at himself in relation to the context. He redefines himself in relation to what he's looking at. And that's probably why the piece has people confused.

PJA

They don't understand what they see?

Serra

They are looking into a mirror of their limitations, which can be annoying. New experiences often startle people. But I think what's there is open to anyone who just takes time and has tolerance. Do I believe in education? If you turn someone's head around in one direction and then bring it back to center, this person does not see what is in front of him the same way ever again. What I find extraordinary in art is diversity. There is Cézanne and Pollock, there is Giacometti and Judd and their conceptions and methods are totally diverse which is what keeps the language viable. You might think that you understand a particular work of art, but then you go back to it and you have the feeling that what you thought you understood is not commensurate to it but enlarges that condition. How you come to know art is through a process. The anticipation of seeing Matisse's *Red Room* **again**: I'm not seeing Matisse's *Red Room* any longer, I'm involved in a dialogue that I've had with Matisse's *Red Room*. That dialogue is constantly renewed. If the government destroys "Tilted Arc," it cuts off any possibility of that dialogue.

PJA

Don't you think that the nature of abstract art itself is more reflective...

Serra

I think all art is abstract. I think that if artists want to make believe that they're making something that signifies or depicts or illustrates something by analogy, and that, therefore, they are not dealing with abstract art, they are fooling themselves. What is a bronze horse? It's often ten times bigger than any horse I've ever seen, it's hollow and it's made out of a glitzy material. That's not an abstraction? If I asked you if Cézanne was painting a mass or an apple, what would you say? The nature of what one does in the disciplines of art is probably, in its inception, abstract.

Richard Serra is a world-renowned sculptor who lives and works in New York City.

GIULIANO FIORENZOLI AND
RAUN NORQUIST

ABSTRACTION IN ARCHITECTURE

In a remote part of Italy, so far south that it is closer to Africa than to Sicily, is a small island—"the black pearl of the Mediterranean"—Pantelleria. Life on this volcanic island has always been a struggle. The slopes are so radical that intensive terracing is demanded. The wind is fierce. The fresh water is scarce. The ocean is not a friend but a boundary which has secured its isolation for centuries. The only natural resources are human energy and rock. Yet, somehow, in this hostile place man has come to some reconciliation with his environment.

The landscape is striking. The entire island is patterned with the black horizontal stripes of volcanic rock walls. Punctuating these slopes, like solitary sentinels, are small yet monumental structures, prevailing defiantly against the rages of nature. Their forms are Arabic: a sphere in a cube. The clarity of their geometry is reminiscent of how the mind craves order. So stripped down to essentials are these structures, that each element becomes a profound declaration of architectural fundamentals: wall, roof, corner, opening.

These structures are made entirely of stone. It is the only available material. They are laid up dry; no mortar is used. They are man-made primary shelters which exhibit an elementary appreciation of space. It is a simple strong statement: walls and a roof which is vaulted to echo the heavens above. In an effort to create order from disorder, amorphic rock takes on pure form. These buildings have an ironic contrast to the place of which they are inherently a product—manifestations of will and ingenuity, standing out boldly in the landscape, yet humbled as they cling to the side of the volcano, somehow confirming man's place in the scheme of things.

The generations of these structures are a product of hard-earned, empirical knowledge, learned by the act of hefting rocks. Over time there has been a transformation of the character of stone into a vocabulary which discloses a dialogue between material and use, revealing a fundamental connection not befuddled with decoration or "style."

The extreme constraints of this place have given it its particularity. The sun, the wind, the volcano, the ocean—all are a reiteration of isolation and harshness. All life and forms develop as a defense against nature. It is not an integrated society but a society of isolation and distances—distance from the outside world, distance between people, and between buildings. These factors conspire to create an overwhelming sense of abstraction in a landscape of built forms which are at once present and archaic.

Through time the criteria of Vitruvius' formula for architecture, "firmness, commodity, and delight," have been satisfied in this lonely place. These shelters are architecture. In the process of making shelter, man has found his way beyond limitations to a form of austere poetic expression.

These small solitary fortresses look rough and charred on the outside, yet are smooth and generous on the inside. Their thick walls keep out the wind, rain, and heat. They stand apart, steady and surviving in an environment that affords only minimums. Yet it is from these minimums that the purity of these abstracted forms finds a place, not as an intellectual exercise, but as an inevitability. It is their correctness and essential character which speak to us.

Giuliano Fiorenzoli lives and works in New York City, and teaches architectural design at Pratt Institute School of Architecture and at Columbia Graduate School of Architecture.

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