

RHIZOME ARCHITECTURE

LD
S&S
Y&S

coherent structures of meanings, but rather, wonders how the effo
any difference. That is, it asks the famous pragmatist question, 'W
majority," armed with the kind of mora
ness which Rorty adapts in an utterance and crush, the stutterer, who dares
Becoming or transformation here is possible only when the stutterin
philosopher "thinks up" with the stuttering of the majority, and b
to dissolve stultification, not physical science. It may be a culture which is
every "majority" ideas as what consists in its own.

Philosopher, stutterer, thinker of an outside—but never marginal or parasitic
His philosophical apprenticeship and, later on, his career as a "public pr
fessor" have been in accordance with France's best and time-honored way
La Sorbonne, *Professeur de Lycée, Professeur de l'Université en Provence*, research
at the *Centre national des recherches scientifiques, Professeur de l'Université de Pa*
VIII, first at Vincennes and, later on, at Saint Denis. But this rather orth
dox French academic career—this molar, segmented line, as he would ca
it—never managed to conceal a certain taste for the outside, a desire f
nomadic displacements, an openness to encounters which could cause t
molar line to deviate and the *chizome* to grow by the middle, or a kind
humor with which to displace the philosopher's old irony.

François Châtelet, for example, has retained from his student days
Sorbonne, the *Derrida* both Rorty and Derrida have reasons to abandon profo
branch's theories as esoteric philosophy, and are supported in related fields by
of philosophy. Châtelet calls them away from the New Criticism. They hope
bold of himself in investigation that have been blocked by the severe regimen of phil
listening to Derrida's which, they think, are rooted in Cartesian and Kantian tr
and premised *spread* toward modern philosophy radically undermines the
rib." As for Derrida's previous work and, as Corbin West and Richard Poirier
which coincided back in Sartre's *Idéologie of self-reliance*, a position of
for the outside in Sartre. On the other hand, the *feeling* writing of Bloom and P
the Sorbonne life: the *différence* and the *deconstruction* by *transcendentalism*
the presence of *according to Rorty as our Outside*," he writes in his *Dialog*
with Claire Parment. "He was really the breath of fresh air from the ba
offer a way to think about literature and about life that seems... a cruc
yard. . . . Among all the Sorbonne's probabilities, it was his unique co
bination which *insufficiently understood and was limited*, especially within the acad
der." In 1964 Deleuze with American sermons on *the past that had never pass*
professor, for having *recently under* mostly philosophy on new themes, for choosin
new style and *was* *less* *ingenue* and warns of many weaknesses, yet *ultimat*
problems. In *neo-pragmatism* as a limited but useful springboard for a more
Sartre, Deleuze *is* *gone* *is* *attracted* *of* *the* *value* *of* *this* *way* *of* *thinking*, and if
Sartre demon *sorte* *thinking* *of* *the* *literature* *and* *architectural* *theory* *is* *a* *virtua*
der in it, a bit *of* *fragility* *on* *an* *unhappy* *source* *for* *a* *theory* *of* *architecture*, with
Sartre's oppos *ible* *might* *benefit* *and* *imagination* *and* *his* *love* *for* *speak*
purposes realized in built form. To accept Rorty's notions is to be
operative, progressive culture, rather than constructing new conce

The architect works in a paradoxical situation. While the architect is a product of culture, he or she also has a role in changing that culture. Our culture manifests itself through a range of forces— political, economic, social, historical, material, and conceptual, and these forces are all linked together in various ways as they form us.¹ It is these forces which educate us and, at the same time, tend to limit our possibilities: culture works to contain the possible. The risk for the architect is that s/he may produce a-critical, bourgeois objects which simply repeat existing conditions. In order for the architect to really participate in the field of culture, s/he must produce something that is able to question and modify the cultural forces themselves, something that widens the cultural discourse rather than merely fits within it.

In the ancient Greek sense, Culture meant "an ideal to be understood and followed" and education "the process by which a community preserves and transmits its physical and intellectual character."² This idea of continuity works as long as the "ideal" is understood and believed. In our culture where education, finance, and politics, for example, are so closely tied together, "ideals" dissipate into multiple ideologies. The architect needs a tool of resistance, then, to disperse the normal proclivities of design, to open up the possibilities directed otherwise by culture. Such a tool is described by the philosopher Gilles Deleuze in his term, **rhizome**.

The rhizome's structure is opposed to that of the tree. While a tree structure divides and organizes in a binary, linear, dialectical(Hegelian) fashion, the rhizome continually connects in multiple directions and dimensions, bringing together that which is typically apart. While the tree defines a unity, the rhizome signals a multiplicity. The rhizome can be used as a tool, as part of a strategy to take that which is outside of the disciplinary boundaries of "architecture" and temporarily bring it into architecture, to see how architecture changes. The forces of culture are suspended as new experimental objects are made. These objects do not readily make sense within traditional frameworks but may be understood by overlaying new interpretive structures. The rhizome is both a generative as well as an interpretive tool. This thesis explores some rhizomatic flows into architecture and enjoys architecture's subsequent transformations.

The problem of the individual working within a cultural context has been dealt with at length in the poststructural critique of culture. Foucault suggests that people form "themselves" through the categorizing and

"Culture endows consciousness with a new faculty, which is apparently opposed to the faculty of forgetting: memory." –Gilles Deleuze, *The Deleuze Reader*, ed.

Constantin Boundas, (New York, Columbia University Press, 1993), p. 246.

"In contemplating civilization where everything is standardized and repeated, *the whole point is to forget the space between an object and its duplication*. If we didn't have this power of forgetfulness, if art didn't help us forget, we would be submerged, drowned under these avalanches of rigorously identical objects. "

–John Cage, *For the Birds*, (Boston: Marion Boyars Publishing, 1981), p. 80.



"If you do not expect the unexpected, you will not find it; for it is hard to be sought out, and difficult." –Heraclitus in Daniel J. Boorstin, *Cleopatra's Nose*, (New York: Random

House, 1994), p. 141.

normalizing techniques of culture, not independently of them. He claims that rationality itself is structured by cultural relations and is, therefore, subject to cultural forces. In the Greek view, the individual is "moulded in accordance with an ideal." Foucault claims instead that culture moulds not with an ideal model, but through a politics of subjectivity, a situation in which the State negotiates power through its institutional apparatuses. He does not claim that the individual can or should overcome culture, but rather that the individual can invoke a critical/experimental attitude towards culture in order to balance its normalizing forces: "Where religions once demanded the sacrifice of bodies, knowledge now calls for experimentation on ourselves, calls us to the sacrifice of knowledge."³

While Foucault describes this process of subjectification, Roland Barthes identifies its dangers. In his analysis of writing, Barthes observes that 17th century French writing practice was considered to be "pure expression," without any particular cultural style. He notes that it was not until the 19th century that this style could be identified as a style, as something culturally formed and not universally usable. The danger in the assumption that culture is neutral or universal is that this position allows groups to "reduce all human experience to fit the shape of its own particular view of the world, which it promotes as 'natural' and 'normal,' refusing to recognize what it cannot so classify."⁴ Culture works to make "all aspects of life silently acquire the same air of naturalness, of rightness, of universality and inevitability. But bourgeois writing is not innocent. It does not simply reflect reality. In fact, it shapes reality in its own image, acting as the institutionalized carrier, transmitter or encoder of the bourgeois way of life and its values."⁵

The rhizome challenges the bourgeois drive to limit and classify. It produces multiplicity which by definition cannot be reduced.

"The essential thing is the noun multiplicity ... which designates a set of lines or dimensions which are irreducible to one another."⁶

In architecture, the rhizome may be used to make porous the disciplinary or representational borders traditionally reified by culture. In the following projects, the rhizome connects architecture to objects which are outside its "normal" discourse. This results in new objects which either complicate or question the architectural discourse, depending on the disposition of the viewer.

Architecture is the "spatialization of knowledge."

—Michel Foucault, *Foucault Reader*, ed. Paul Rabinow, (New York: Pantheon Books, 1984), p. 254.

"Any point of a rhizome can be connected to anything other, and must be."

—Gilles Deleuze, *The Deleuze Reader*, ed. Constantin Boundas, (New York: Columbia University Press, 1993), p. 29.

"Every idea originates through equating the unequal." —Nietzsche, "On Truth and

Falsity in their Ultramoral Sense," *The Complete Works of Friedrich Nietzsche*, ed. Oscar Levy, (New York: Russell + Russell Inc., 1964), p. 179.

1 This idea is discussed at length in terms of *ecstasis* in "The Dislocation of the Architectural Self," an article about the architecture of Peter Eisenman by David Goldblatt in the *Journal of Aesthetics and Art Criticism*, Fall 1991.

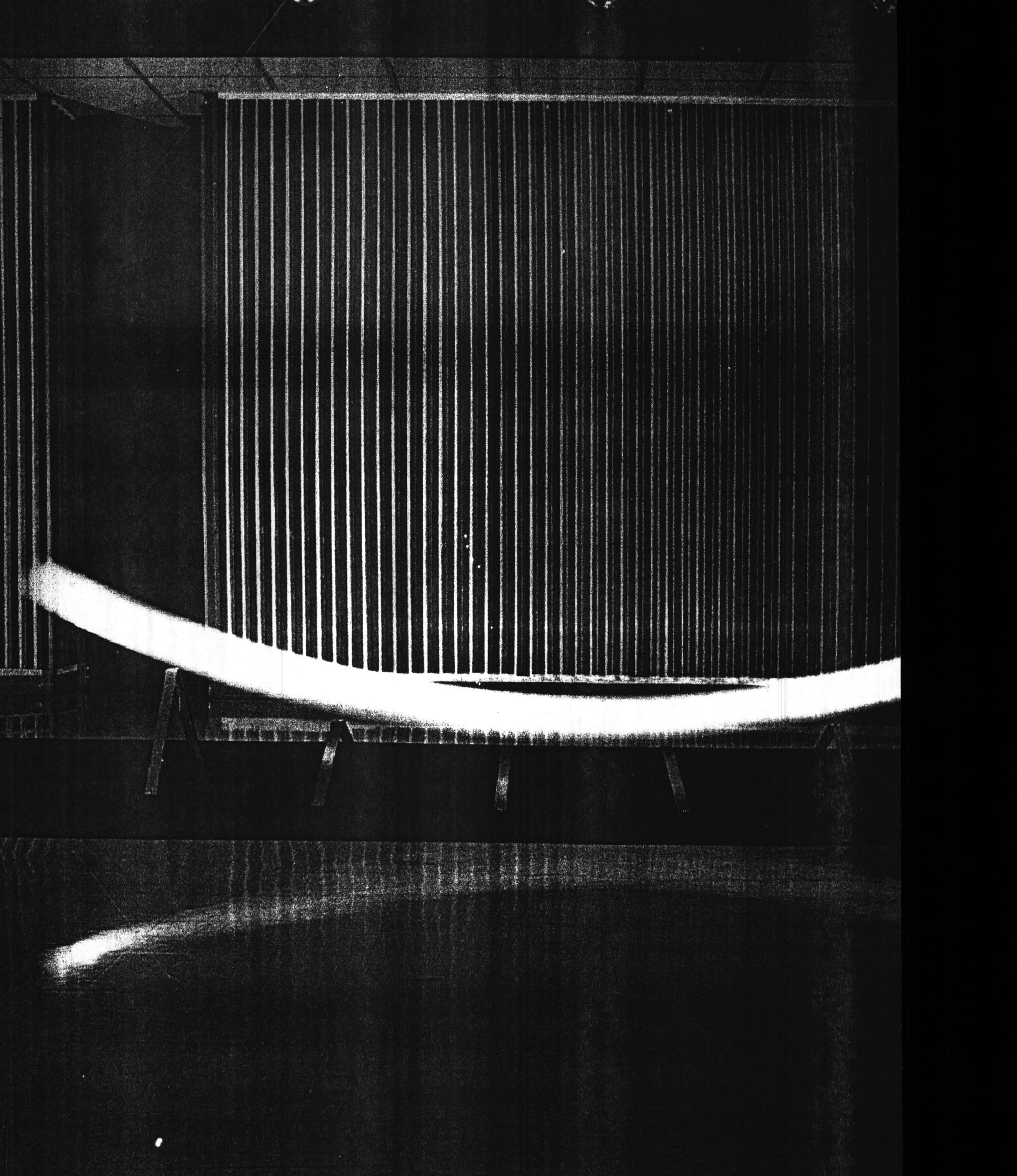
2 Werner Jaeger, *Paideia: The Ideals of Greek Culture*, (Oxford: Oxford University Press, 1939), pp. 303, xiii.

3 Michel Foucault, *Foucault Reader*, ed. Paul Rabinow, (New York: Pantheon Books, 1984), p. 7.

4 Terence Hawkes paraphrasing Roland Barthes in *Structuralism and Semiotics*, (Berkeley: University of California Press, 1977), p. 109.

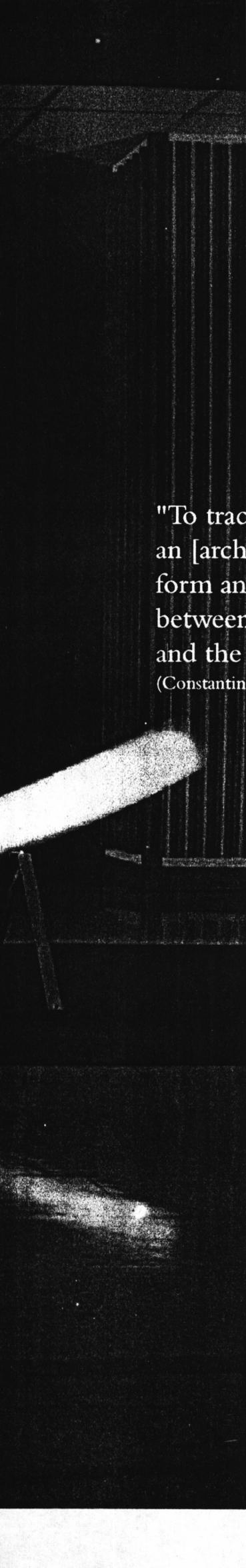
5 *Ibid.*, p. 107.

6 Gilles Deleuze, *Dialogues*, (New York: Columbia University Press, 1987), p. v.



S o u n d

P e n d u l u m



"To trace a line, say, between [architecture] and music, is not to orchestrate an [architectural] theme or to talk with [architectural] expertise about the form and the content of the piece of music. It is to find a third term, in between the two that would facilitate the becoming-music of [architecture] and the becoming-[architecture] of music."

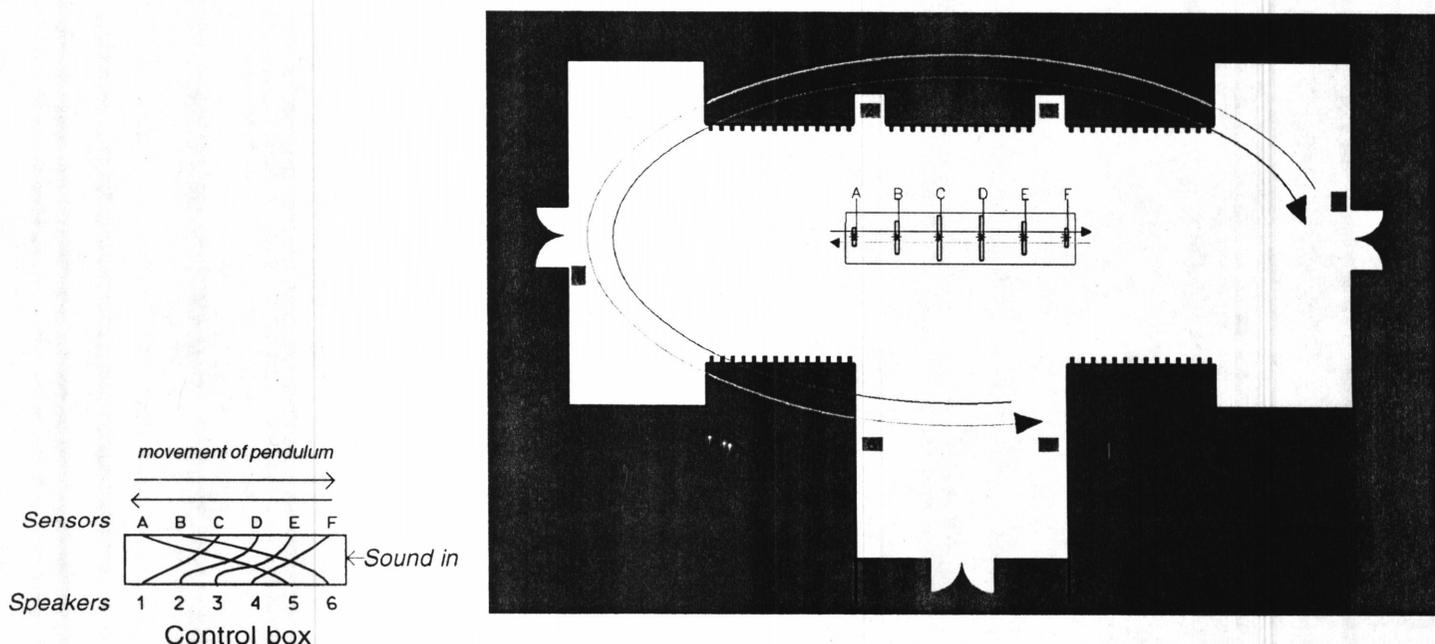
(Constantin Boundas, *The Deleuze Reader*, (New York, Columbia University Press, 1993), p. 2, replacing the word 'philosophy' with the word 'architecture'.)

"Any point of a rhizome can be connected to anything other, and must be."

-Gilles Deleuze, *The Deleuze Reader*, ed. Constantin Boundas, (New York, Columbia University Press, 1993), p. 29

The line between categories is the very thing that denies their absolute difference. While traditionally, the line between categories is thought of as the mark of separation (an infinitely thin line), it can also be thought of as the connection, the thing which is both, which suggests a thicker, less definite line. In the field of architecture, these thick lines border and connect with other fields and produce ambiguities which provide sources of becoming in architecture. Opposed to the structure of the tree which starts with a root and builds on itself logically (remains within its 'discipline'), there is the rhizome which has multiple potential connections and is a model for that which is within architecture that jumps outside or problematizes the boundaries of architecture. With the *sound pendulum*, the dynamic is not in the pendulum swing or in the sound source, but in the interference of the two as it remaps both realms. The tree structure describes objects whose parts synthesize into one (dialectic). The rhizome forms a multiplicity which always remains multiple. The *sound pendulum* cannot be simply internalized. It must be experienced, walked around, seen and heard.

The *sound pendulum* works with a stream of sound, fragments it, and then distributes it among six speakers arranged in an ellipse. The duration of the fragments as well as the location of sound among the speakers is controlled by the swing of the pendulum. Six sensors sit under the swing of the pendulum. Each sensor triggers sound in one of the speakers but only for the time that the pendulum is in close proximity to that sensor. The continuous, linear, visual movement of the pendulum is translated into a quantized, spatial, auditory movement. The rhythm of the original sound source is re-fragmented through the sound pendulum. The visual and auditory movements are at once directly related yet their experiential connection is made strange by their mediational differences. Relays in the control box click on and off as the pendulum moves in and out of the range of each sensor's sensitivity. This sound represents the presence of the rhizome, re-forming and connecting that which is typically apart.



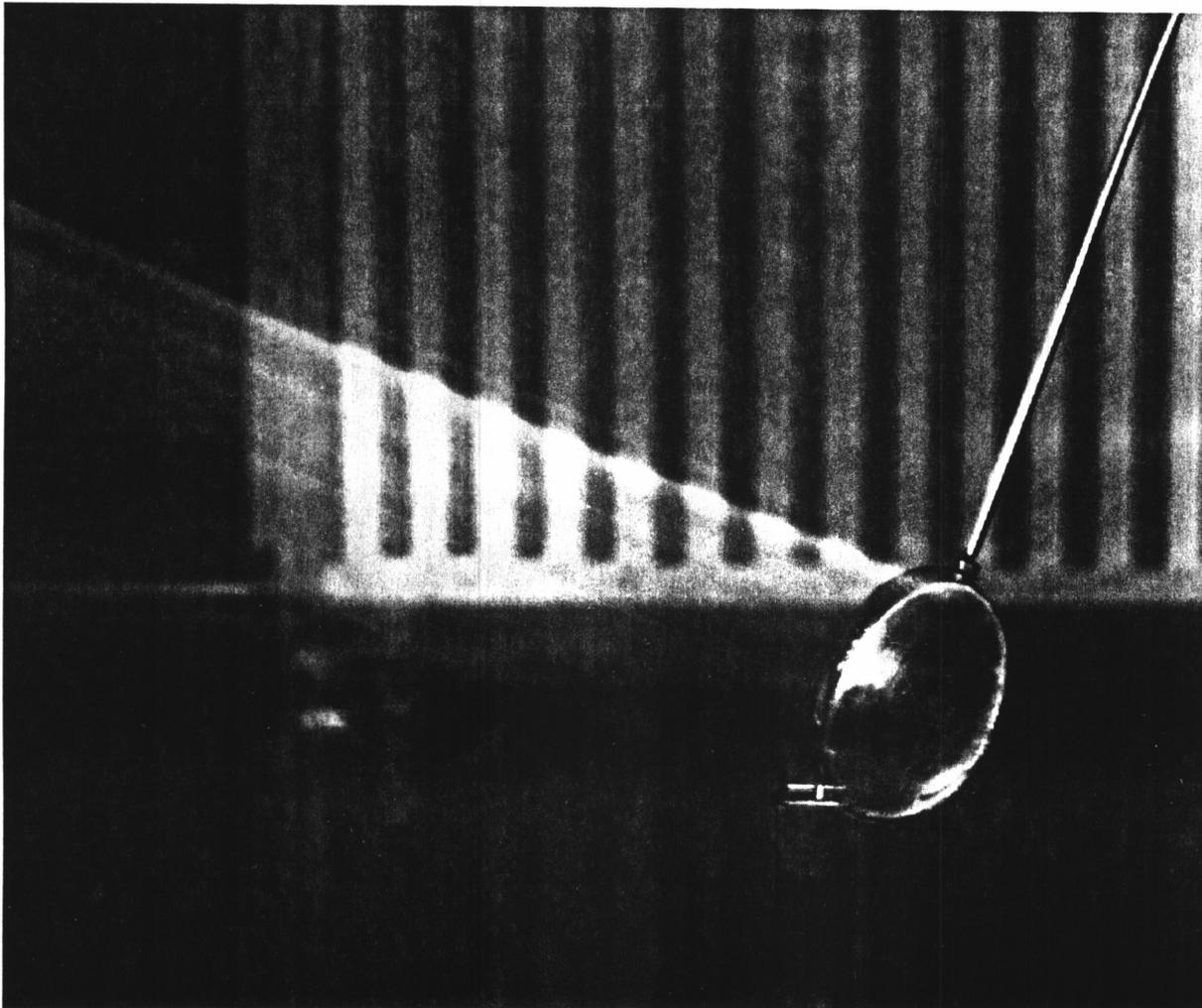


While both music and architecture consist of structure, music may be thought of as time that approaches space and architecture as space that approaches time. The sound pendulum cross-connects these two ideas.

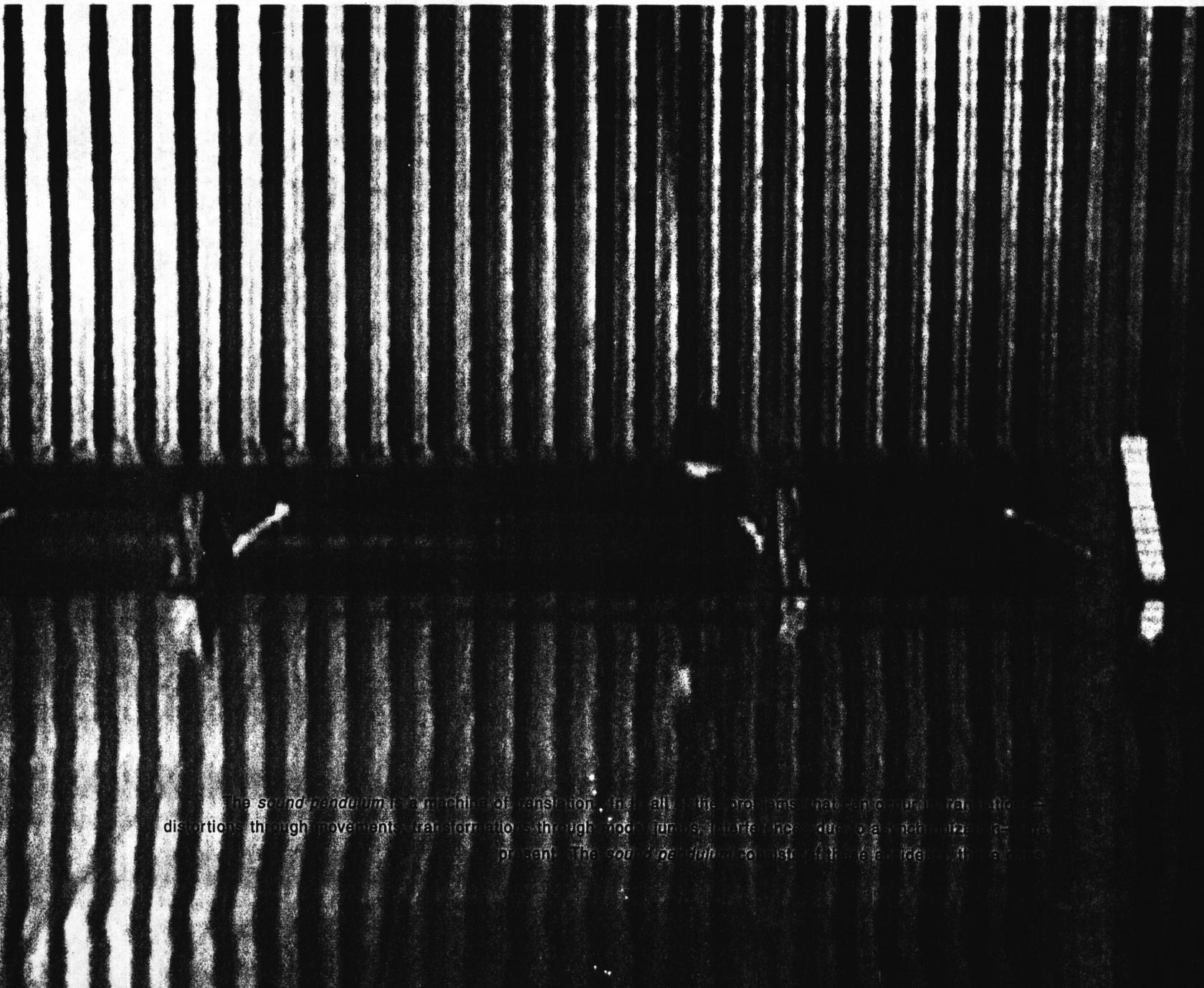
"Let us summarize the principle characteristics of a rhizome: unlike trees or their roots, the rhizome connects any point to any other point, and its traits are not necessarily linked to traits of the same nature; it brings into play very different regimes of signs, and even nonsign states."

Gilles Deleuze, *The Difference and Repetition*, (Cambridge, Mass.: Harvard University Press, 1994), p. 16.

The first *sound pendulum* performance took place on June 10, 1994. The sound sources consisted of a recording of T.S. Eliot reading 'The WasteLand' as well as recordings that were made in Europe during an architectural travel program the previous year. The European recordings consisted of bells, organ music, and other repetitive sounds. The periodic movement of Eliot's voice was interfered with by the dynamic movement of the pendulum swing, forming a new, sliding cadence, consisting sometimes of words and sometimes of words fragmented, forced into sound. The Eliot recording contained a high level of tape hiss, due to its age. Often pulses of noise accentuated and divided the sound of Eliot's voice.



"That is not what I meant at all. That is not it, at all." -T. S. Eliot, "The Love Song of J. Alfred Prufrock," *Collected Poems 1909-1962*, (New York: Harcourt Brace Jovanovich, Publishers, 1970), p. 6.



The *sound pendulum* is a machine of transition. The fall of its pendulum that, in general, represents distortion through movement, transformation through motion, is what the machine is designed to present. The *sound pendulum* consists of a large pendulum, the end of



s from Circular Apertur
tened and a short one leng
nces, by sonorous vibratio
is long, straight, and smol
ed, and brilliant. On sou

Fig. 128.



Fig. 129.



Fig. 130.



he becomes short, forked
ile the forked flame beo

"A downward stream of gas subjected to acoustic irradiation. The flowing veil of gas assumes a laminar pattern under the influence of sound. Eddy and wave formations also appear as turbulences."

-Hans Jenny, *Cymatics*, (Basel: Basilius Presse, 1974), p. 141.

"...the possibility of a difference, of a mutation, of a revolution in the propriety of symbolic systems."

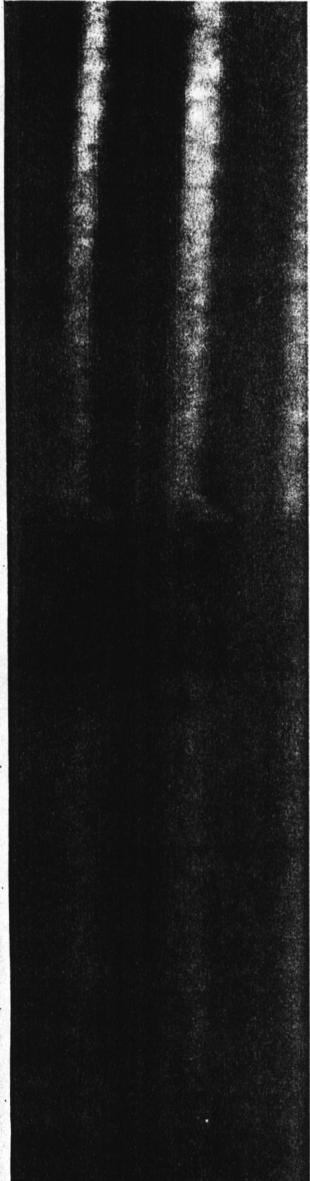
-Roland Barthes quoted in Hal Foster, "Postmodernism in Parallax," *October* 63, (Fall 1993), p. 16.

Ideas are always accessed through other ideas; things through other things. In science measurements, observations, and calculations are always achieved through ideas and devices which are not the object of study. The sound flame is a Nineteenth Century attempt to understand sound through its effect on flames.

Cymatics is the phenomenological study of waves. The visual effects of sound, magnetism, and other waves on gasses, liquids, and powders are studied. Here, the strangeness of the cross-connected media is made apparent and enjoyed. Like the *sound pendulum*, the sound flame and Cymatics have a rhizomatic logic which jumps between media.

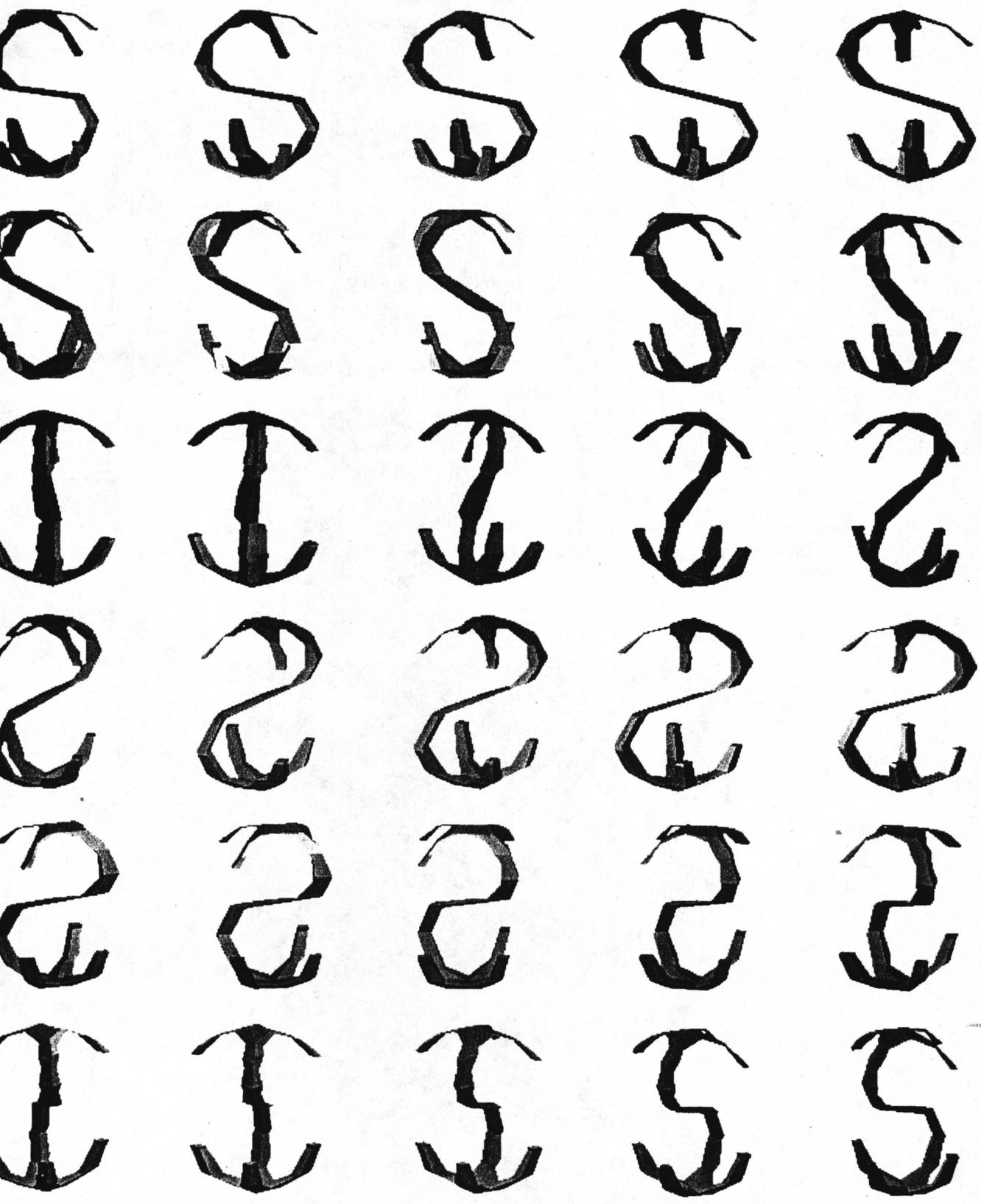
"It should be pointed out here that even metaphors are sensory-motor evasions, and furnish us with something to say when we no longer know what do to: they are specific schemata of an affective nature. Now this is what a cliché is. A cliché is a sensory-motor image of a thing. As Bergson says, we do not perceive the thing or image in its entirety, we always perceive less of it, we perceive only what we are interested in perceiving, or rather what it is in our interest to perceive, by virtue of our economic interests, ideological beliefs, and psychological demands. We therefore normally perceive only clichés. But if our sensory-motor schemata jam or break, then a different type of image can appear: a pure optical-sound image, the whole image without metaphor, brings out the thing in itself, literally, in its excess of horror or beauty..."

-Gilles Deleuze, *The Deleuze Reader*, ed. Constantin Boundas, (New York: Columbia University Press, 1993), p. 182; error op. cit.



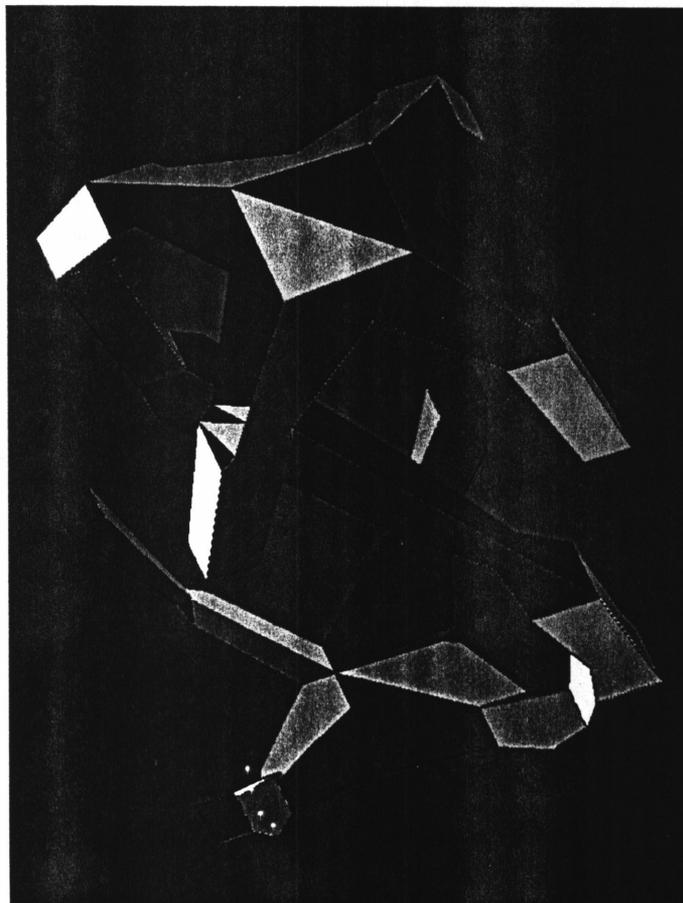
L e t t e r

Handwritten characters in a stylized, possibly cursive or calligraphic script, oriented vertically on the right side of the page.



Architects always work in 'other media.' When designing, architects use the tools of drawing, modeling (physical and virtual), calculating, and writing as part of their working environment. There is no working directly in the medium of architecture for there is no one medium central to architecture. While a building may be a common result of architectural work, few architects have the luxury of working with the building itself while it is being built, experimenting with different conditions. Instead, architects work in various media at different scales and 'forget' the difference between their working media and their intended media.

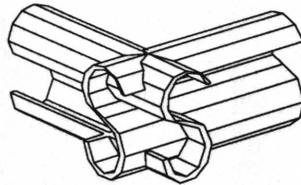
Buildings contain traces of working media— the flatness and reduction of a model, the ornament of a sketch, the horizontal logic of plan. Language, too, plays a role though it is often sublimated in the materiality of the process. The following projects expose the linguistic in their architectures, using the actual material forms of language— letters and, in addition, use a formal logic of language. Rather than the visual logics of plan, proportion, and symmetry, these pavilions use logics possible to propose with language but not with the eye. The computer allows an idea such as 'the common volume of two complex, overlapping volumes' (intersection) to be realized quickly. These forms cannot be foreseen visually, yet once they are achieved, they become provocative artifacts of a linguistic process. A cut in a volume, for example, is often 'read' as a window and is perceived within the visual history of windows. In the following projects, windows are not generated within a historic/visual framework, but a linguistic one, and this formative difference is evident. These cuts are initially perceived as windows, but their 'strangeness' sets up a dissonance, a vibration against conventional forms. These new forms are, therefore, conceptually irreducible to the visual.



The S-object

"We believe that we can slip as in a continuity from one sound to the next, from one thought to the next. In reality, we fall down and we don't even realize it. We live, but living means crossing through the world of relationships or representations. Yet, we never see ourselves in the act of crossing that world! And we never do anything but that!"

—John Cage, *For the Birds*, (Boston: Marion Boyars Publishers, 1981), p. 93.



The S-object at left is made by isolating the 'intersection' of two extruded S's

"Illumination or clarification is thus never a complete reduction of complexity in order to obtain an uncomplicated or unfolded planar surface transparency. On the contrary, in the first instance, it is the multiple complications in things which illuminate or clarify, redistributing what may be visible and what may be obscure."

—John Rajchman, *Unfolding Frankfurt*, (Berlin: Ernst & Sohn Verlag, 1991), pp. 49-50.

"Renouncing the nostalgia and the desire to coincide, it establishes its language in the void of this temporal difference."

—Paul de Man, *Critical Theory Since 1965*, ed. Hazard Adams and Leroy Searle, (Tallahassee: Florida State University Press, 1992), p. 198, referring to *allegory*.

"Narrative allegory explores the literal-letteral level of the language itself, in a horizontal investigation of the polysemous meanings simultaneously available in the words themselves— in etymologies and puns— and in the things the words name. ...In short, narrative allegory favors the material of the signifier over the meanings of the signified."

—Gregory Ulmer, "The object of Post-Criticism," *The Anti-Aesthetic*, ed. Hal Foster, (Seattle: Bay Press, 1983), p. 95.

S-pavilion

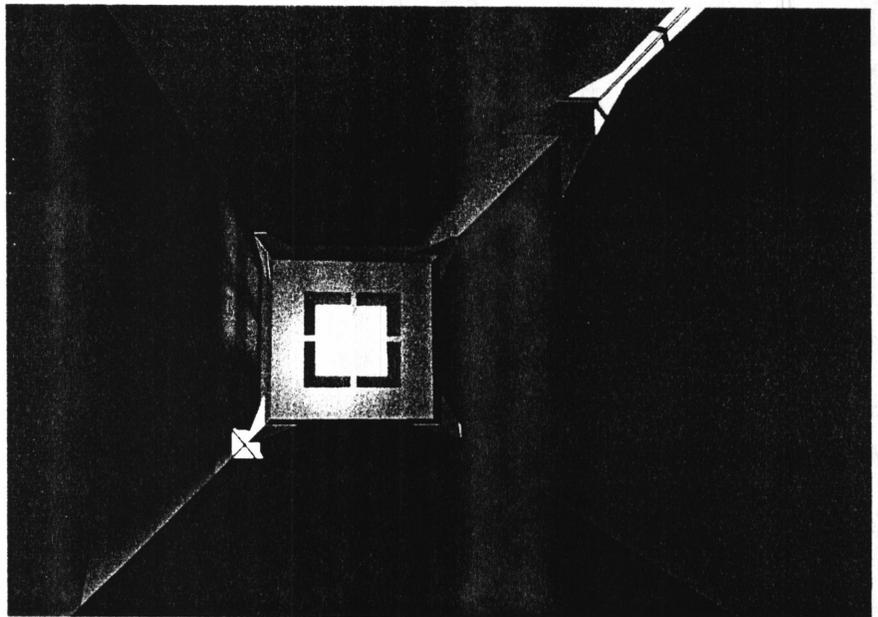
This is the anti-fascist pavilion. The letter combination SS was used by Nazi Germany to refer to the *Schutz Staffel*, the powerful and treacherous elite police. The particular double-S graphic used derived its form from the Runic S, the symbol of the sun. This S was repeated, forming a narrow channel between the two letters, suggesting the constricting, controlling, and limiting cultural condition present during this time. The elongated, straightened, repeated S-shape as well as the strident, alliterative sound of its referent became a symbol of the Nazi's mechanized, fascist ideology.

The *S-object* generated here is the result of an attempt to repeat the S in a complex manner— in a way that drops its fascist associations and produces a new experimental object.

The *S-object* contains two Ss which may be viewed only by moving around the object and which may not be viewed at the same time. It is a non-reductive object which promotes movement rather than constriction.

In the *S-Pavilion*, the *S-object* is subtracted from a simple 'architectural form'— a rectangular volume with a thickness.

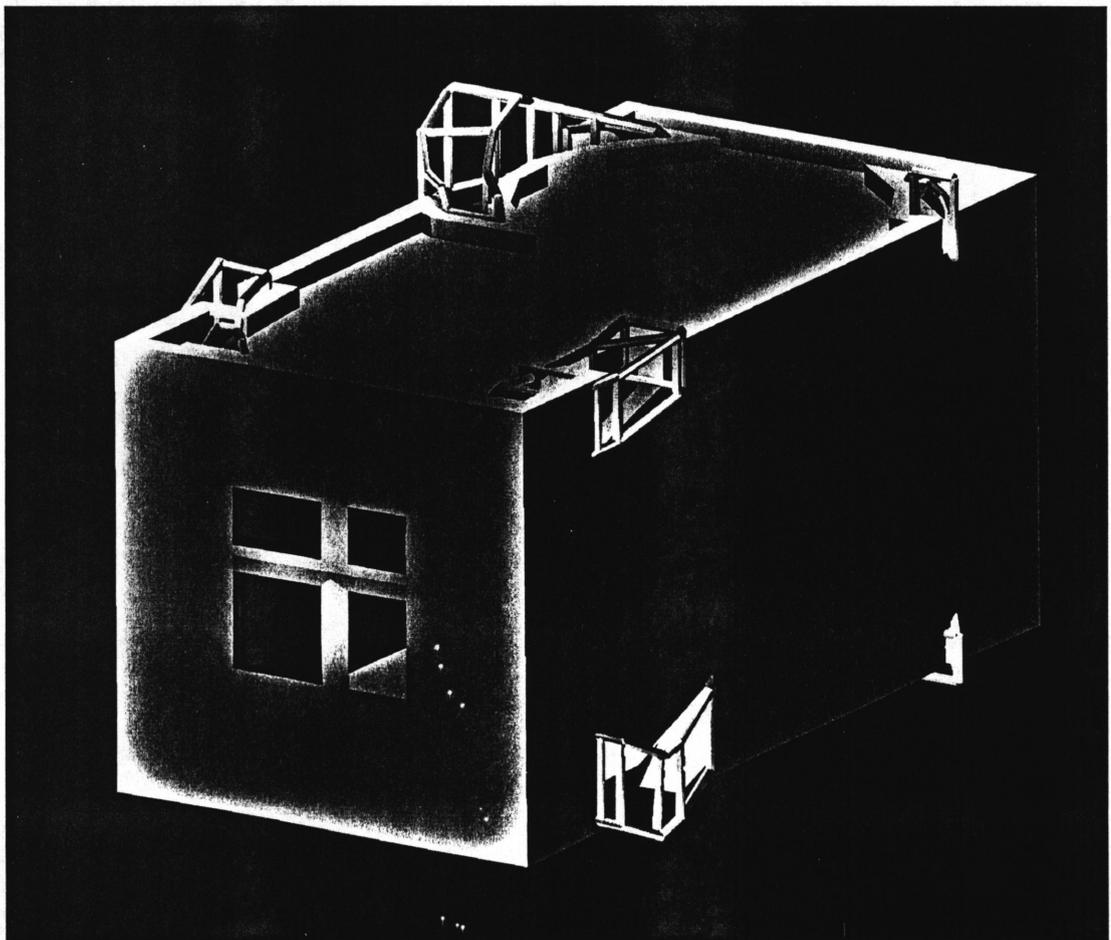
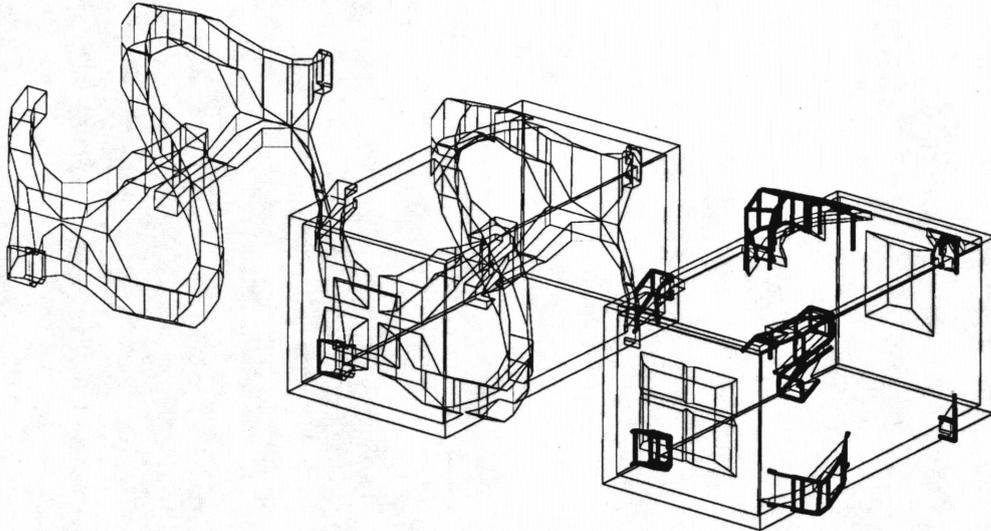
The *S-object* cuts holes in the end of the volume similar in appearance to the traditional 4-square window. The apparent 'rationality' of the 4-square has an 'irrational' consequence elsewhere in the volume. Apparently random cuts form multifaceted skylights and floorlights as well as a panel-like scoop taken out of the rear wall.

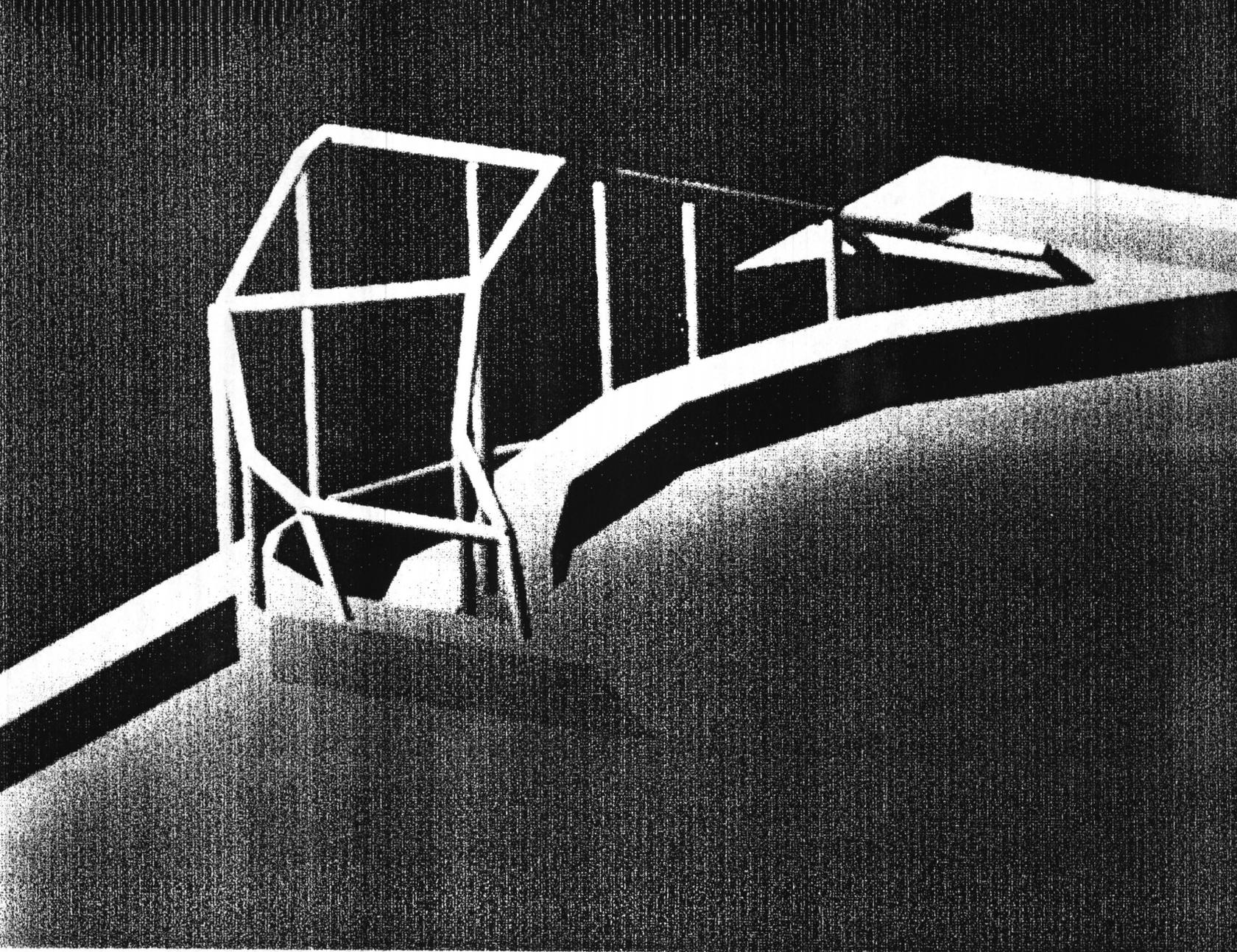


"Perplications are those 'cross-foldings' that introduce a creative distantiation into the midst of things. Such distance is the holding apart— what Deleuze calls the 'disparation' of a space that opens in it the chance of a 'complex' repetition (not restricted to the imitation of a pre-given model, origin, or end) or a free difference or divergence (not subordinated to fixed analogies or categorical identities.)"

"Individuals desire their own repression when their libidos are cathected to powerful and destructive emotional sources or symbols, or demagogic leaders, rather than to political groups, ideologies, and values which promote their interests."

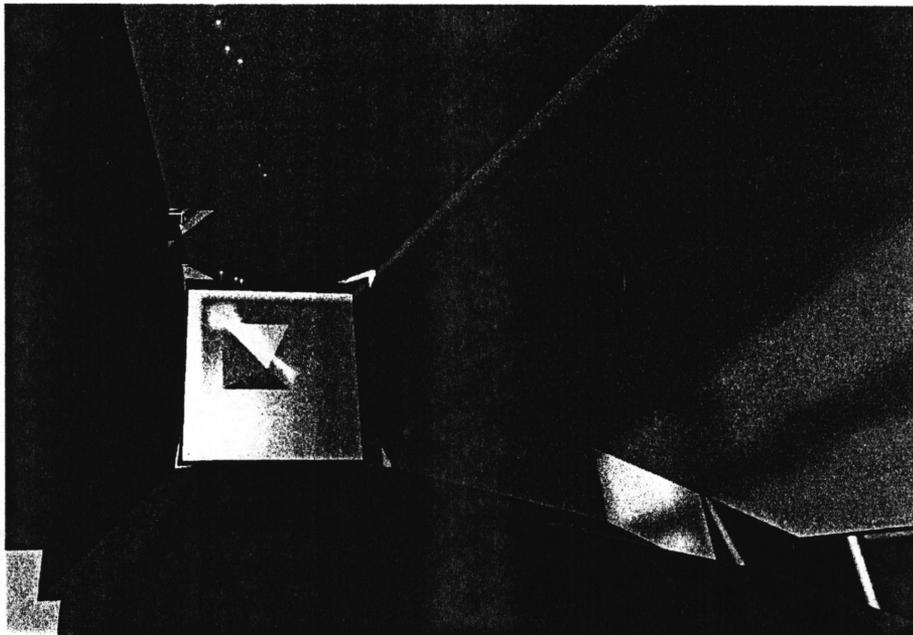
-Douglas Kellner and Stephen Best, *Postmodern Theory*, (New York, The Guilford Press, 1991), p. 94.





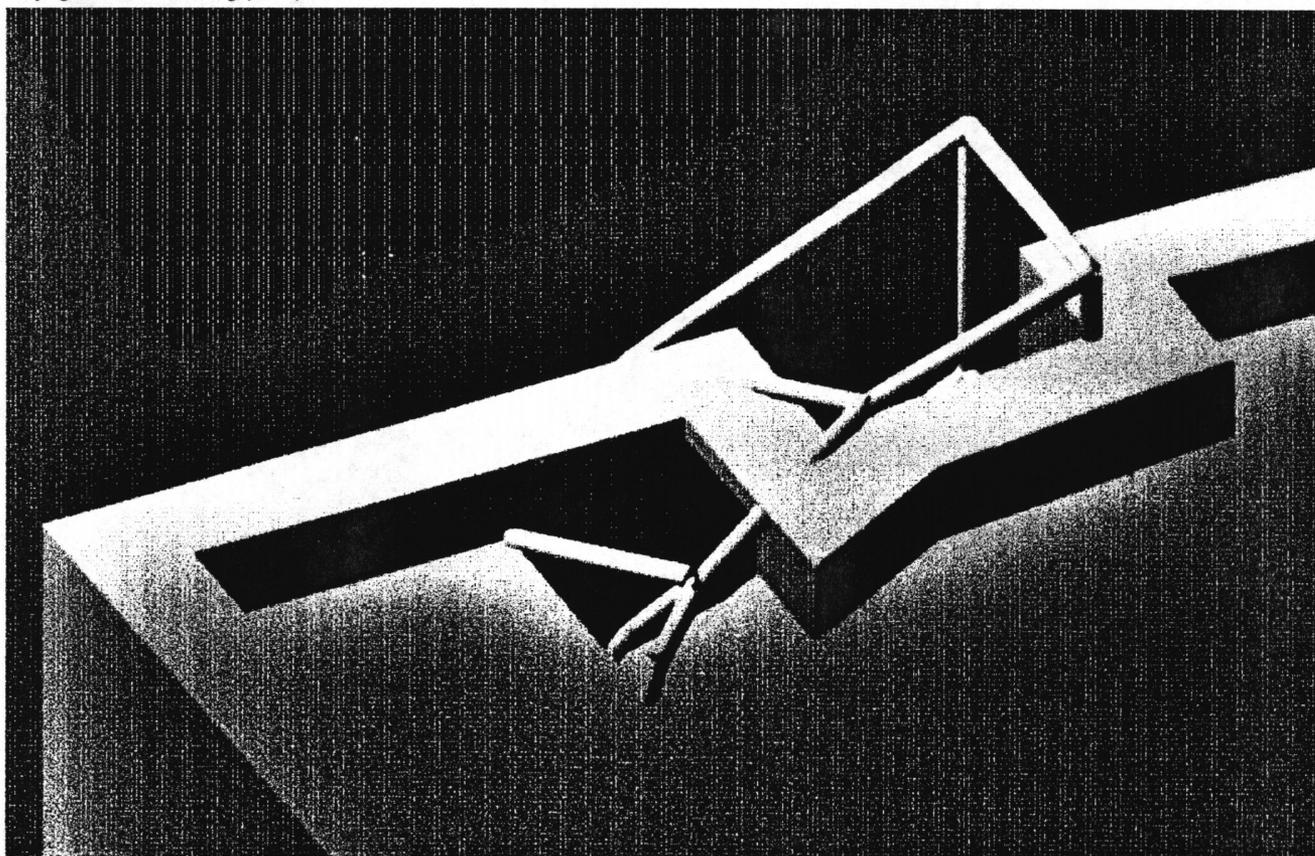
Skylight

This window is not a threshold between inside and outside, but is rather a marker of ambiguity between the visible and invisible, rational and irrational, language and architecture. Language both allows us to speak, to mean, and limits our thought by compacting our meanings into words. Architectural forms have the same dilemma. A form such as a column has its meanings flattened because it is re-cognized rather than perceived. Here, a form of language (S-object) has eroded an 'architectural' volume, revealing the conventions of window and connecting them in a new way. The S-object doubles and problematizes (over-dimensionalizes) the threshold, which offers us freedom and territorializes and colonizes us by totalizing our thought— the



'Panel' cut out of rear wall

Skylight overreaching parapet

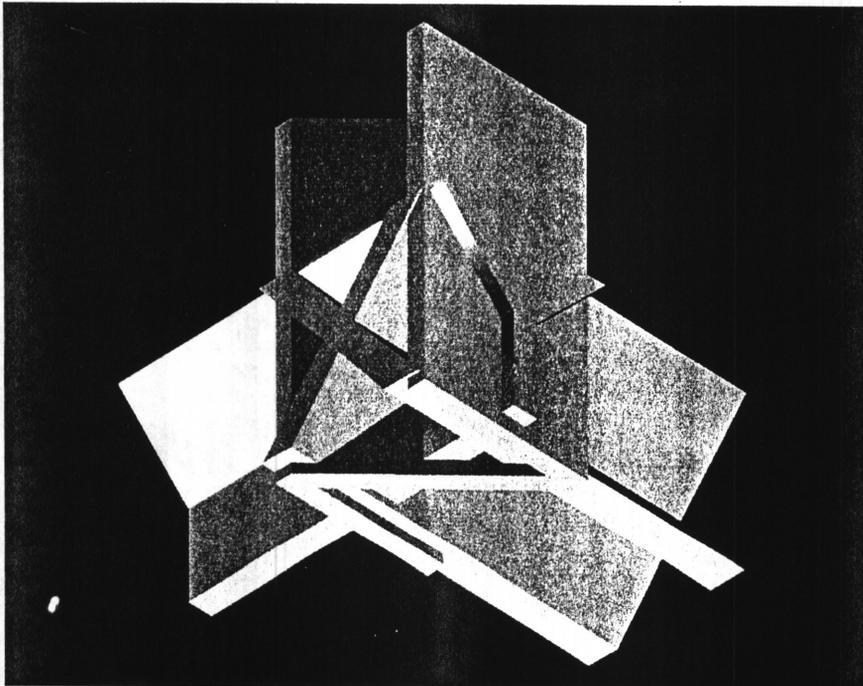


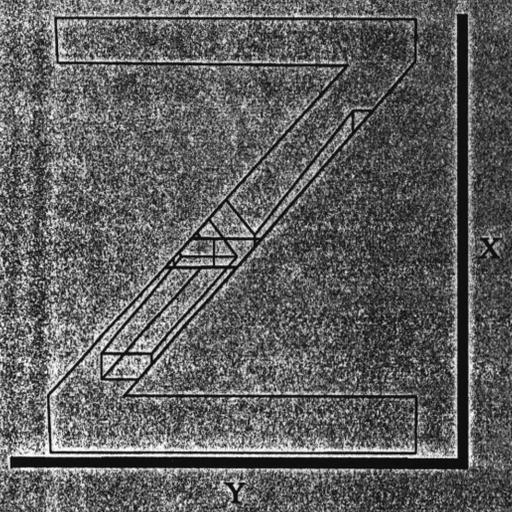
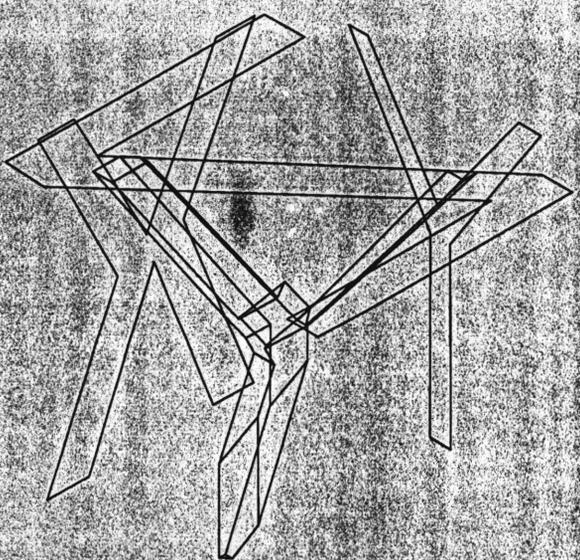
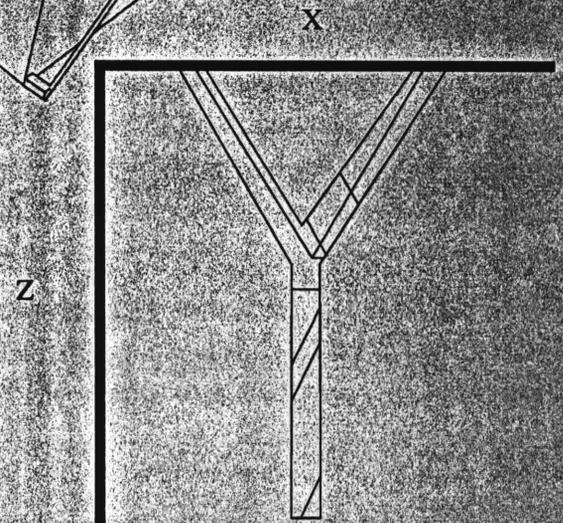
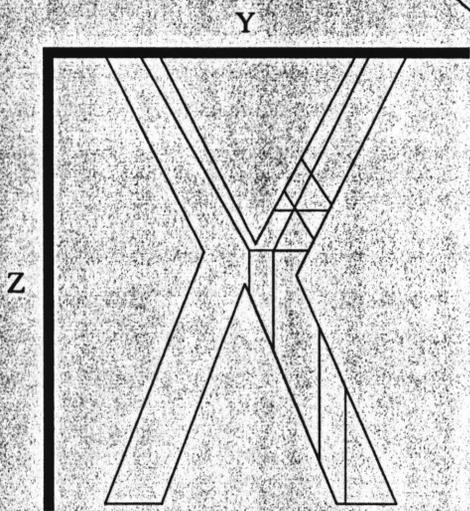
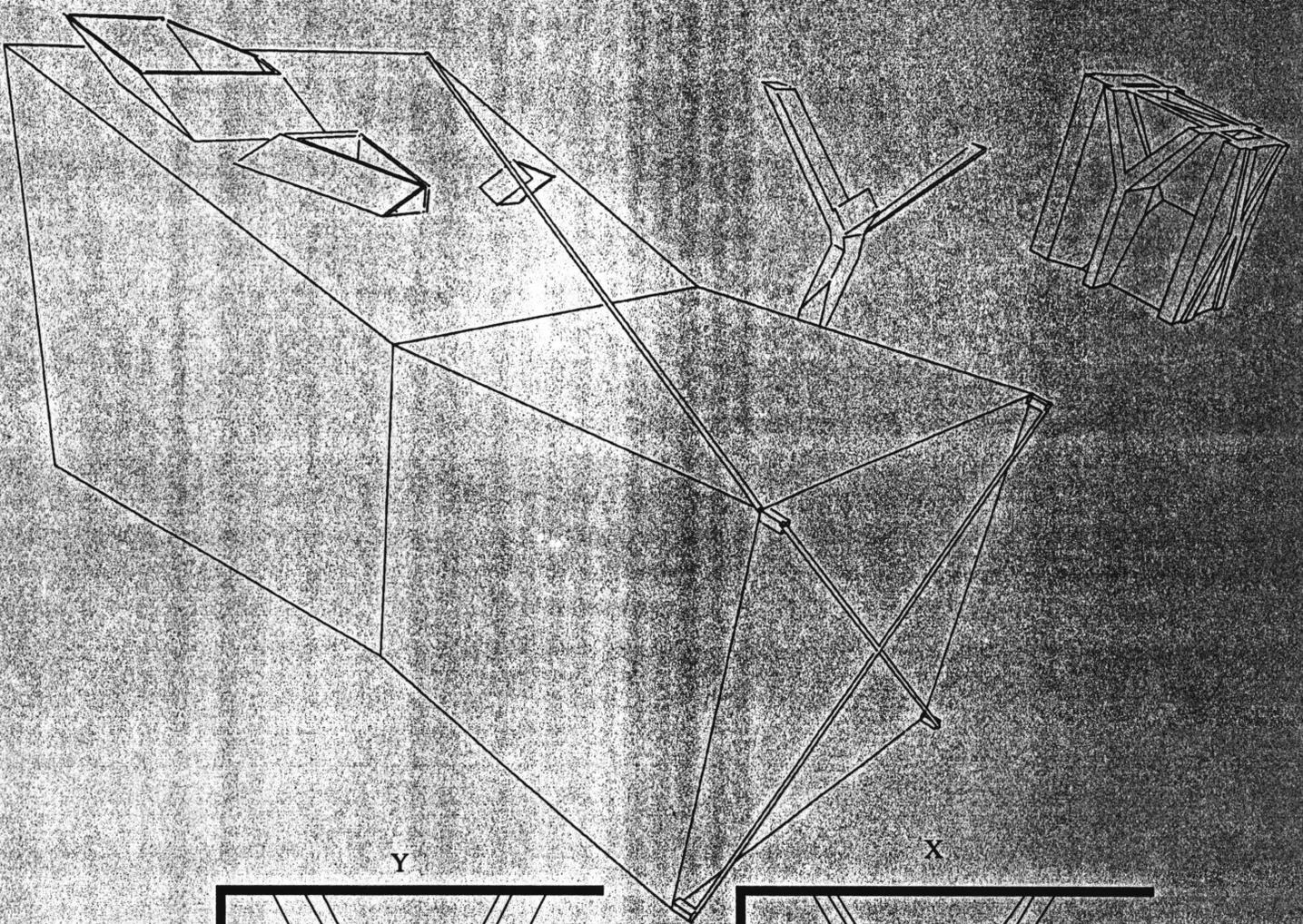
XYZ-Pavilion

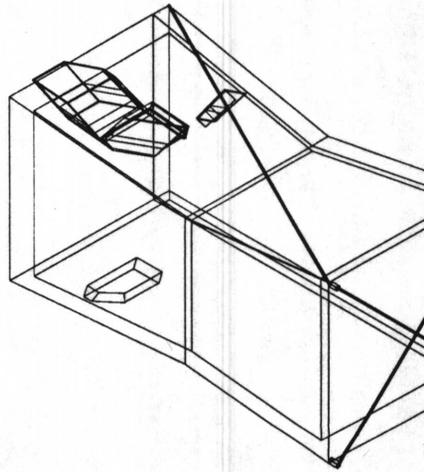
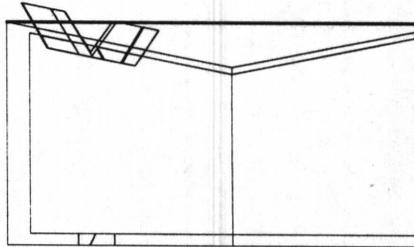
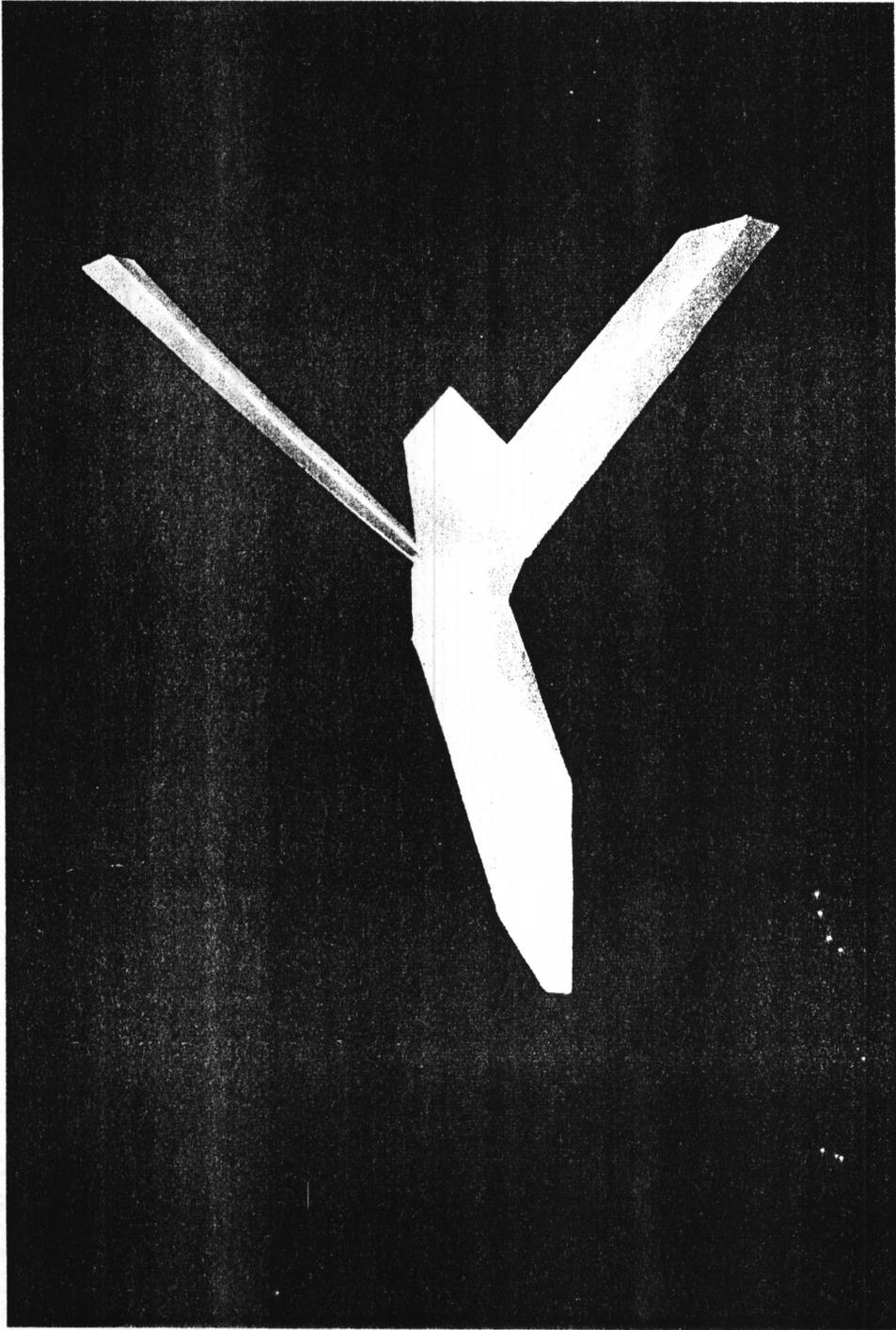
The *XYZ pavilion* is an engineering building for a cable television company. It re-routes signals received from satellite and rebroadcasts them through a cable. While the building is the origin of cable signals, it is only a relative origin, an origin without origin.

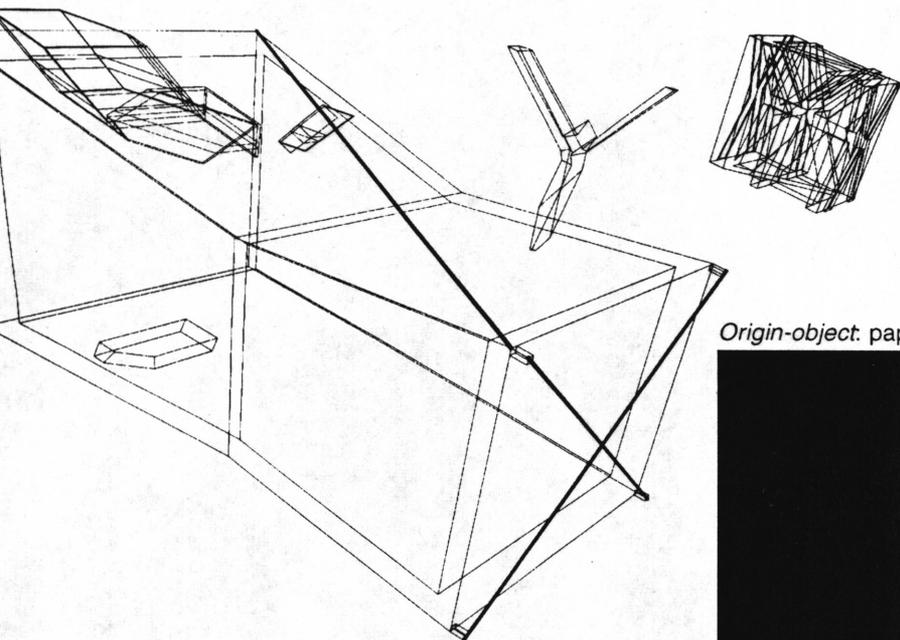
In a similar manner the Cartesian grid is an origin without origin. It is a convention, one system out of many possible systems which has proven to be extremely useful to the sciences. Its power originates in its use, not in its necessity.

The letters of the Cartesian grid X, Y, and Z are each extruded along their respective axes. The origin is defined as 'the intersection of the coordinate axes.' The *origin-object* is the intersection of the three extruded-letter axes. The *origin-object* is then subtracted from a box which has been slightly deformed forming skylights and floorlights. The subtraction of the *origin-object* cuts holes in the floor which then allows the satellite signals to enter, become transformed, and then re-broadcast.

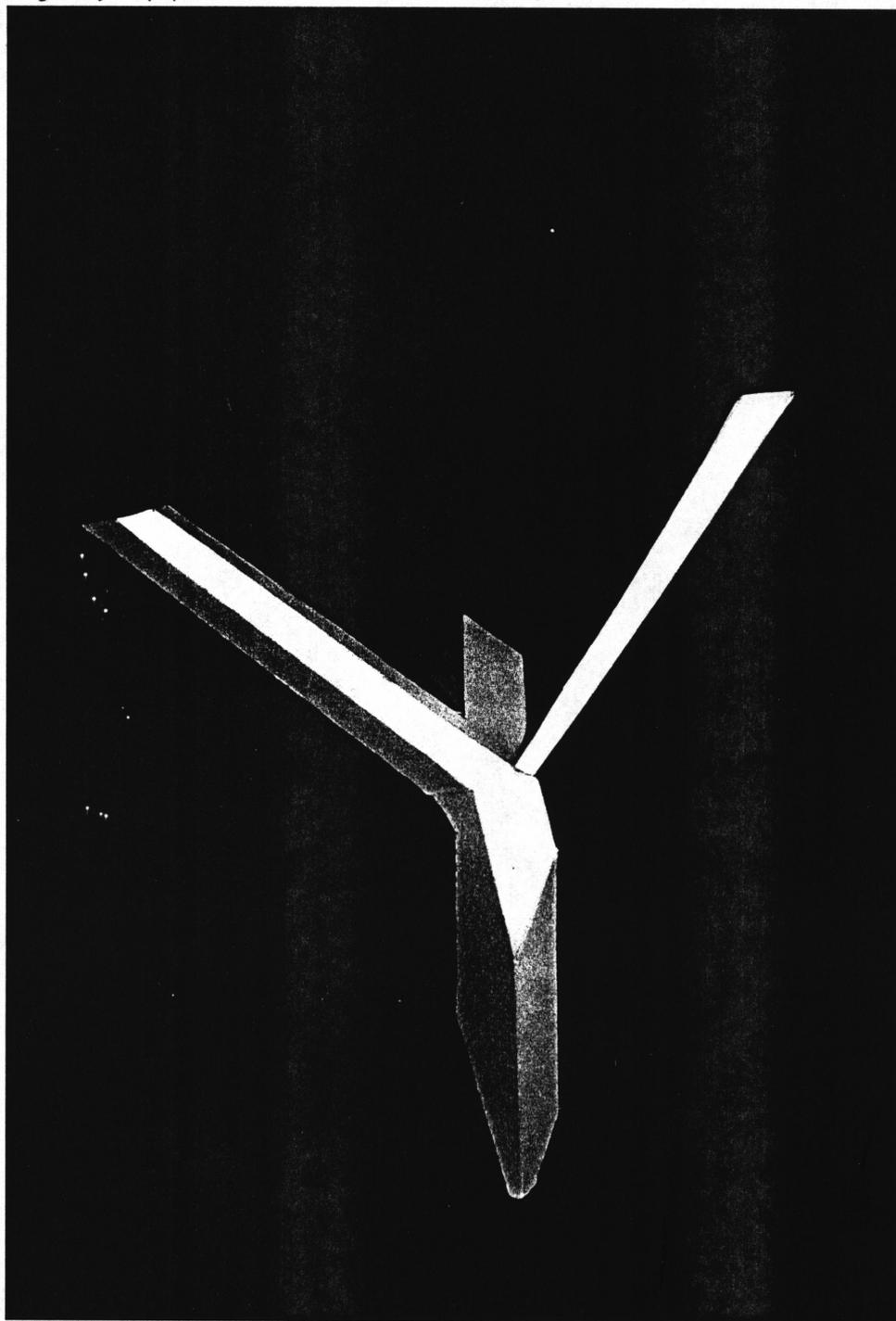
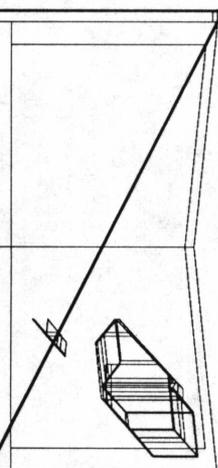
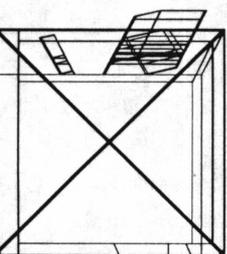








Origin-object: paper model



"In this new 'intellectual art' we produce simultaneously theory, critical combat, and pleasure; we subject the objects of knowledge and discussion— as in any art— no longer to an instance of truth, but to a consideration of effects."

Roland Barthes, *Roland Barthes*, trans. Richard Howard (Hill & Wang: New York, 1977), p. 90

T a b u l a R a s a T a b l e



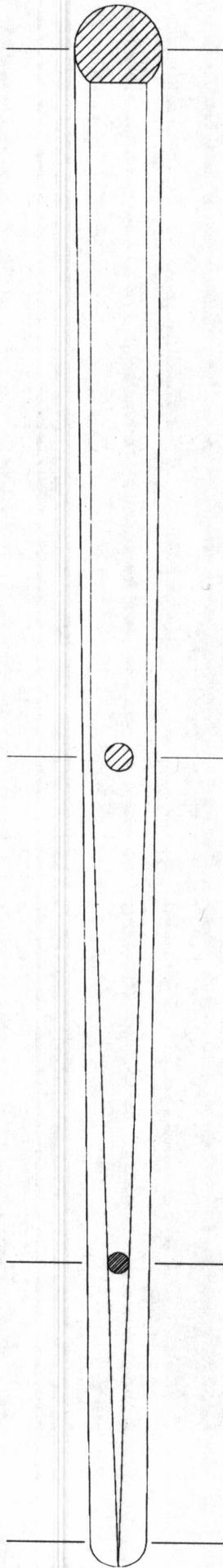
"Forms, like modes of folding disappear."

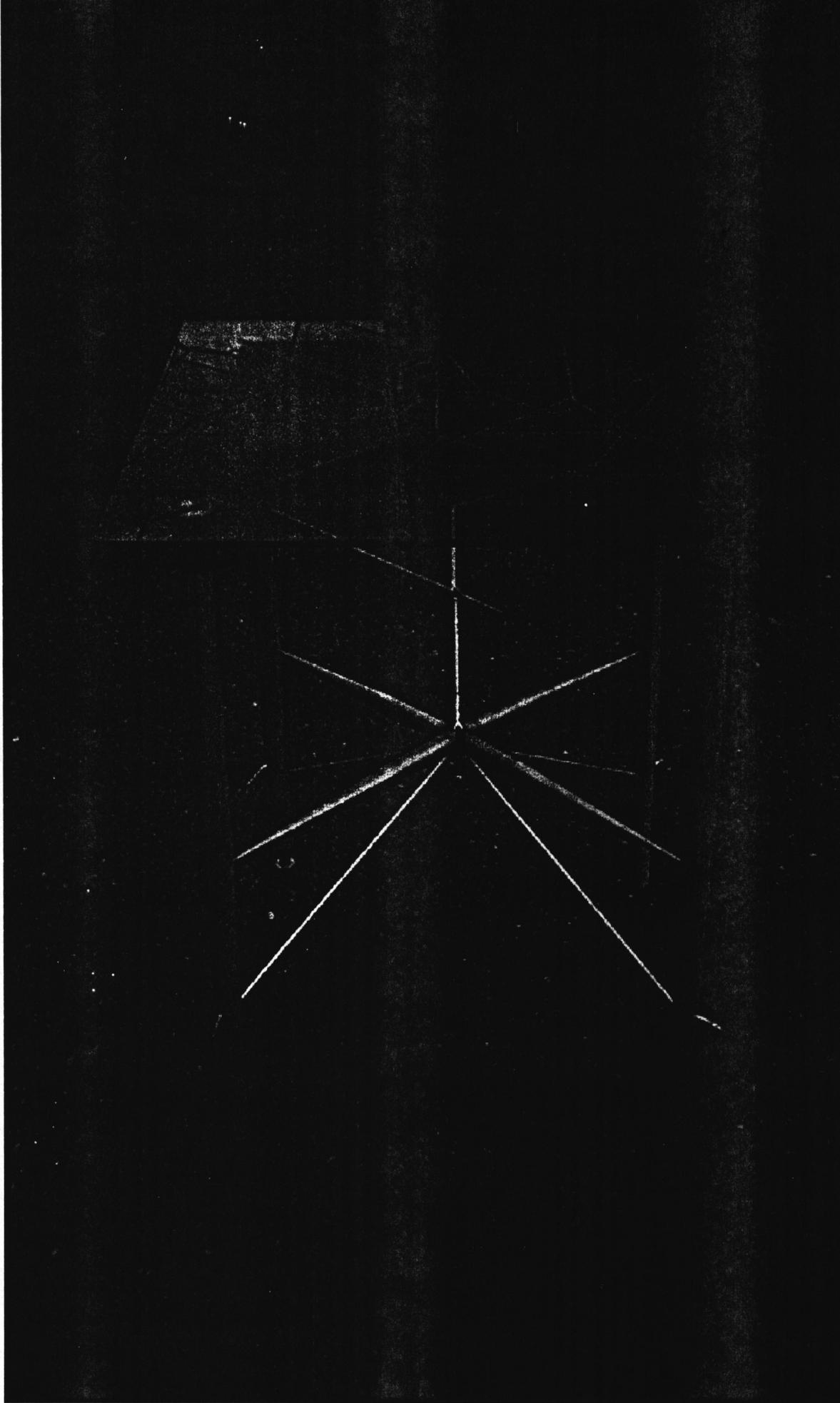
"The aim of the game is not to discover the eternal or the universal, but to find the conditions under which something new may be created."

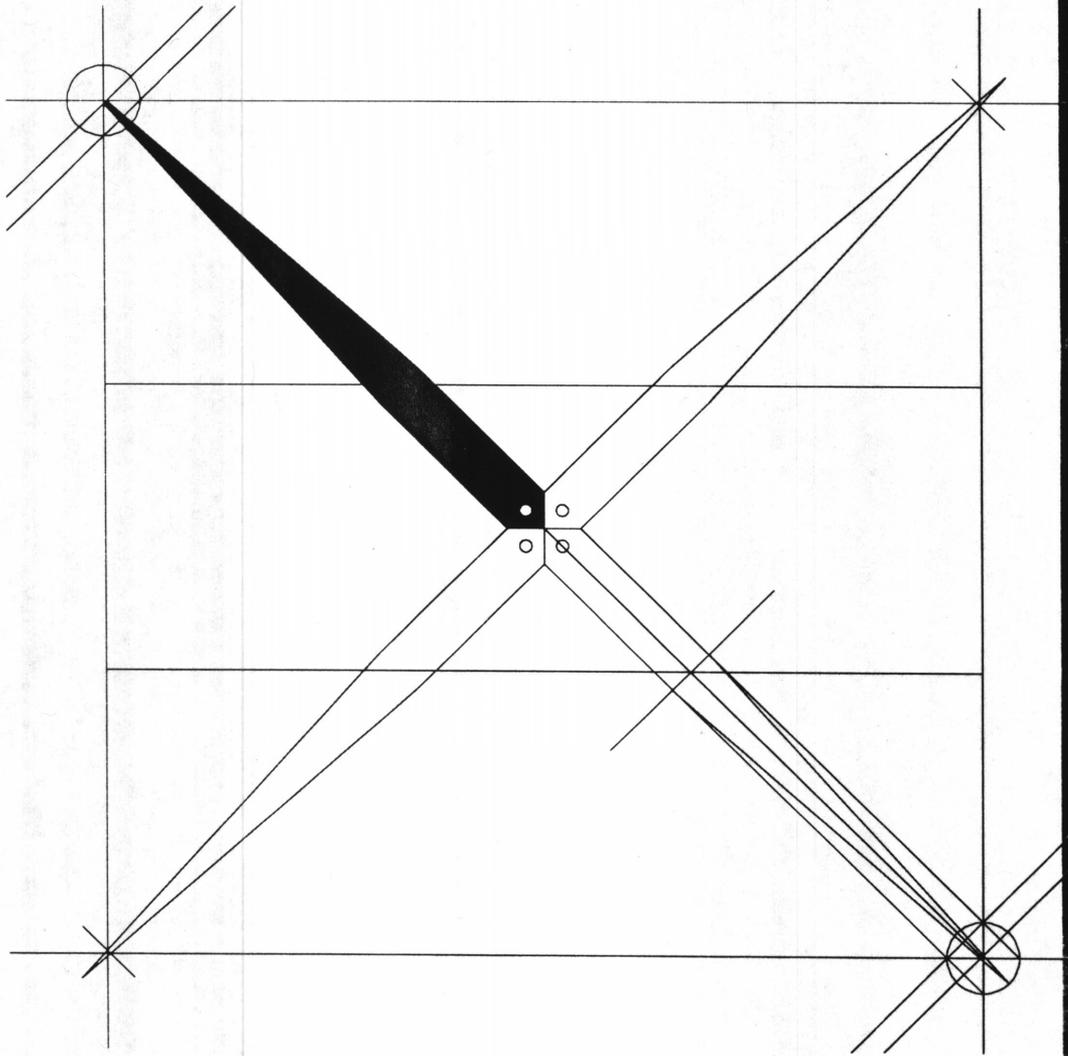
A table may be thought of as a kind of Tabula Rasa. It is the neutral ground on which to begin a project, a flow of ideas. In this way it is a useful fiction—the often desired yet never achieved 'uninfected' starting point. Geometry and the idea of planarity are such starting points for the architect. They are often invoked as neutral ground for the progression of an architectural idea. Yet, while a neutral mental condition is an impossibility, so is the geometric 'plane'—for it is always already substantiated by material. The plane may be implied but never reached.

The Tabula Rasa Table begins with this double desire for mental/material neutrality, then exposes its impossibility. The form and material of the table refer to various traditional table types—the square wooden table and the modern glass table. Here the 'traditional' qualities end. The glass is etched differently on each side, reinforcing its depth and materiality. A rotating bar increases the tension of cables which both stabilize and threaten the wooden legs.

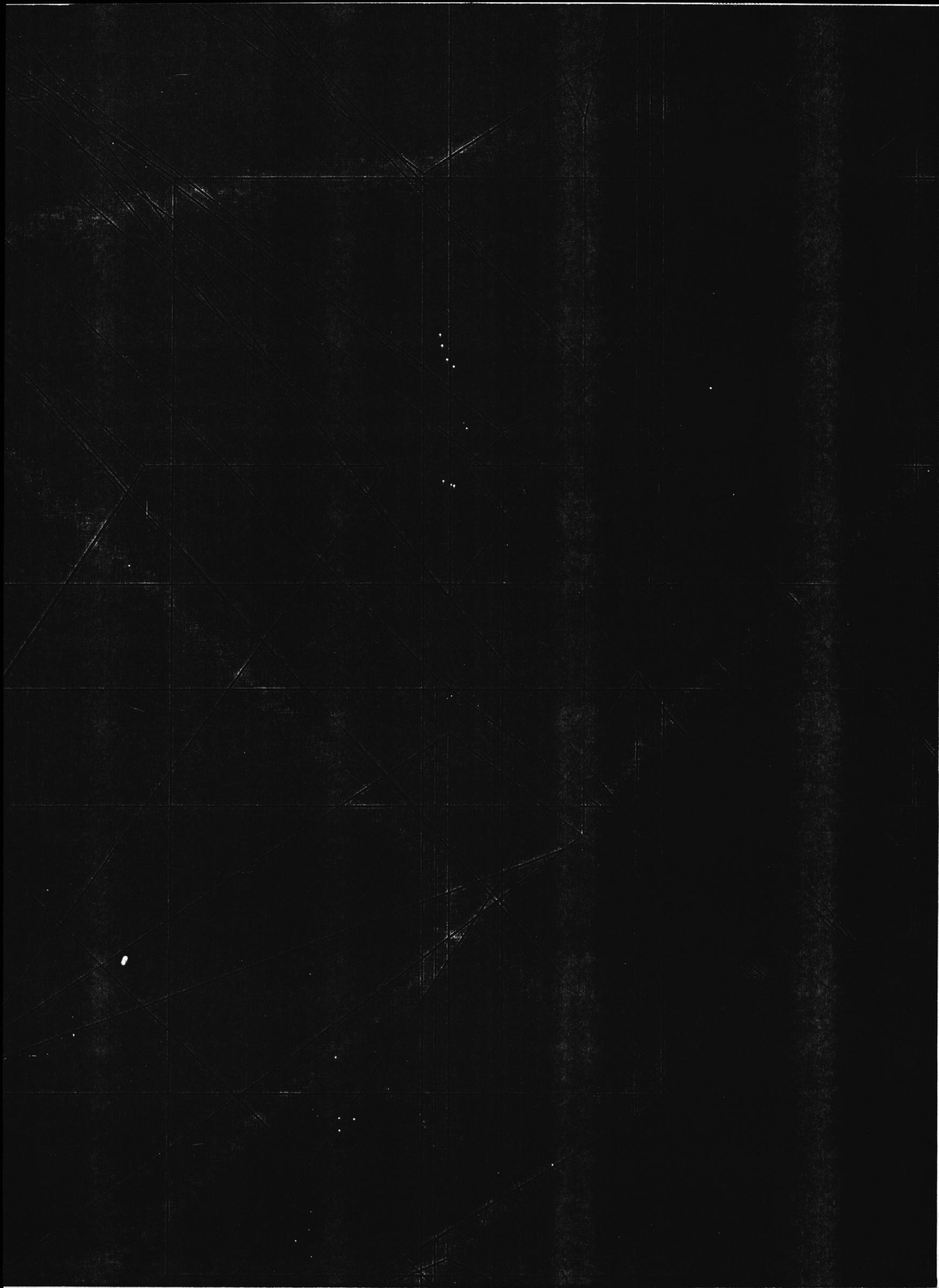
While the table's stability is a temporary fixity within a structural continuum, both the neutral starting point as well as the architect's 'plane' are imaginary fixities, biased towards our cultural pre-dispositions.







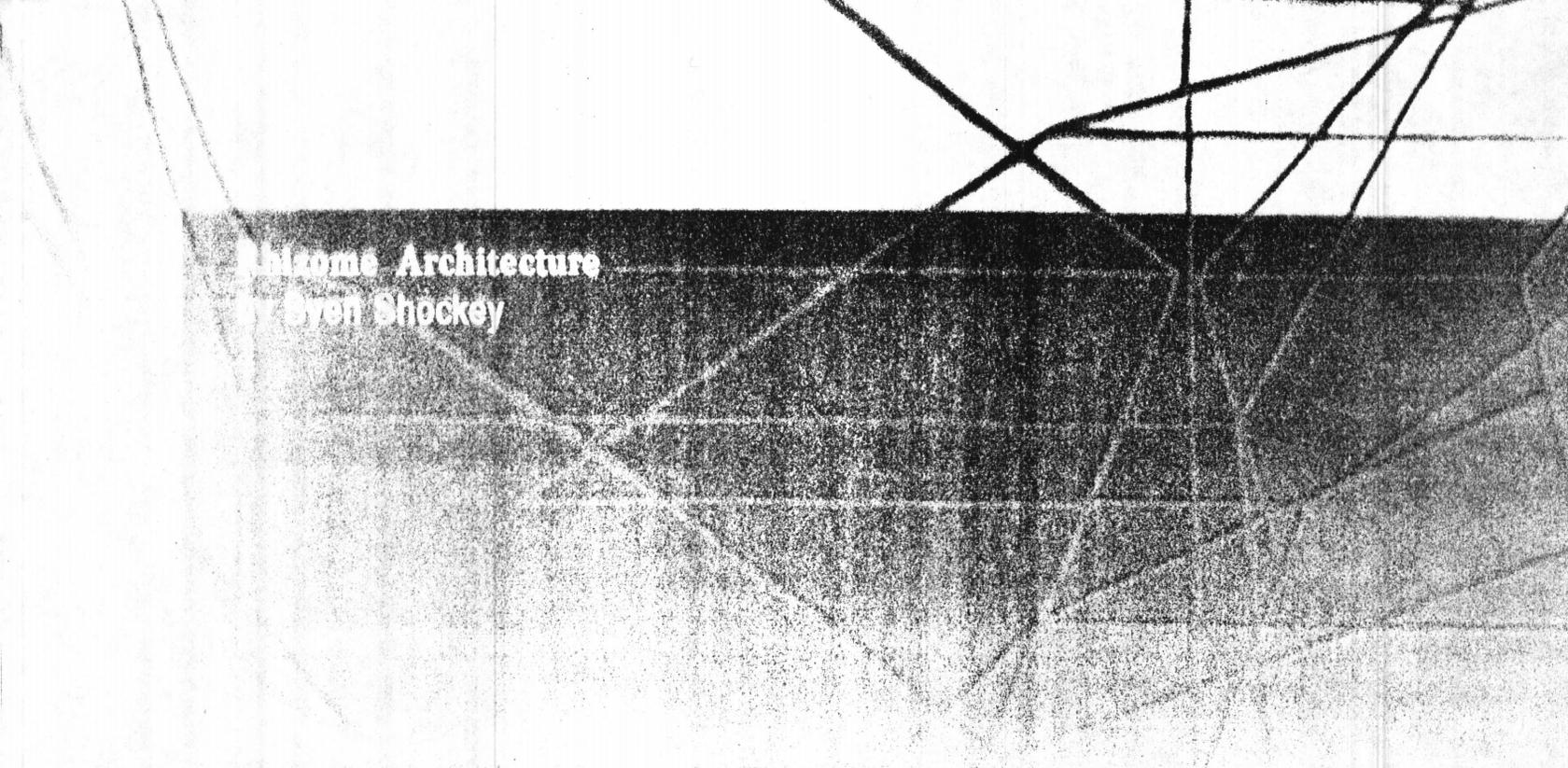
"Gently tip the assemblage, making it pass over to the side of the plane of consistency. It is only there that the body without organs reveals itself for what it is: connection of points, conjunction of flows, continuum of intensities." *Deleuze and Guattari, A Thousand Plateaus, Minneapolis, University of Minnesota Press*











Rhizome Architecture
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