A SENSE OF PLACE

by

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ABSTRACT

The thesis argues that a sense of place is one of the most fundamentally important quality of architecture and cities and attempts to show that legibility and latency are the aspects of the environment which contribute most to creating sense of place. Further it discusses various design tools which can contribute to the creation of legibility and latency.

Thesis supervisor: Maurice Smith
Title: Professor of Architecture.

Intro	Design criteria	Descriptions of form	Methods
What is sense of place?	How to evaluate?	How to talk about it?	How to build it?
Legibility and latency	Contrast Continuity Range Behavioral support Hierarchy Human scale Latency	Associative Built Spatial Reciprocal Form types	Fields Frameworks Partial definition Use form Use dimensions Additive form Units of build Plate shift Slack Spatial connections Reciprocal Systems integration Behavior of materials

The format of this thesis divides the points of discussion into five parts.

I. Introduction

II. Design criteria

III. Terminology of form description

IV. Methods

V. Case study

INTRODUCTION

Many contemporary critics have chosen to view architecture as being split into two diametrically opposed groups: formalists and behaviorists. The formalists, by and large priding themselves on urbanity and sophistication loath the "populist" undiscipline of the behaviorist, while the behaviorists, whose trump cart tends to be social awareness, are exasperated by the inhuman, "ars gratia artis" tendency of the formalists.

If there is any endeavor which must struggle to be inclusive and broadbased, surely it must be architecutre. As the platform of work and leisure, as the field of social and solitary behavior, as the environment of the mind and the inspiration to think beyond ourselves, architecture should be both useful and beautiful, in the broadest sense of both those concepts.

Young designers everywhere cry out for some starting point, some guidance, something to imbue their work with meaning beyond its mere existence as a structure.

This thesis discusses a method which attempts to locate itself

at a position apart from the two extremist views outlines above, which seeks to find meaning in the confluence of use and form and which finds meaning in the objectness of built environments, their use in our daily lives and in the historical associations which have contributed to their development.

WHATS IMPORTANT?

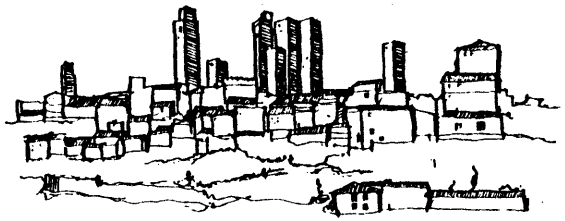
By what criteria do we judge architecture?

Everyone will have his or her own answer to this question, some will emphasize suitability, others physical attractiveness, still others will value the cultural message above other aspects.

All of these are certainly valid, few forms of endeavor have so broad a range of considerations to encompass as architecture does.

Inarguably, though, there is a certain aspect of buildings and palces which we can identify as "sense of place". Difficult to define precisely, perhaps even more difficult to specifically "design", it is still a pervading essence which most people can agree is present or not present in a place.

We can think of it as the "humanness" of the place, its sense of livliness or merely the extent to which it is memorable to us, whole and alive. Christopher Alexander, in his The Timeless Way uses these latter terms to describe places which possess this quality.



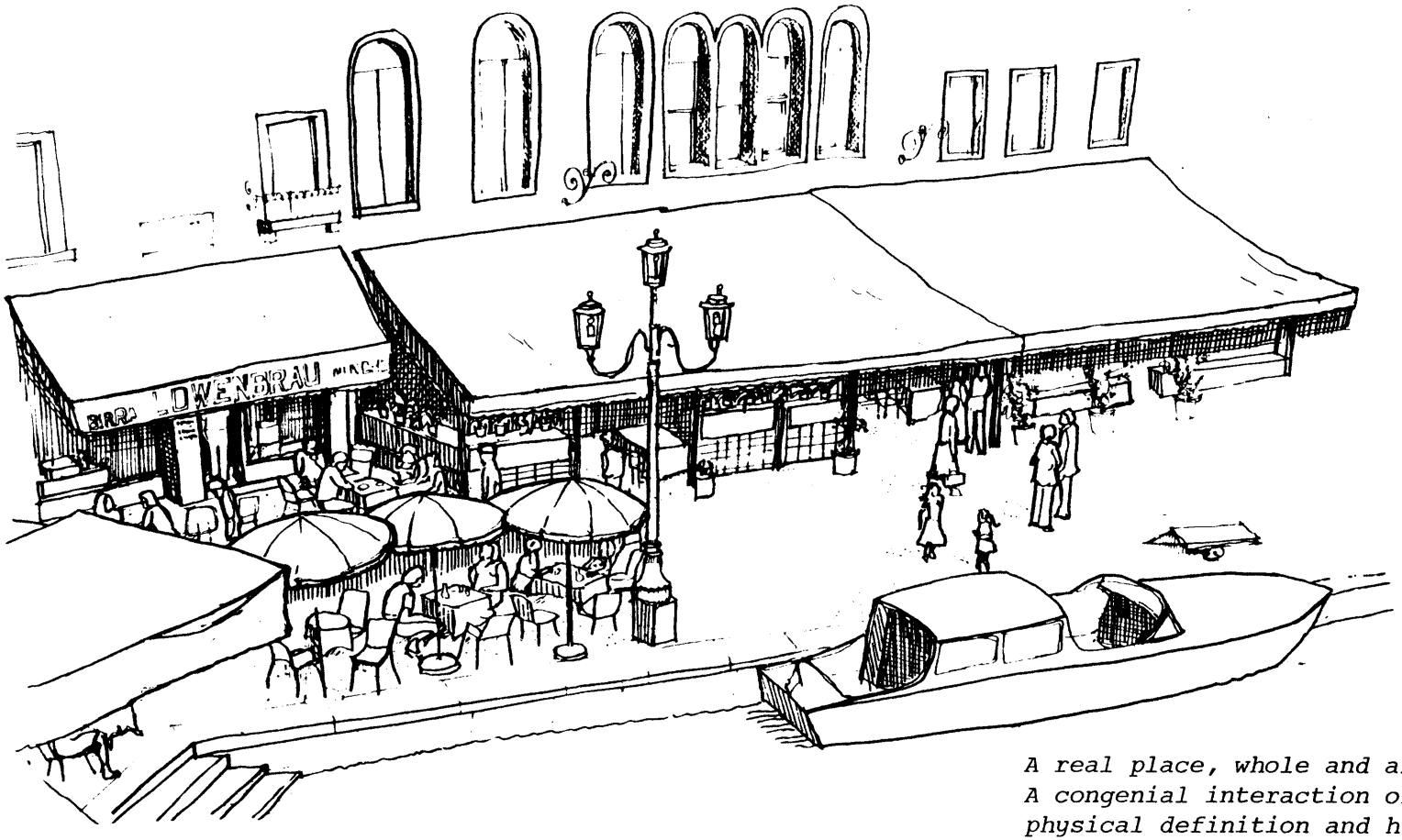
Sense of place is the central theme of this thesis, a vocabulary for thinking about it and a method which can contribute toward its creation are the two pieces of the puzzle which are attempted here.

Throughout this discussion the term sense of place will be used as general description of the quality of places which makes them seem real and alive to us: human, inhabitable, enduring and memorable. The contention is that this quality is common to places we like and return to again and again.

To a great extent "alive" relates to layeredness in buildings or urban places, what we might think of as the ever changing and growing collage which is our environment. Cities are rich and and exciting places to be in because there are a number of overlapping space claims, activities and definitions occuring simultaneously. At a certain point on a street in Pari s, it might be possible to stop and see a flowerseller, a street singer, a sidewalk cafe, the entrance to a small hotel, a book shop, college students on their way to class, ancient concierges leaning out of windows and so on.

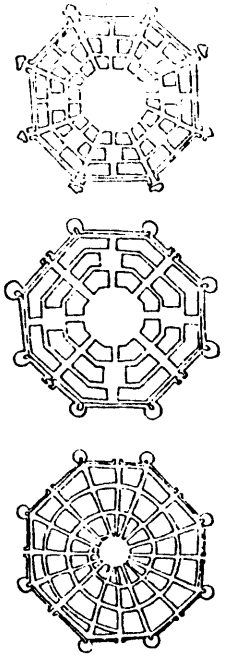
By contrast, one might go down to the Fanueil Hall markets on a Saturday and see two activities: people buying things and people

. . .



A real place, whole and alive. A congenial interaction of physical definition and human activity bearing the imprint of daily use.

watching people buy things. For all its excitement and color the markets at Fanueil Hall are one dimensional: mere congestion. They are a Disneyland version of a truly urban place.



In his latest work, Kevin Lynch suggests that the task of making a normative theory of environments is doomed to futility if it continuies to deal in a method of ideal prototypes: form solutions or ideal arrangements. Indeed, he believes that the job is not in general one of maximizing any particular aspect. For instance, although access is desirable in a high degree, no one would want to live in a city where access was infinite: no more privacy.

Instead, Lynch suggests that the discussion be based on a set of performance dimensions: reference continuums of key factors. They include: access, fit, control, adaptability, legibility. (Kevin Lynch, unpublished lecture notes, spring, 1977). Thus, there is no "ideal" amount of access. The present discussion will be confined to adaptability and legibility, which it is hoped will be shown to be primary concepts in the design of buildings.

ADAPTABILTIY

Adaptability is defined as the future cost of adapting a structure or site to a different use. It includes manipulability, reversibility and resilience. A major part of the concept is latency: the as yet unused capability for variation.

There are two fundamental approaces:

1. The throwaway approach. Dispensible and replaceable.

2. A differentiation of spatial elements according to their life cycle of use: discriminating patterns of space and use which are general and long term from those which are local and short term.

LEGIBILITY

Legibility is defined as "The degree to which people can clearly identify the ~~elemths~~ ELEMENTS of a settlement, connect them in a coherent spatial and temporal structure, and link elements and structure to their concepts and feelings about other aspects of their lives. The quality cannot be analysed except as an interaction between person and place." (Lynch, unpublished lecture notes, spring 1977).

The simplest form of legibility is identity, the simplest form of structure is orientation: a higher level is congruence of spatital and non spatial structures. Congruence is allied to transparency (the visibility of spatial and social structures). At a deeper level is meaning.

"The concept of imageability does not necessarily connote something fixed, limited, precise, unified or regularly ordered, although it may some times have these qualities.

"Nor does it mean apparent at a glance, obvious, patent or plain. The total environment to be patterned is highly complex, while the obvious image is soon boring, and can point to only a few features of the living world."

Lynch, The Image of The City, 10.

Order and legibility should not be infinite and immediately obvious: order should be unfolding: a layering of order from the immediately apparent to the subtle and barely perceptible. There must be room for the logical surprize: a variation on a theme which is more internally consistent than mere randomness.

Lynch's methods for achieving legibility are well known: he distinguishes paths, nodes, districts, edges and landmarks and proposes to clarify and reinforce them. In later work, he also discusses the celebration of time and the need for temporal collage, layering and temporal placeness. (Lynch, What Time Is This Place.)

We might speculate, then, that two fundamental aspects contribute to placeness: differentiation of structure and local variation: that the ability of a place to be memorable and alive stems from both its overall consistency and imagability (legibility) and also from its ability to sustain local variation/permuation and imprinting (latency).

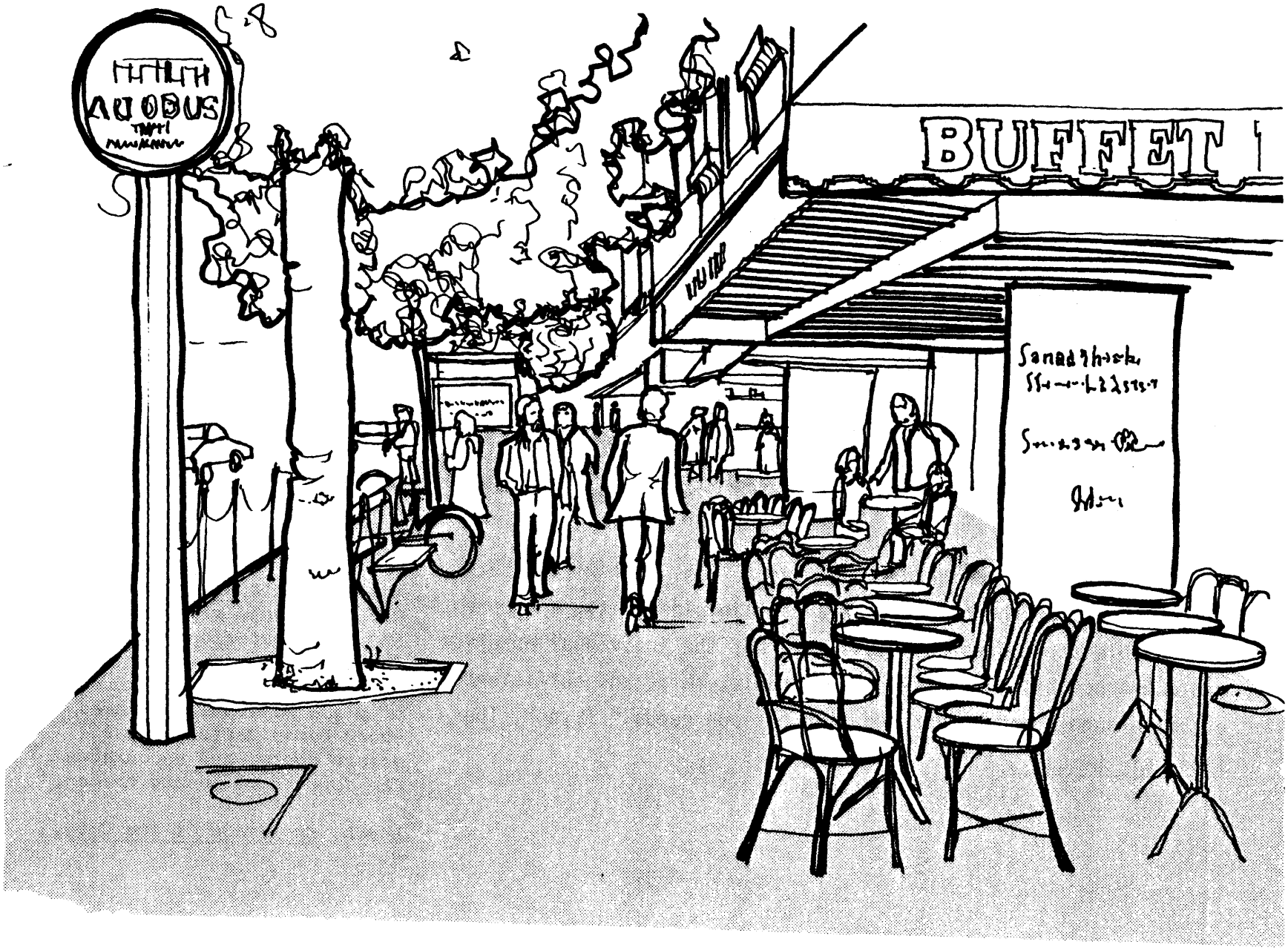
This suggests some sort of dual structure: frameworks and infill theme and variations, deep structure and surface variety. "It is important to maintain some great common forms: strong

Piranesi's Rome

nodes, key paths, or widespread homogenieties. But within this large framework, there should be a certain plasticity, a richness of possible structures and clues, so that the individual observer can construct his own image: communicable, safe, and sufficient, but also supple and integrated with his own needs." (Lynch, The Image of the City, 111)

"By appearing as a remarkable and well-knit place, the city the city could provide a ground for the clustering and organization of these meanings and associations. Such a sense of place in itself enhances every human activity that occurs there, and encourages the deposit of memory traces."

Lynch, The Image Of The City, 9.


BUFFET

VARIATION

Four concepts emerge:

1. That this close connection of framework and infill (in fact the denial of the idea that the two are in fact separate elements) leads to a new understanding of the idea of layering: the basic accumulation of small changes is part of the temporal collage which contributes to placeness.

2. We can see that variation and local definition can enrich and elaborate a scene without interfereing with the overall continuity and homogeneity insofar as it occurs within the latency of the framework, it is another layer of definition, not an interruption.

3. That there are, in fact, two kinds of variety: a change in framework (thematic patterns which make a district homogeneous) and changes within the latency of the framework (local variation). They are different kinds of change and must be treated differently.

4. The logical surprize is an internally consistent permutation within the larger framework.

"Above all, if the environment is visibly organized and sharply

identified, then the citizen can inform it with his own meaning and connections, then it will become a true place, remarkable and unmistakeable." (Lynch, The Image of the City, 92).

To recap:

An essential component of legibility is coherence, which can be strengthened and intensified in two ways: by clarifying its essential framework (polarizing and differentiating), and by strengthening its latency: its ability to accomodate adaptation and local variation leading to unfoldingness.

Babson college library by Arrowstreet.

DESIGN CRITERIA

*CONTRAST
*CONTINUITY
*BEHAVIORAL SUPPORT
*RANGE
*HIERARCHY
*HUMAN SCALE
*LATENCY

CONTRAST

*POLARITY
*DIRECT JUXTAPOSITION

We know something as much by what it is not as by what it is. Thus contrast and polarity are critical to our understanding of the environment. It is a lack of such contrast or completely jumbled and disorderly contrast which is one of the worst aspects of many of the most oppresive modern environments, from neo-Miesian office towers to extending highway commercial strips.

Throughout the environment, it is the contrast and polarity of small and large, enclosed and open, vertical and horizontal, movement and rest which intensify our experience, clarify the inner structure and help us to understand our environment.

CONTINUITY

If the environment is ever going to add up, to be something more than just a random collection of separate and isolated elements, there is the need for occaisional "thematic units": identifiable stretches of pieces which add up to make something larger than themselves. The continuity of urban boulevard street wall buildings, an ongoing line of street trees, or a continuous system of access are all understandable and enjoyable partly because they have some degree of continuity: they are whole and unified. As with all design principles, the contrast and polarity of strategically placed discontinuities are important to punctuate and enliven continuity. But unless the continuous field has accumulated itself into a self-contained thing in itself, the interruption will have nothing to contrast with and will thus be lessened in its force.

*THEMATIC UNITS
*SYSTEM "TELLS ITS OWN STORY

BEHAVIORAL SUPPORT

*USE DIMENSIONS
*USE ARRANGEMENTS
*RANGE
*USE FORM

Human activity cannot take place in a spatial vacuum; it needs various kinds of physical definition to support and help it. It is dfficult to wait comfortably for a bus if there is no covered space to sit in. We cannot visit casually with someone we meet on the street if there is no space just out of the flow of traffic which is properly scaled for two people to stand and talk.

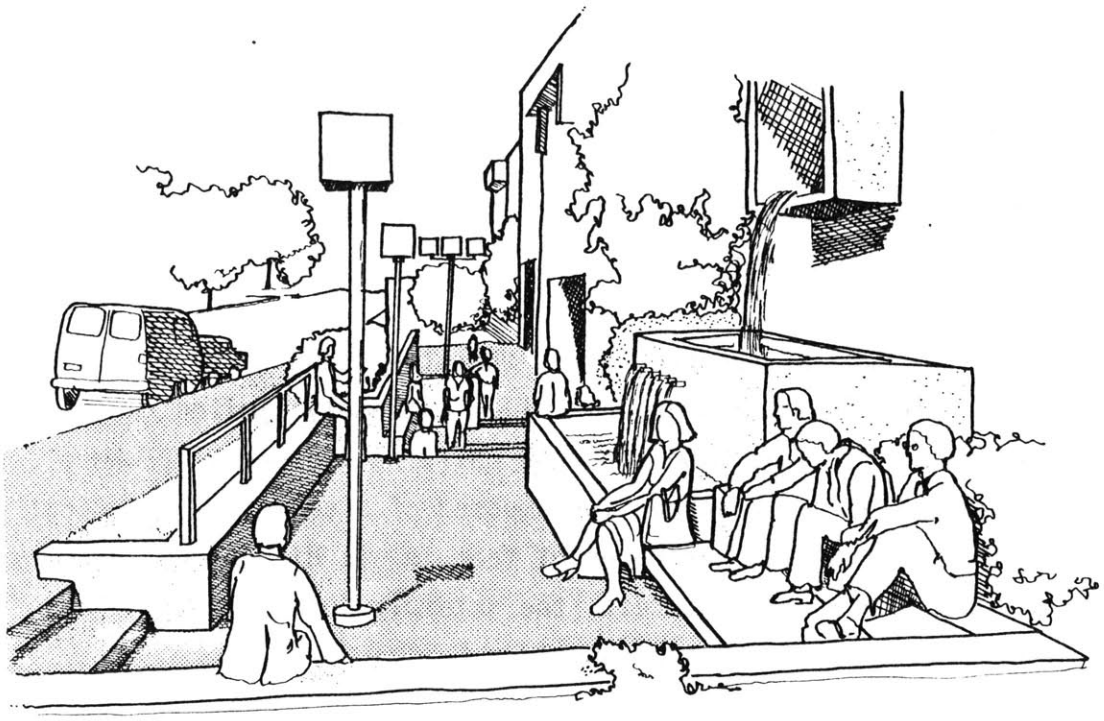
And yet we cannot design specific and singular "places" or "furniture" for each and every activity which might occur in a public place: not only would it not be possible to provide for all the diversity, but each place would be singular and isolated, not part of the overall structure of the place. Nor would it be possible to always put them in exactly the right place: no one is going to walk any great distance to a specifically designed "visiting place".

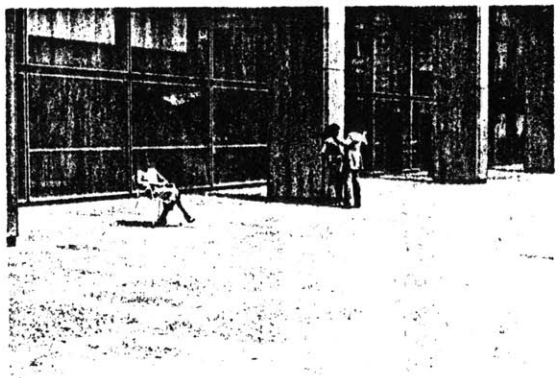
"What matters in a building or a town is not is outward shape, its physical qeometry alone, but the events that happen there."

"And indeed, the world does have a structure, just because these pattersn of events repeat themselves, are always anchored in space."

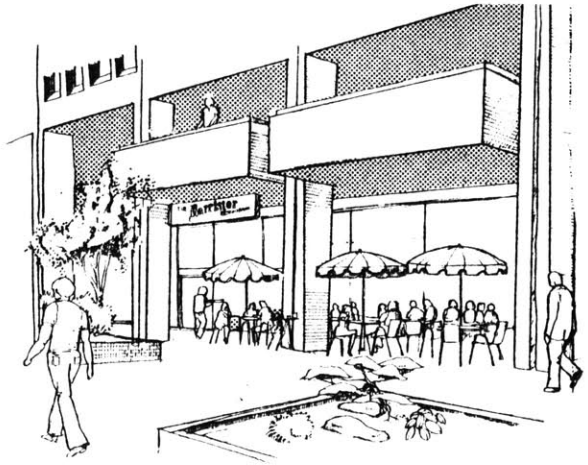
Alexander, The Timeless Way, 1-7.

It is important to remember that what we are talking about is not providing separate and singularly designed "furniture" to be spotted about in front of the building, rather, what is needed is a habit of thinking of these dimensions and arrangements as a part of the built structure itself.





Above: buildings want to support behaivor, if we would only give them half a chance.



The building on the left does almost nothing to support the behavior, the one on the right is much more accomodating of the activity.

*SIZES
*ARRANGEMENTS
*BUILDING SYSTEMS
*MATERIALS
*USE DEFFINITIONS

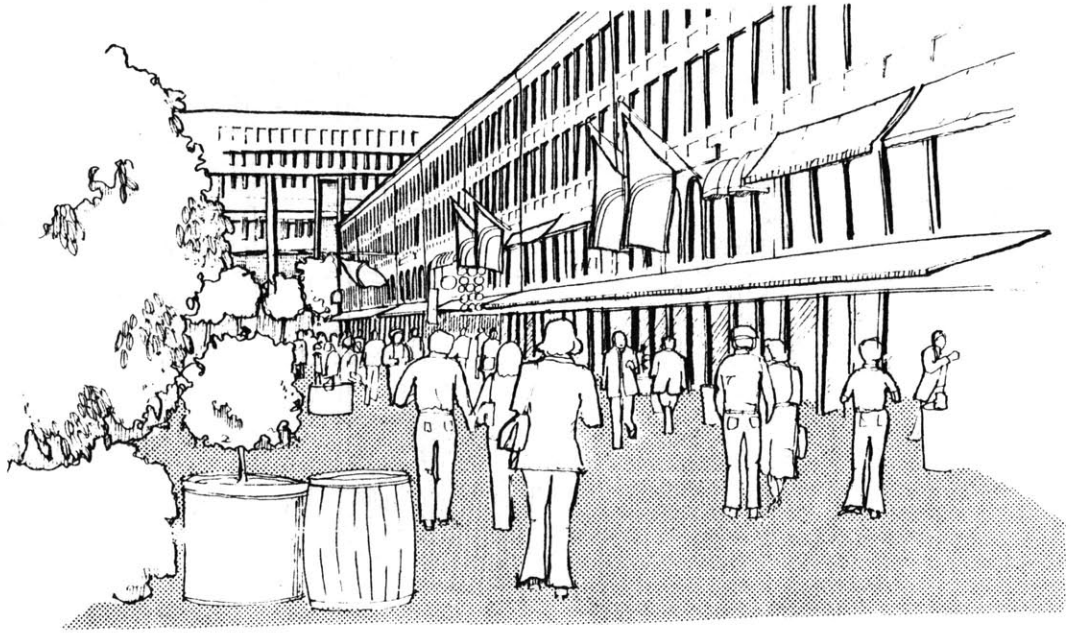
RANGE

What is it about many buildings of the Modernist era which is often so disturbing and vaguely malevolent? More specifically, what is it which contributes to their impenetrable and inhuman, fortress like character?

Certainly, part of the problem is that they tend to be visually all of a few dimensions and all of an extremely limited range of materials. All glass and concrete buildings, especially where the exposed grid or screen is composed of a series of identical dimensions extending hundredes of feet in all directions, display little of the visual interest, the interplay of forces that one might see in the facades of an older building.

Every environment needs a range of dimensions, definitions, arrangements, materials and use supports.

A nearly complete lack of range.

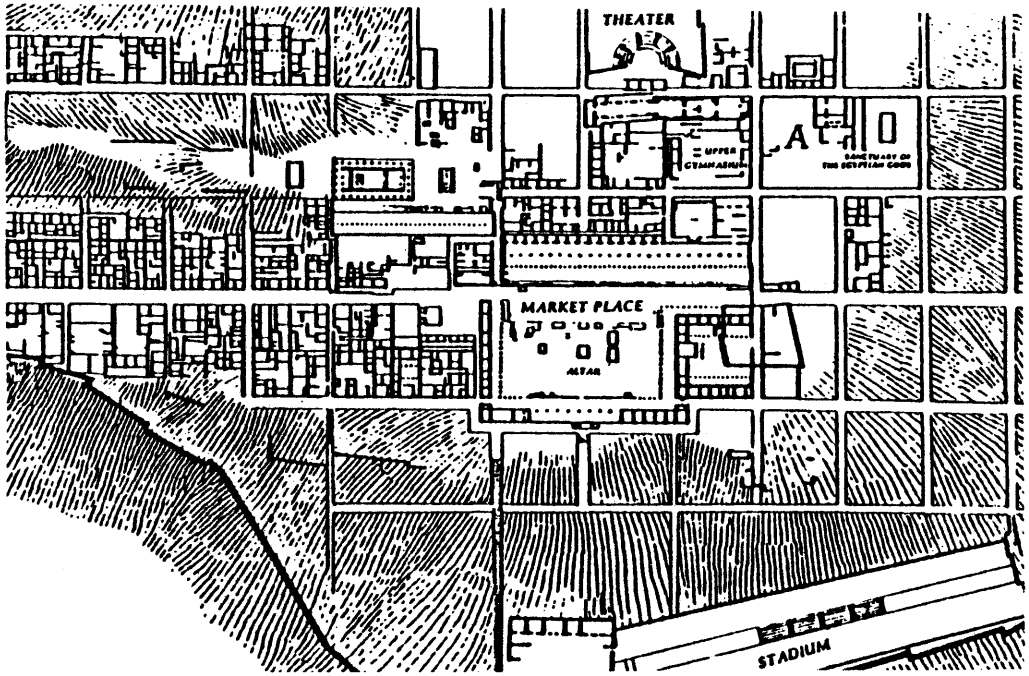


Fanueil Hall embodies a wide range of dimensions materials and field relationships.

*UNFOLDING ORDER
*INTERNAL CONSISTENCY

HIERARCHY

Even if they do so only slowly and unfoldingly, environments of all scales must eventually reveal their structure to us. Mystery is not the equivilant of chaos. Essential to the mental structuring of a place or field, is a perception of its hierarchy, its ordering of large and small, dominant and subsidiary, active and passive, armature and addition. As with legibility, obviousness is no particular virtue (except where quick and easy access to information is essential, street signs, for instance): it is the suggestion, the perception, that an order exists, which induces the sense of well being, which an orderly environment might tend to provoke.



HUMAN SCALE

*RANGE OF SIZES
*HUMAN SIZES
*REFERENCE DIMENSIONS

"Intimate, human scale" is a phrase which is heard often in conjunction with space requirements, but it is difficult to be precise about.

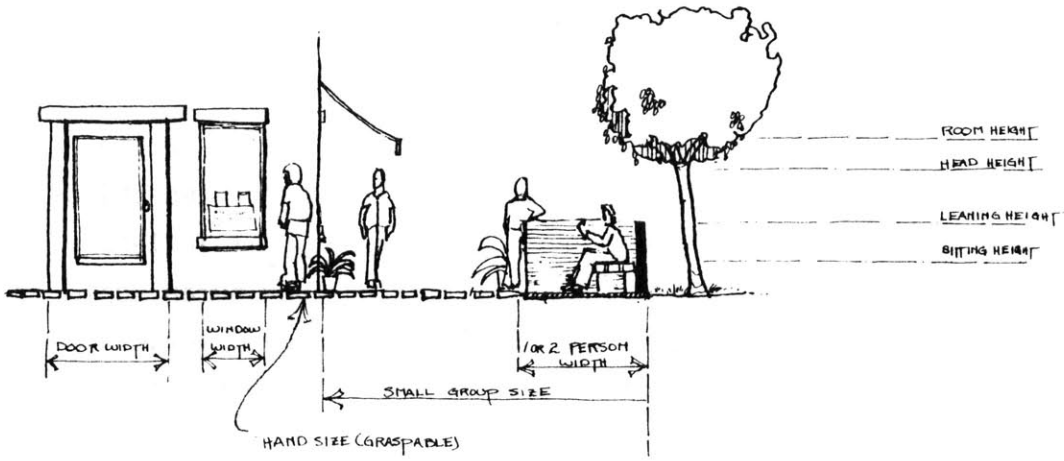
Human scale does not imply that everything is small. While this is one way to achieve intimate scale (like the two-thirds scale buildings along Disneyland's Main Street), it is less complete and psychologically less fulfilling than human scale definition which is part of the complete range from large to small: a whole system which integrates and relates to all the components.

There is the need for the big and small in human environments. This is part of the need for range of definition and for human activity oriented use dimensions. These two principles are important parts.

A third principle comes into play, however, and it is closely related to the other two. This is the idea of reference dimensions: common measurments which derive from and refer to human activities and physique. These might include: window sill height, first floor height, household window width, shoulder height, etc.

Human scale definition should embody all three of these principles.

A large part of human scale is "reference dimensions". Dimensions which reflect human physiology and activity.



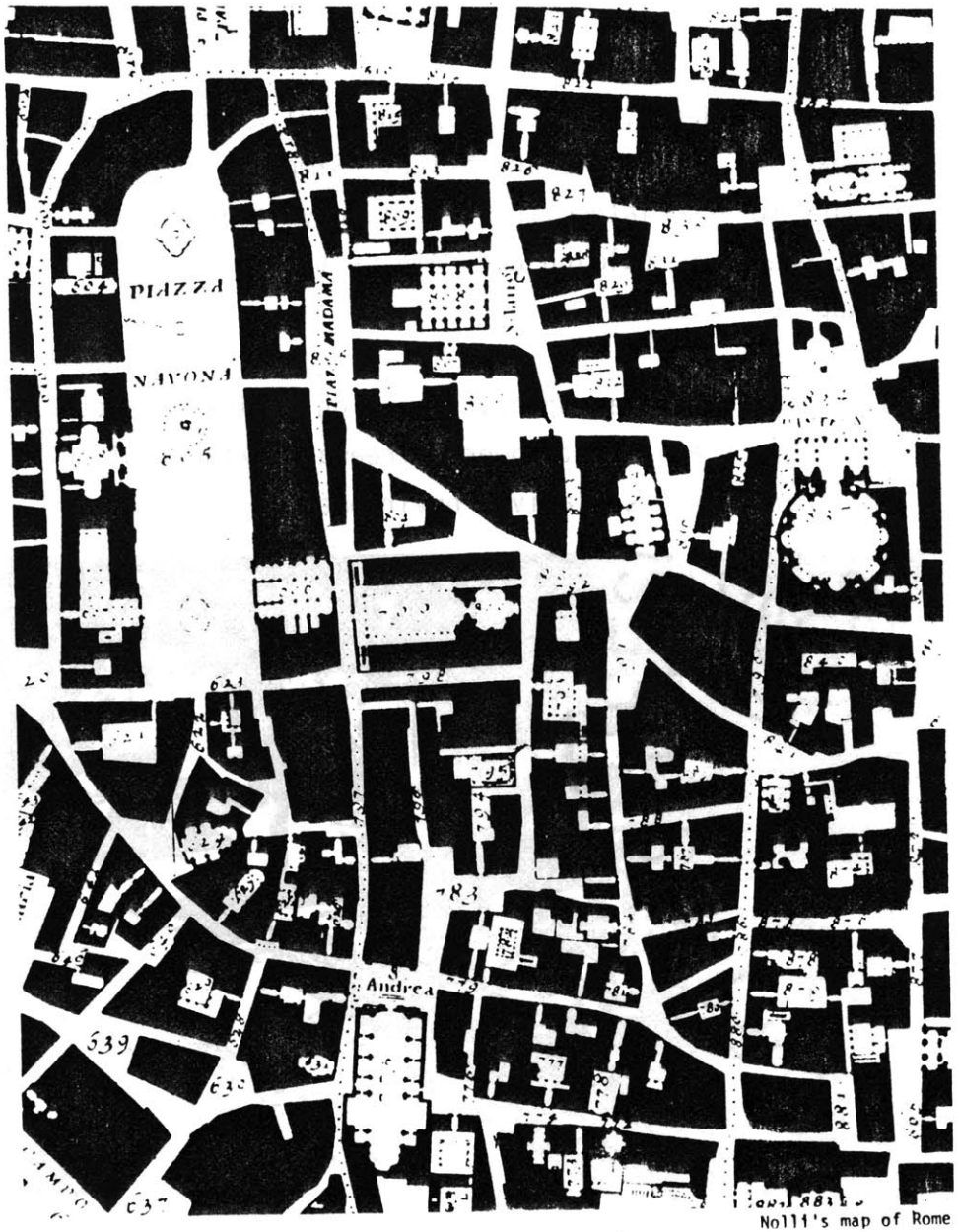
LATENCY

Latency is the ability of the environment to adapt to new uses (or different users) with little or no physical change in the main structure: this can include additions of lighter definitions. It can be accomplished with differentiation of systems (frameworks and infill) also differentiation of life cycles) additive structures, articulation, excess capacity, dense networks of communication and direct connection and other methods.

LATENCY

*DIFFERENTIATION
*ARTICULATION
*EXCESS CAPACITY
*DENSE NETWORKS
*SLACK
*ADDITIVE SYSTEMS.

By providing a certain degree of partial definition and reciprocal interaction with the surrounding space, this structure embodies the latency which sets the scene for the weekly market. (After photographs in Town scape by Gordon Cullen)



Nolli's map of Rome

DESCRIPTIONS OF FORM

*ASSOCIATIVE
*BUILT
*SPATIAL
*RECIPROCAL
*COLLAGE

*USEFUL
*COMFORTABLE

ASSOCIATIVE

Associative definition/places/zones/buildings is the aim? What is meant by the word associative? Simply stated, it is something we want to associate with: a "friendly" object. Usable, comfortable, pleasant, calming are some of the adjectives which might be applied.

To look at its polar opposite we might think of Modernist office buildings or apartment towers, freeways, windswept barrent plazas and other "dis-associative" environments.

A plaza in Washington by Arrowstreet.

Two dissassociative environments. At the left is an example of dissassociative circulation, two 180 degree turns a 90 degree turn and a level change are required to get into the building. Above is a solid marble wall a block long, inside a prestigious shopping mall.

BUILT

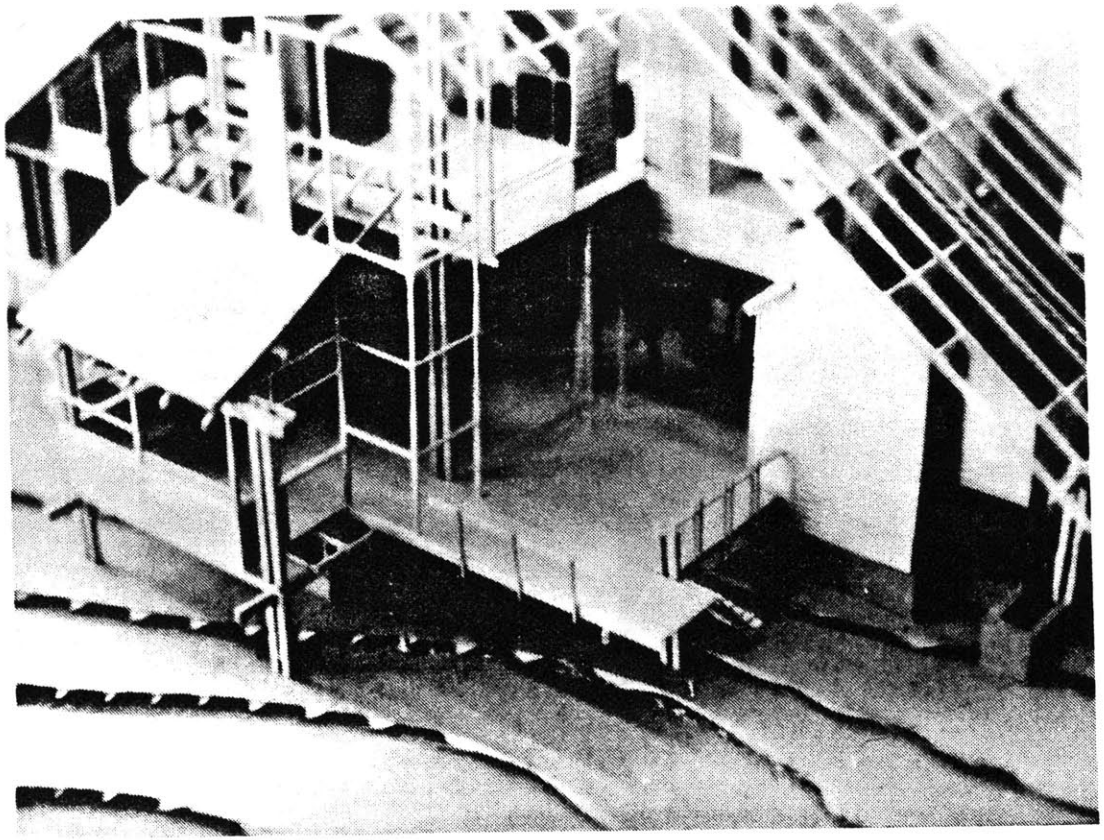
*MAKING GEOMETRY BEHAVIORAL
*MATERIALS ARE REAL
*USE FORM
*INTERNALLY CONSISTENT
*ASSEMBLAGE

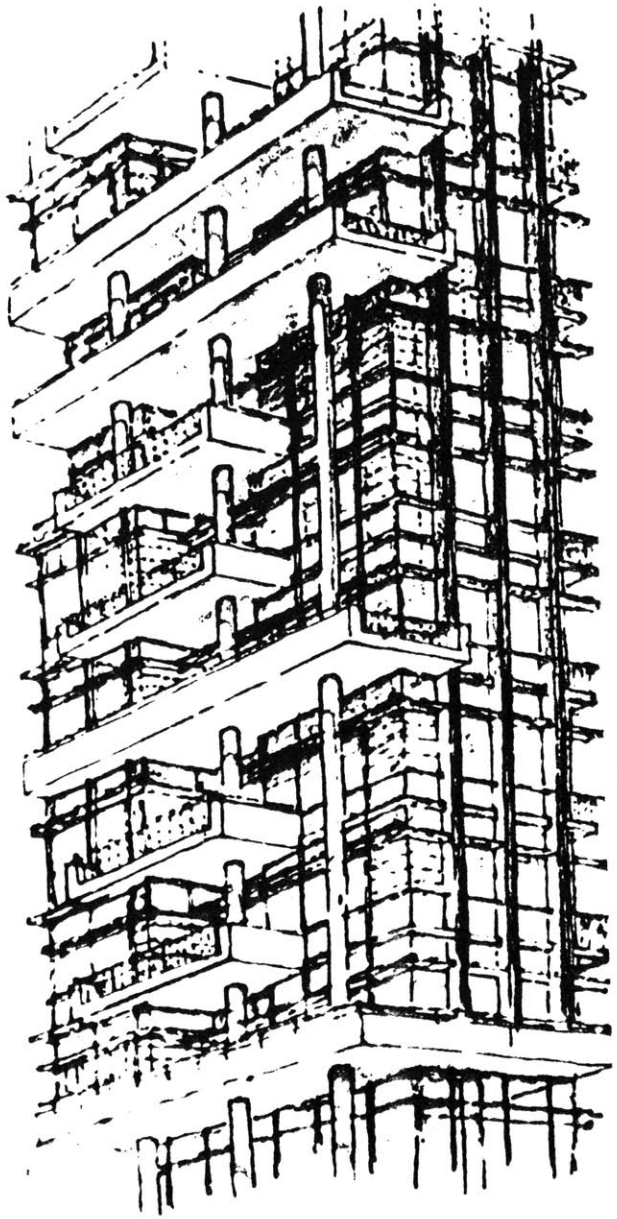
Territories, habitable zones, frameworks, fields, all must be "built" to be associative.

Built means simply assembled from " real" materials with an understanding of the behavior of each material and the inherent behavior of each material and the inherent behavior ~~of the for~~ of the geometry: a real and logical environment.

A cafeteria dining room which is just a clear area spanned by thirty foot beams is an "empty" space. A mosque which has columns at ten foot intervals is a "built" space. Each column is a generator of a habitable zone : a usable territory. Many small groups or individuals can use the zones in a variety of ways, but it is still available for large groups for prayers.

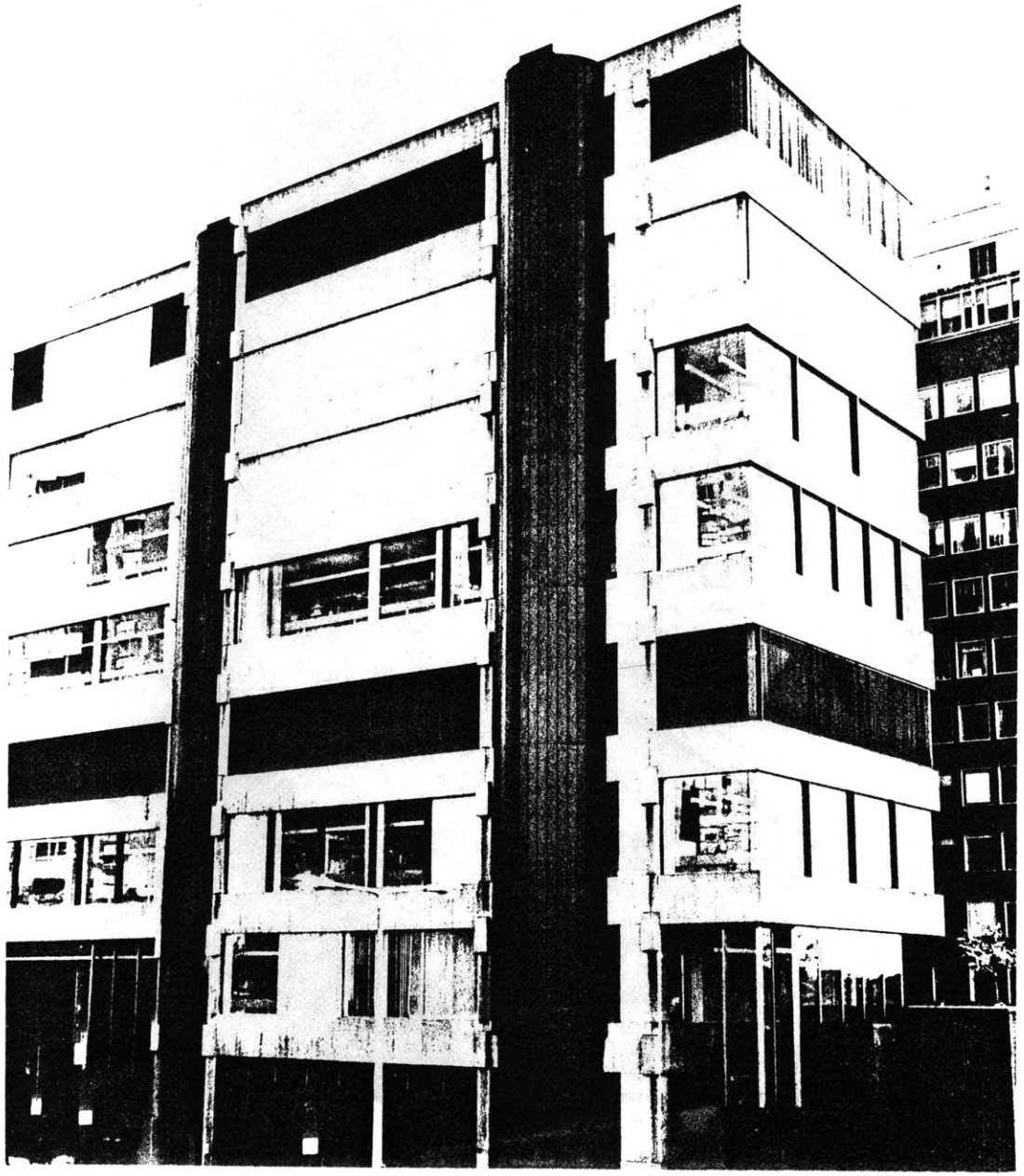
Clearly, this form of "building" does not apply to areas which are for square dancing, but these zones can be built in their own way, as we shall see later.





We can achieve this quality in any system of construction, or indeed in any type of architecture, as long as there is a willingness to work with the nature of the materials and a logical process of construction is expressed. (Model by Steve Kunst, drawing by John Graham).

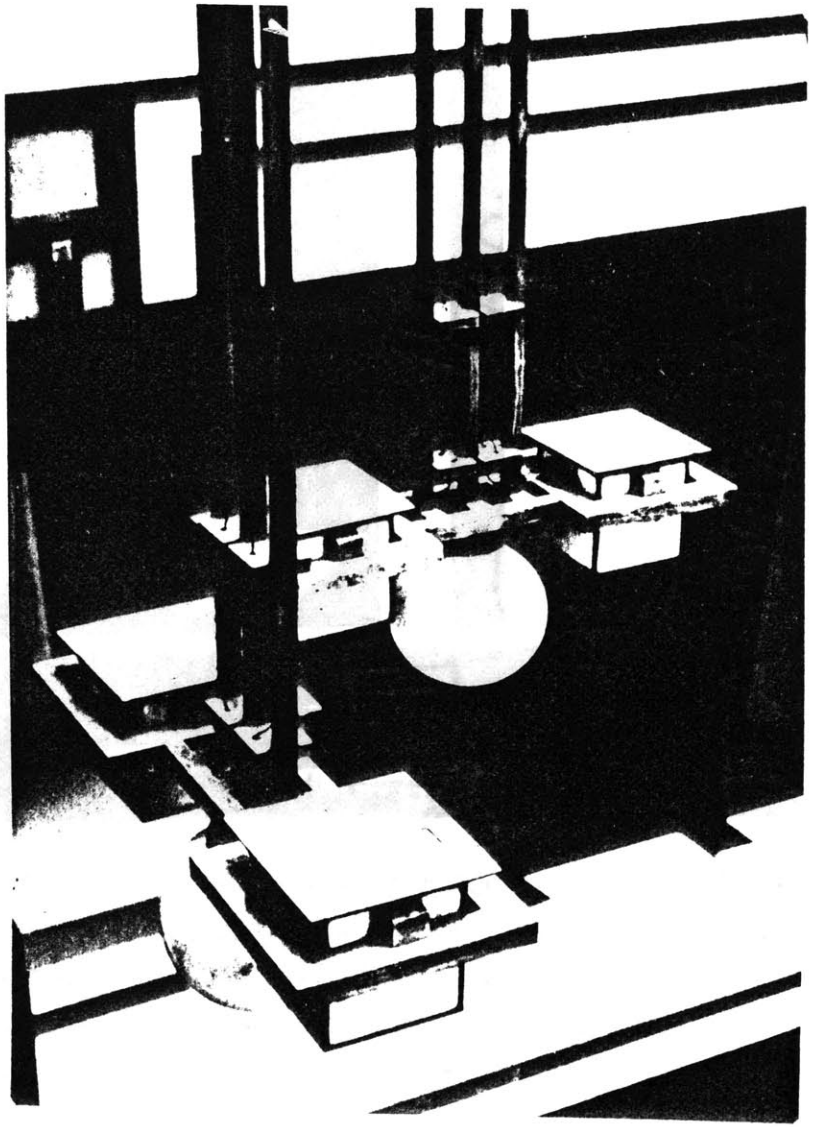
The masonry building is a mere cut-out, the bricks a surrogate for a piece of foam-core with cookie-cutter holes. The flatness of the facade denies any ability it might have had to function as a spatial framework wand the arbitrary nature of the holes destroy any relationship to use of the building method. Such a freestanding facade might have intensified the entrance zone or created a framework for uses which are partially inside.



This concrete building is a built assemblage; each piece of the construction and of the organization is clearly expressed and its contribution to the integrated whole is understandable. The assemblage of a range of pieces into a complete construction invites our mental participation: we can "build" it with our imagination. It is legible both physically and mentally. It is actual building, not conceptual building.

The quality we call built applies at all scales, from the assemblage of large scale buildings such as the concrete framing system shown here to the design of details such as these lamps in Wright's Unity Temple.

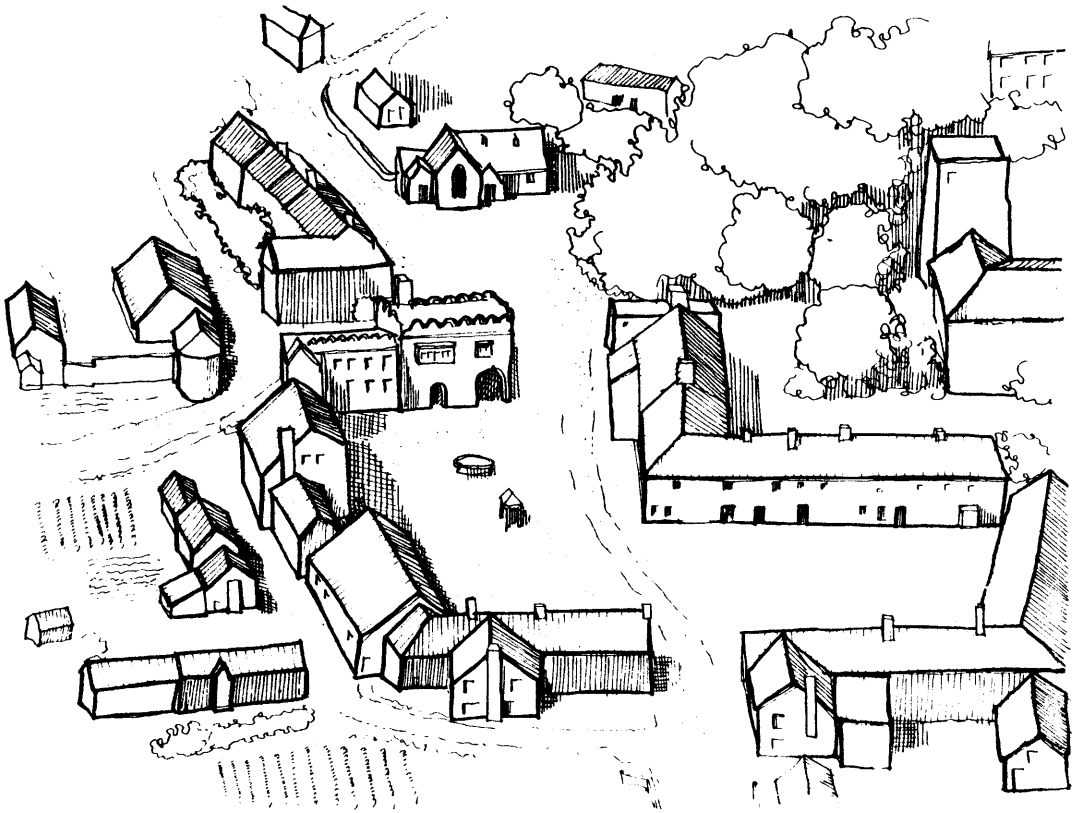
They all share the characteristic of things which are carefully put together with respect for the materials and thought as to the method; they are not just poured or injected into an arbitrarily shaped mould. They have an internal logic and relate to the larger logical system of their context.



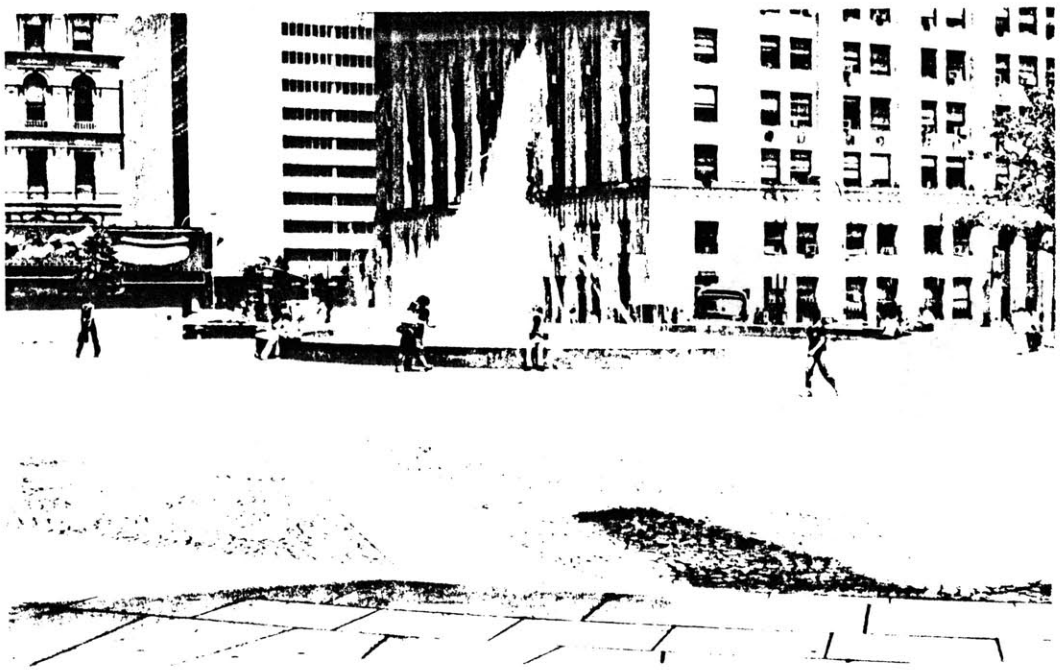
Built lamp details in Unity Temple.

The Brasilia buildings are in the class of forms other than "built" they are continuous surface buildings and singular object forms. The intent is to create minimalist sculpture, but the result is isolated non-associative lumps of concrete. The masonry building opposite is built in two ways: the internal structure of the frame

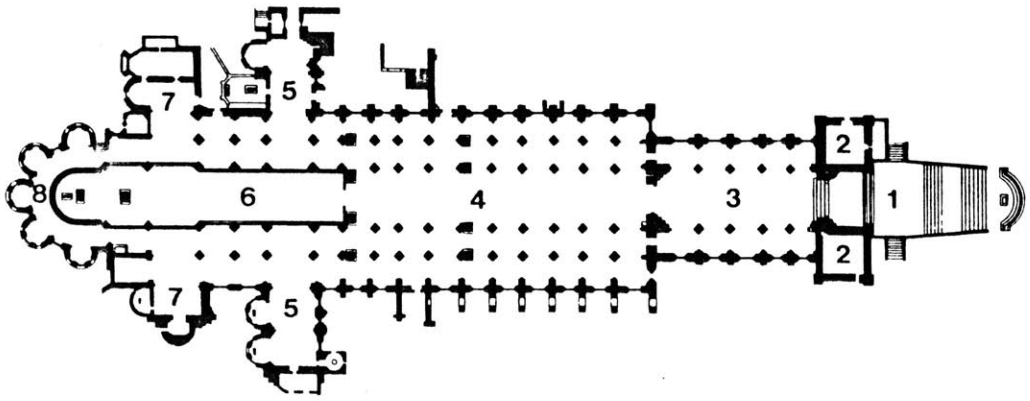
is shown on the facade and a secondary system, different in behavior and material (the concrete balconies) push through the frame to create an in-between zone which connects inside and outside.



Built space is usually formed by the activities which occur there.

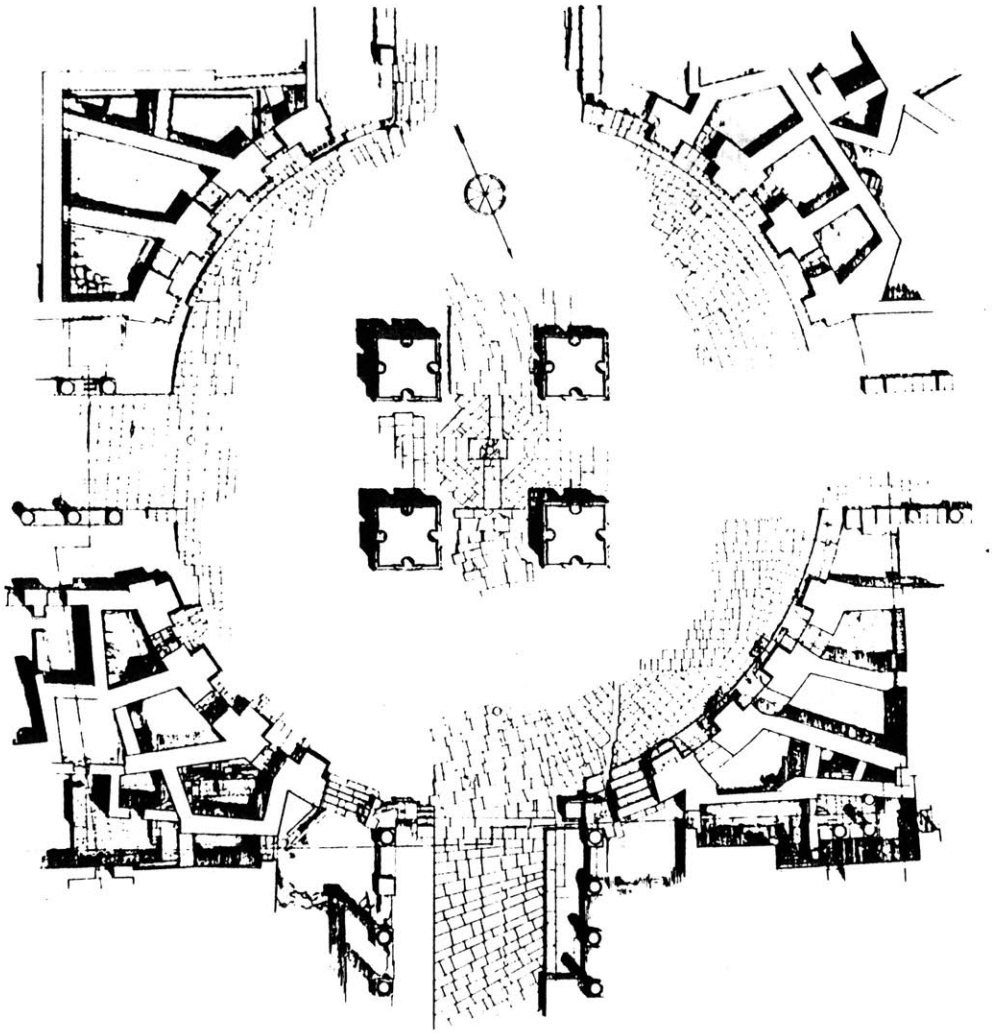


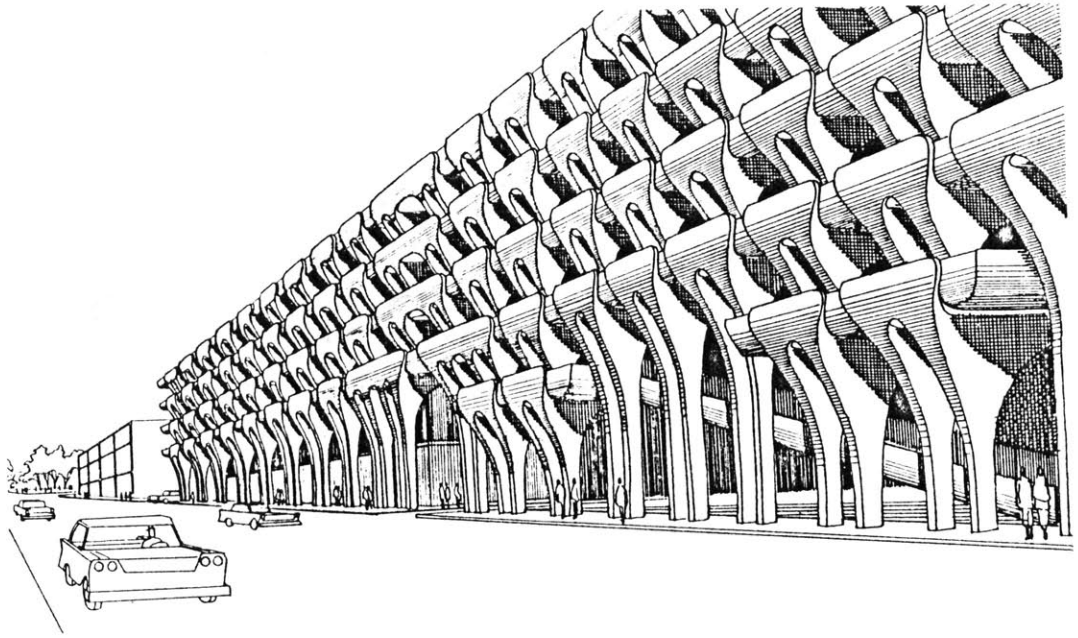
Unbuilt space. Lynch distinguishes open space from "empty" space on the basis of the variety of activities that the space can support. Almost nothing could occur in a space like this. It is not even pleasant to walk across.



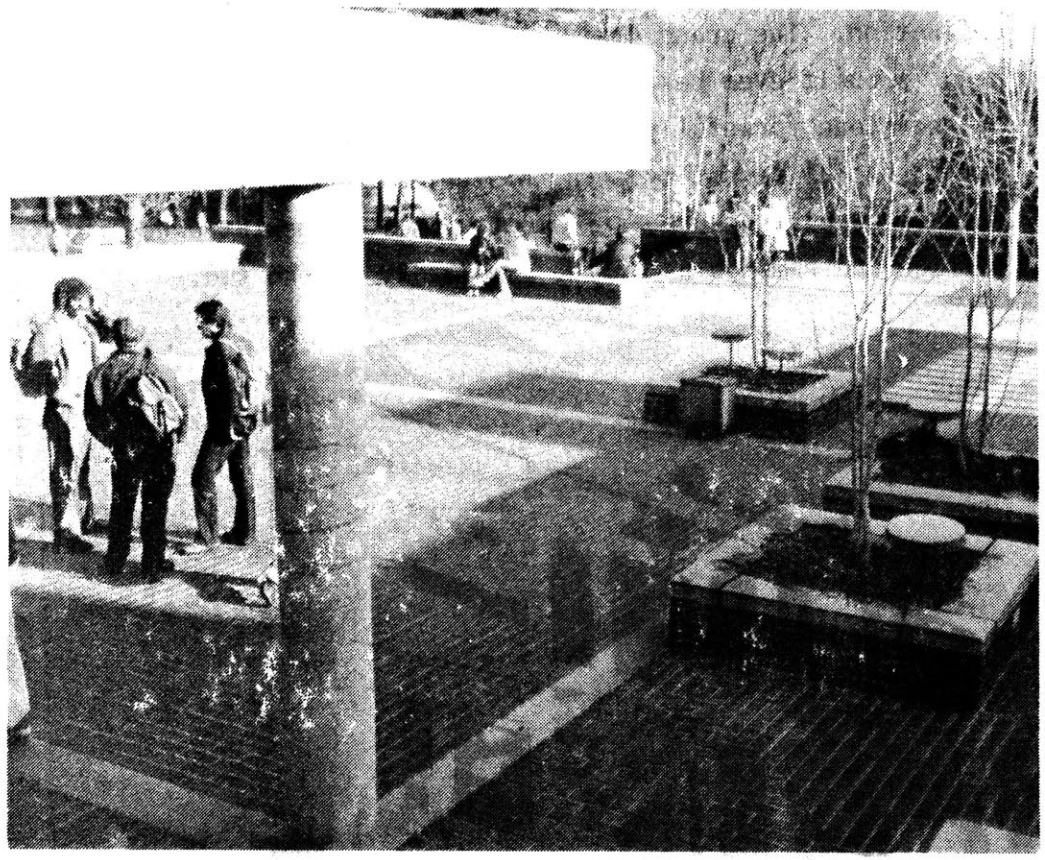
Built space

Grace place is completely unbuilt: it is empty space, not open space. A complete lack of physical definition which forms meaningly zones of activity leaves it as a forbidding blank. This sketch of an ancient crossroads (opposite) shows a space, which although overpowered by a somewhat singular form, starts to be built by the four columns.



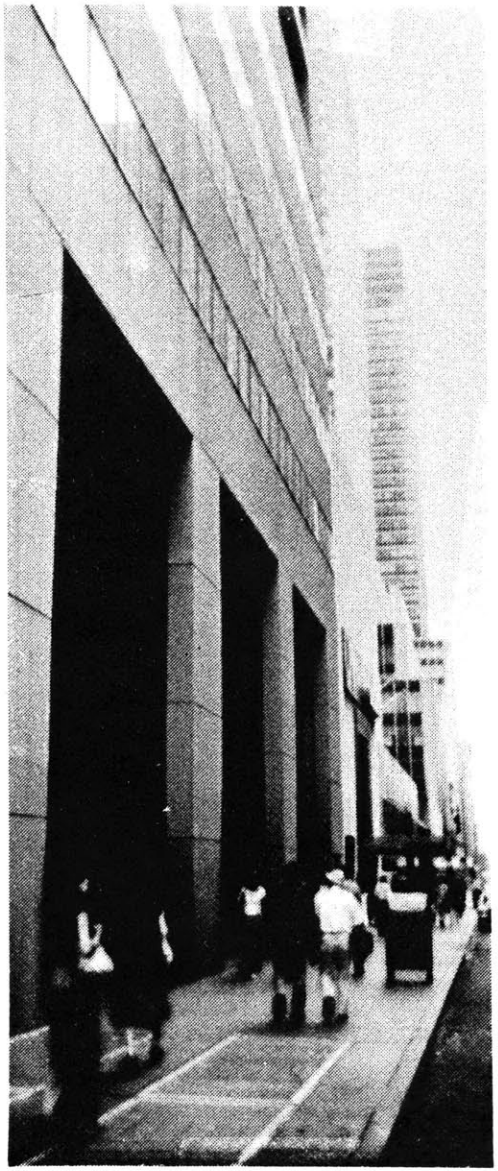


Poured form, not built form.

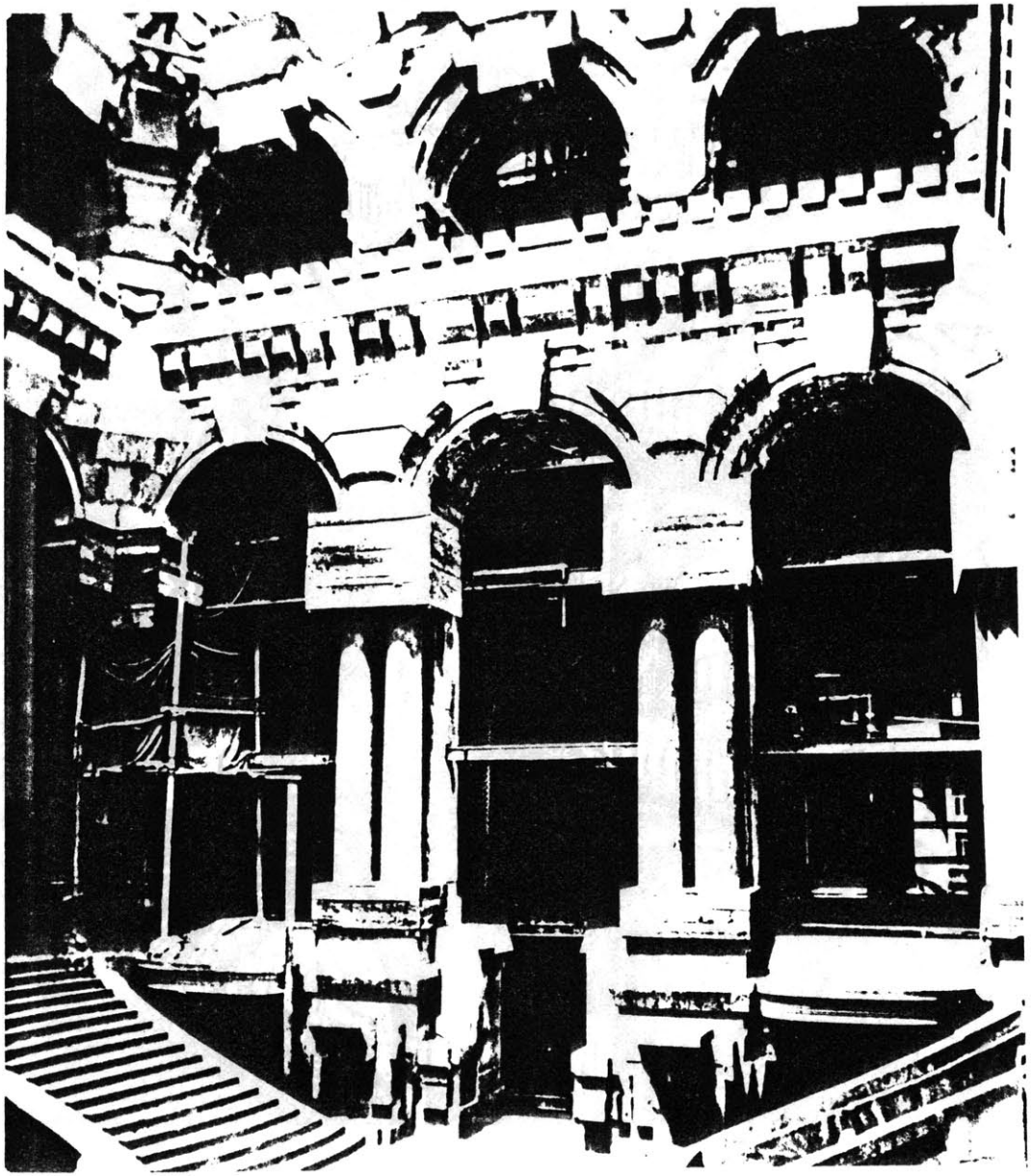


Built space by Arrowstreet at Babson College.

The failure of singular, continuous surface forms to build the external spaces around them is one of the most disturbing aspects of "tower in the park" Modernism. Built external spaces such as this one at Arrowstreet's Babson college buildings, make the most sense when the exterior space is formed by and forms the buildings.



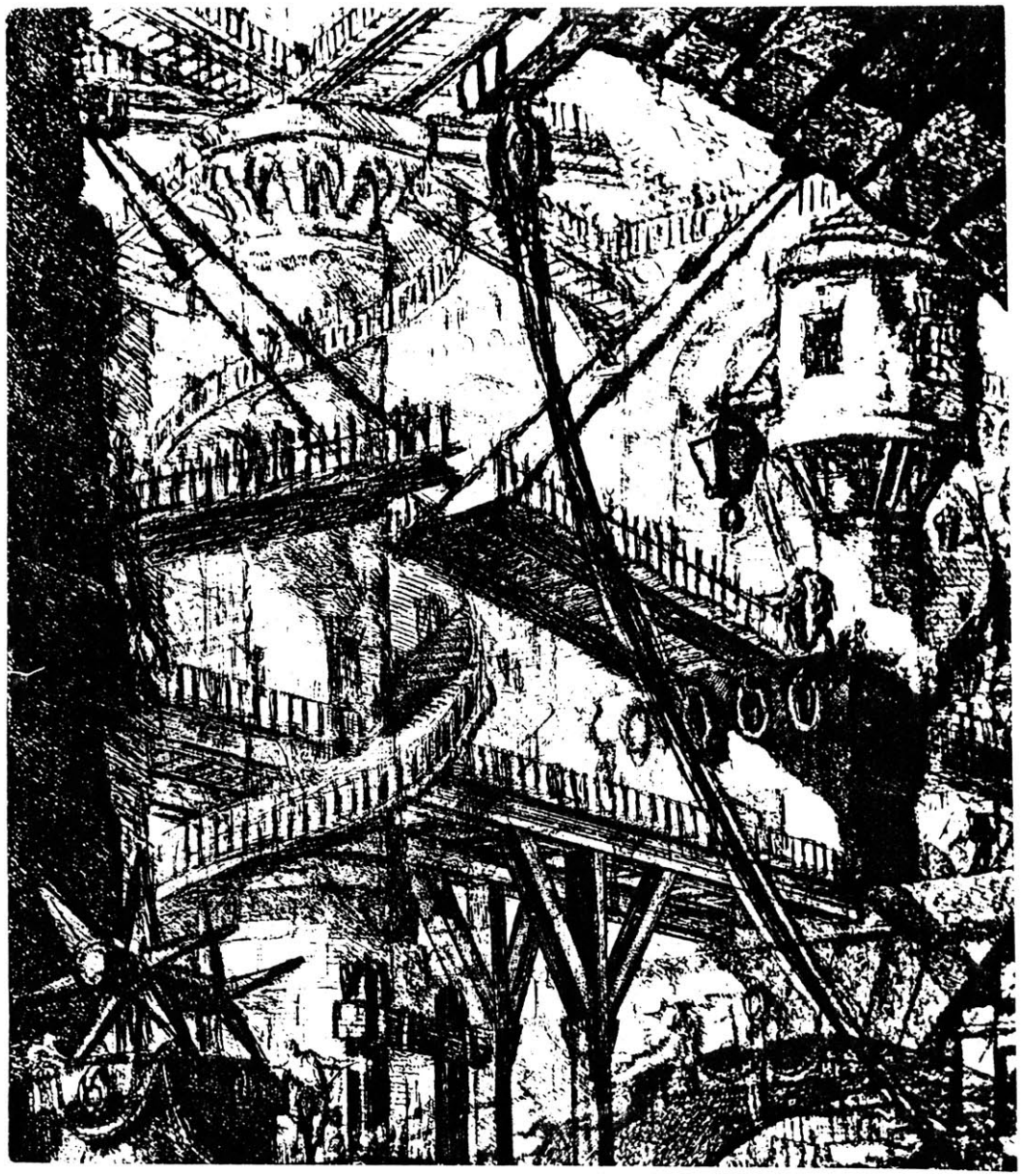
This building facade is completely unbuilt: a flat surface without definition. The grand staircase at the Paris opera on the other hand is built even before the scupture is carved: the assemblage of the stone forcefully expresses the spans, loads, junctions and built spatial territory. In this unfinished state it is halfway between bare structure as framework and ornamentation as built surface and reminds us of the similarity of the two.



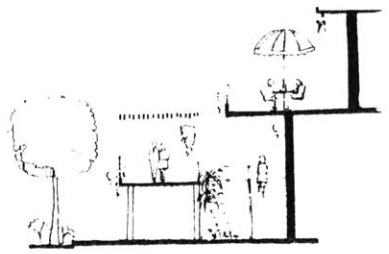
From Drexler: Beaux-arts
MIT Press, 1978.

SPATIAL

*THREE DIMENSIONAL
INTERACTION

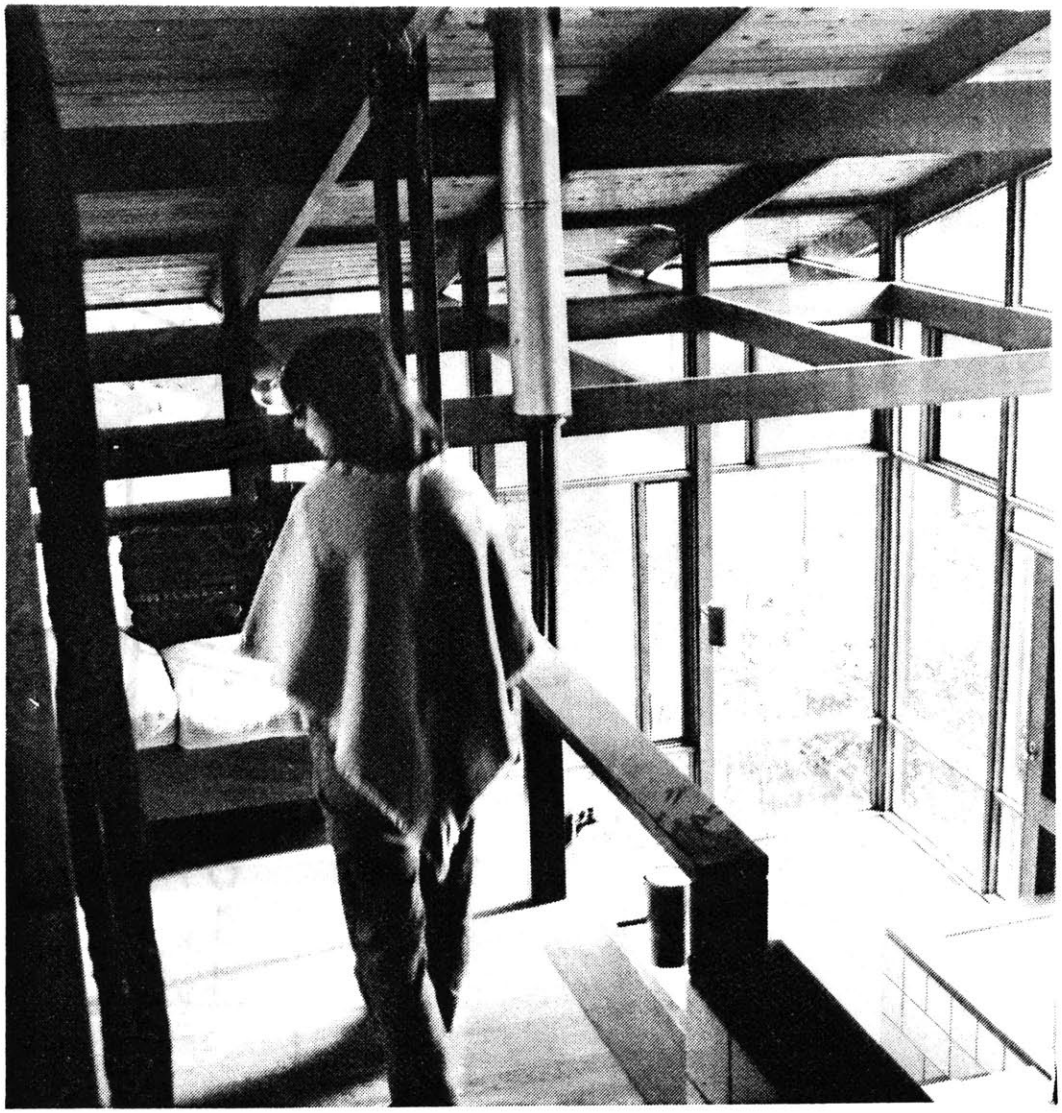


It is nearly impossible for the entire organization of a building to be legible and comprehensible (and thus associative) unless it is to some extent spatial and three dimensional. The two examples here, one by Piranesi, one by Maurice Smith, both embody the same basic principle of three dimensional richness..



Minimally three dimensional.

Spatial.



Spatial.

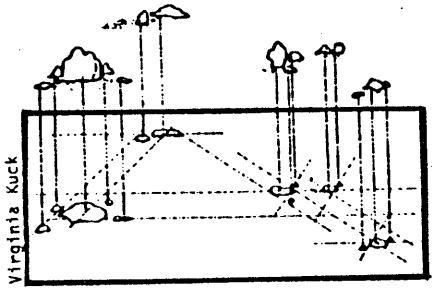
An intermediate level in Maurice's Smith's Blackmun House.

METHODS

*FIELDS
*FRAMEWORKS
*PARTIAL DEFINITION
*ADDITIVE FORM
*USE FORM
*SLACK
*USE DIMENSIONS
*BEHAVIOR OF MATERIALS
*PLATE SHIFT
*SPATIAL CONNECTIONS
*SYSTEMS INTEGRATION

FIELDS

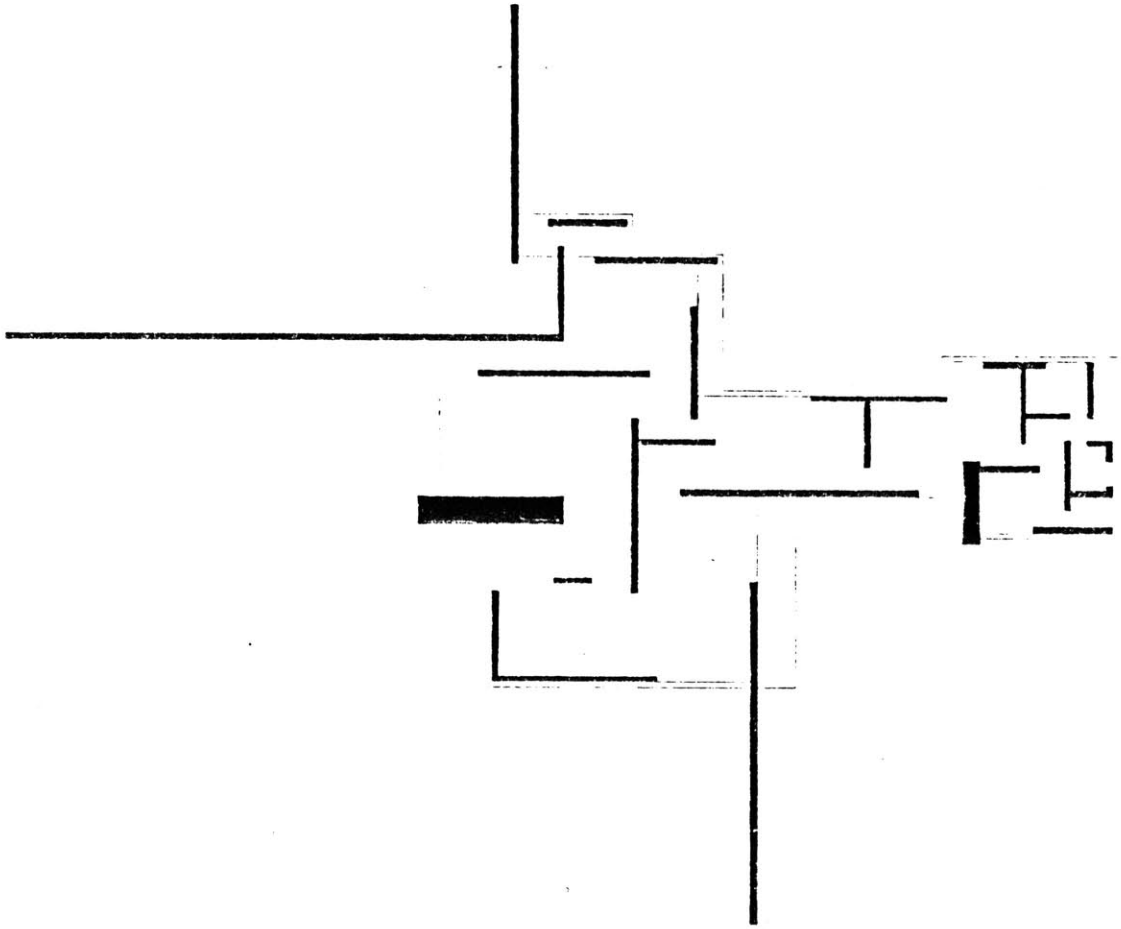
*JUNCTIONS OF PARTIAL DEFINITIONS
*OBJECTS AS GENERATORS OF TERRITORY

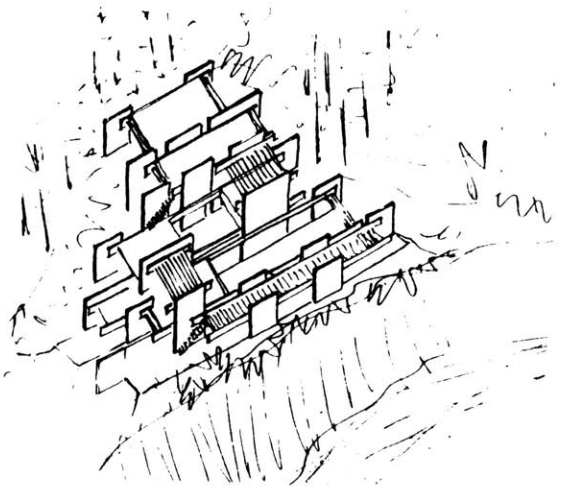


FIELDS

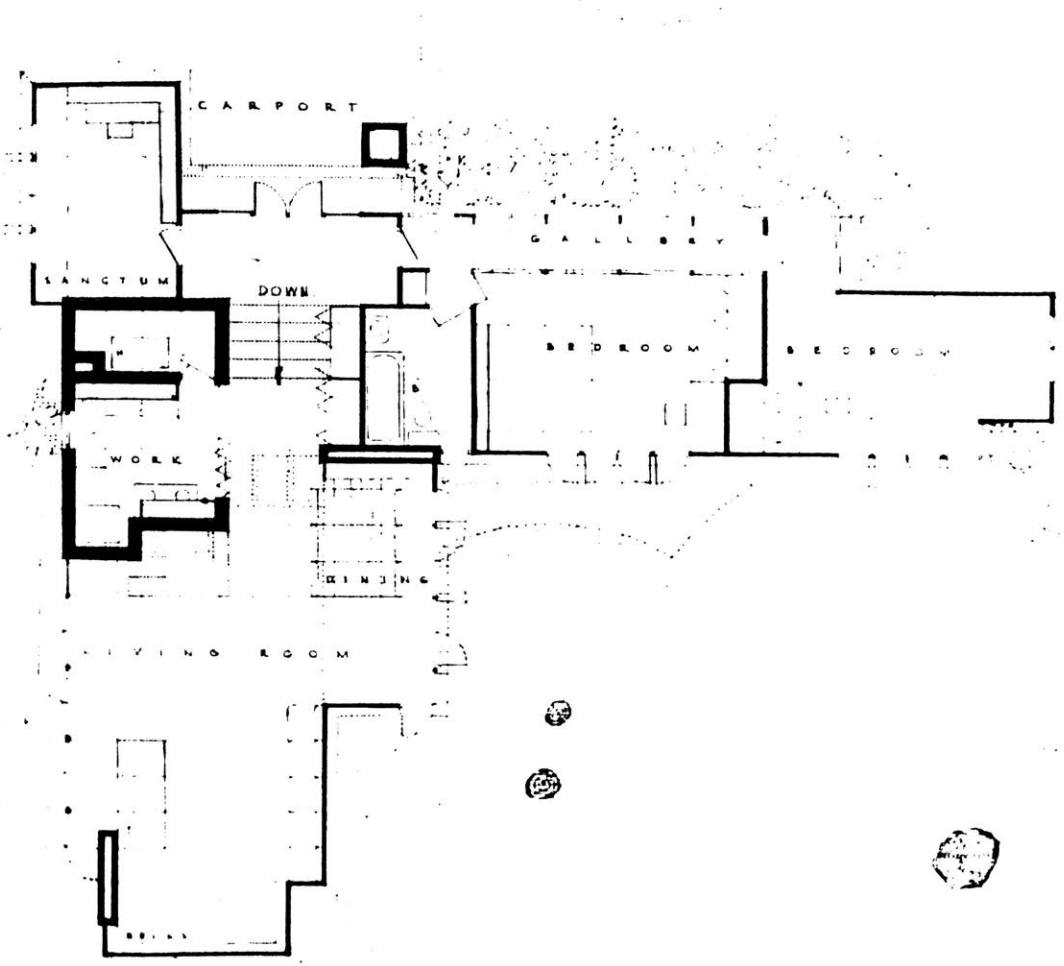
If the environment is not to be a more or less random collection of objects, some attention must be paid to the collective spatial quality of fields. A field is a junction of partial definitions. It is the juxtaposition of interactive zones of influence generated by direcitonal pieces.

Fundamental to an understanding of fields is the idea that lines and objects are not merely edges: they are generator of zones of influence.





Left: An elegant field organization by a young Mies van der Rohe. The only problem is the minimalist and unimaginative way in which he encloses it. Above: a field organization house by Arthur Erickson.



Wright's Usonian houses are among the most direct examples of field form houses. They all employ a "core" of deployed habitable walls which form a framework for light material pavillions which push out into the landscape. Thus the range of degrees of enclosure and protection, of privacy and transparency.

PARTIAL DEFINITION

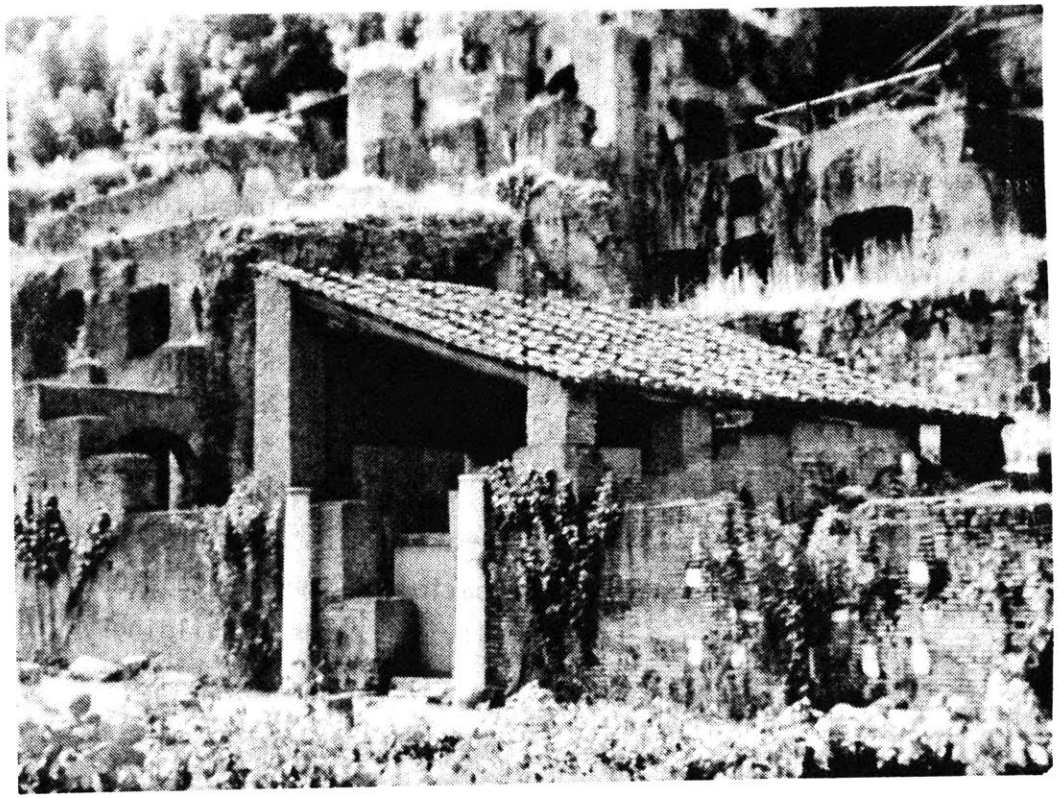
*NO SYSTEM COMPLETELY DEFINES

Fundamental to the idea of additive assmblage is the concept of partial definition. No single system must be allowed to fully and singularly define a zone. This kind of single system design, popular in the sixties, leads to the deadly, tomblike spaces of that period.

Partially defined systems lead naturally to the addition of systems.

Partial definition is part of what makes ruins so inviting. Their incompletelness invites the particpation of the imagination. They excape the arrogance and immutability of complete buildings. They are more fertile grounds for multiple interpretations of place/space.

Ruins, because of their partial definition and reduced to frame elements nature, invite our participations both physically and mentally. They are a higher order of definition which predates our short term additions and will outlast them. If the field form/ framework of our buildings suggests this quality, we add a level of temporal layeredness to the environment: a tragic sense of acceptance and ongoing habitation.



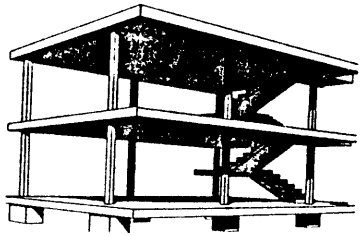
o FRAMEWORKS

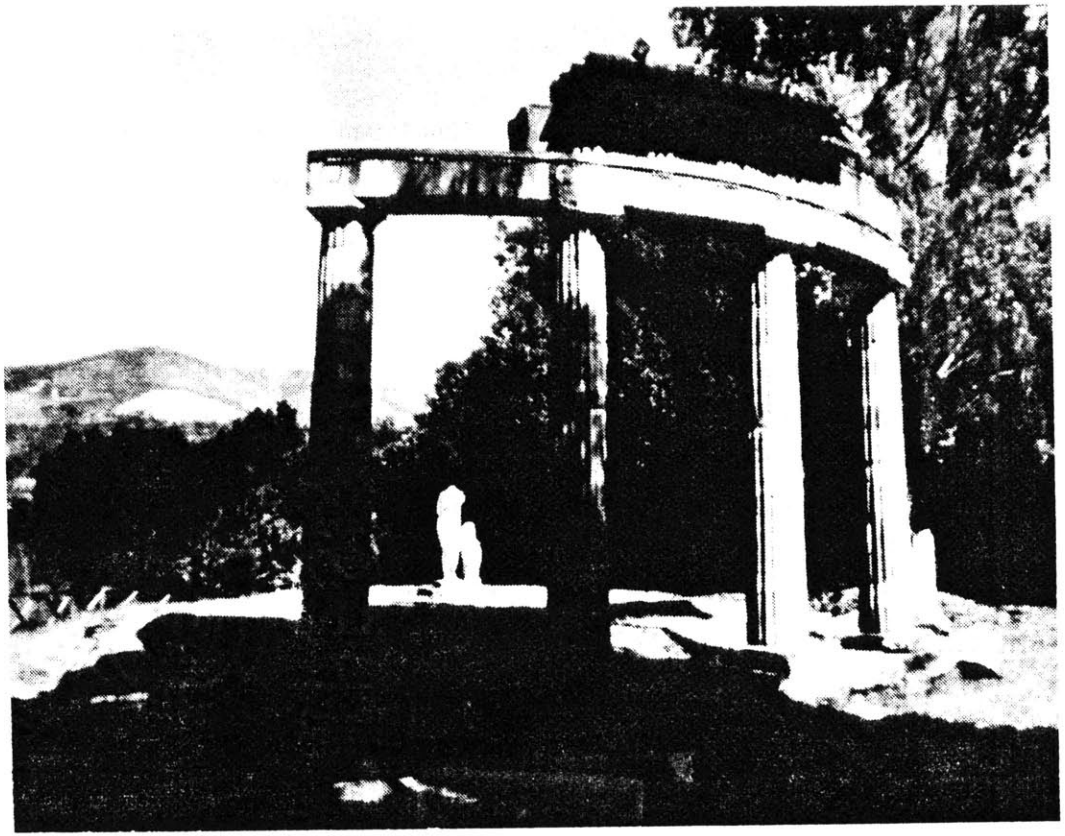
Purely lineal frameworks, such as structural steel skeletons, are just bare bones: extremely minimal definitions which give few clues except to cover it up with a "skin". They lace range and variety of definition. A proper framework, as with any building system, makes some sense as physical definition on its own, even without the heavier and lighter systems of definition which interact with it. A framework must be something that can exist by itself but leaves froom for and encourages additonal definition. Further, there must be the possibility of relationships between every system of definition and every other system.

Thus, if glass can only go into holes formed by concrete, the glass as a system is completely dominated by the heavier system, the relationships or static and unchanging. Even the lightest building systems must have the possibility of taking over in some places, so that the system is not completely, and predictably hierarchical.

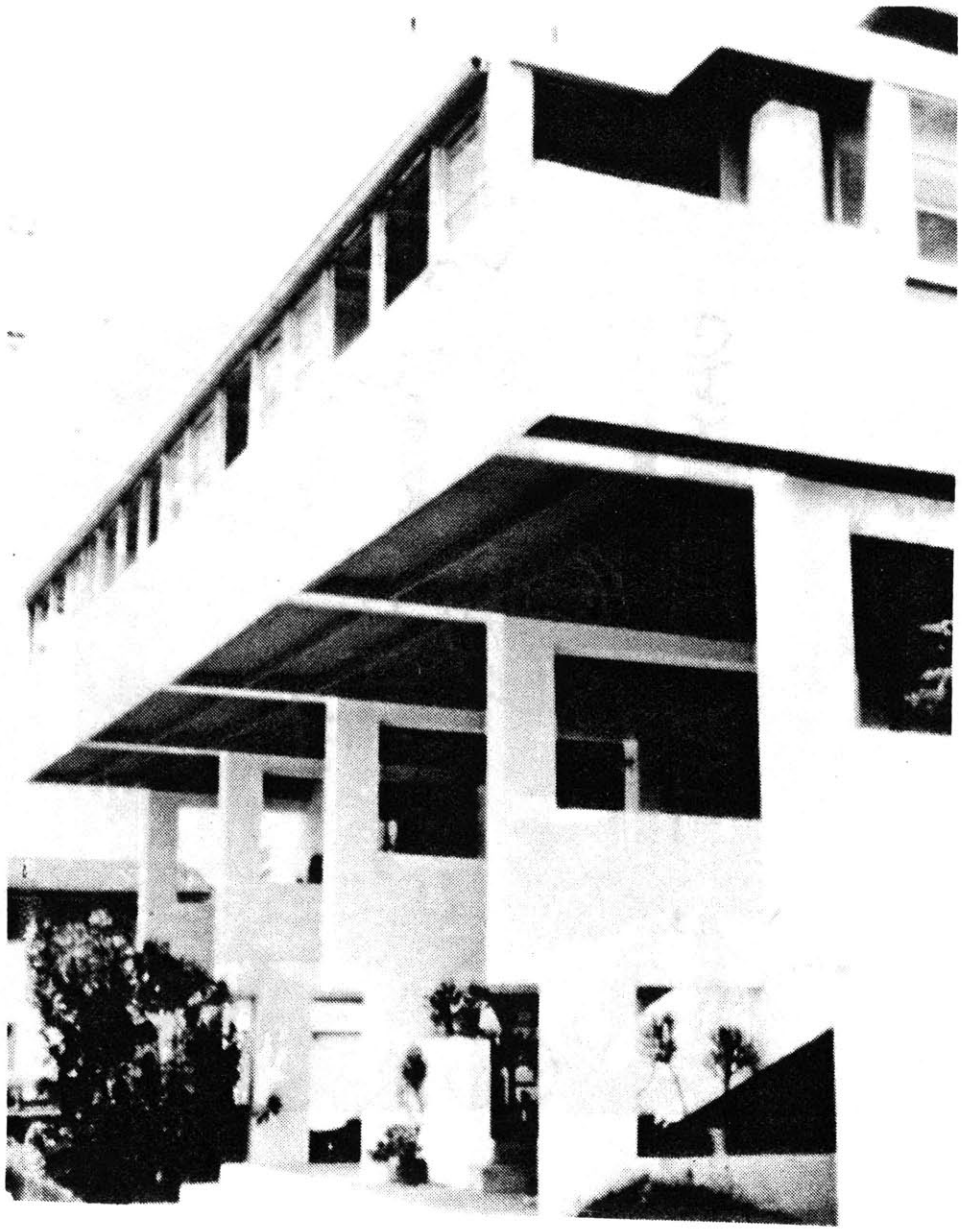
FRAMEWORKS

*EVERY SYSTEM CAN INTERACT WITH EVERY OTHER SYSTEM





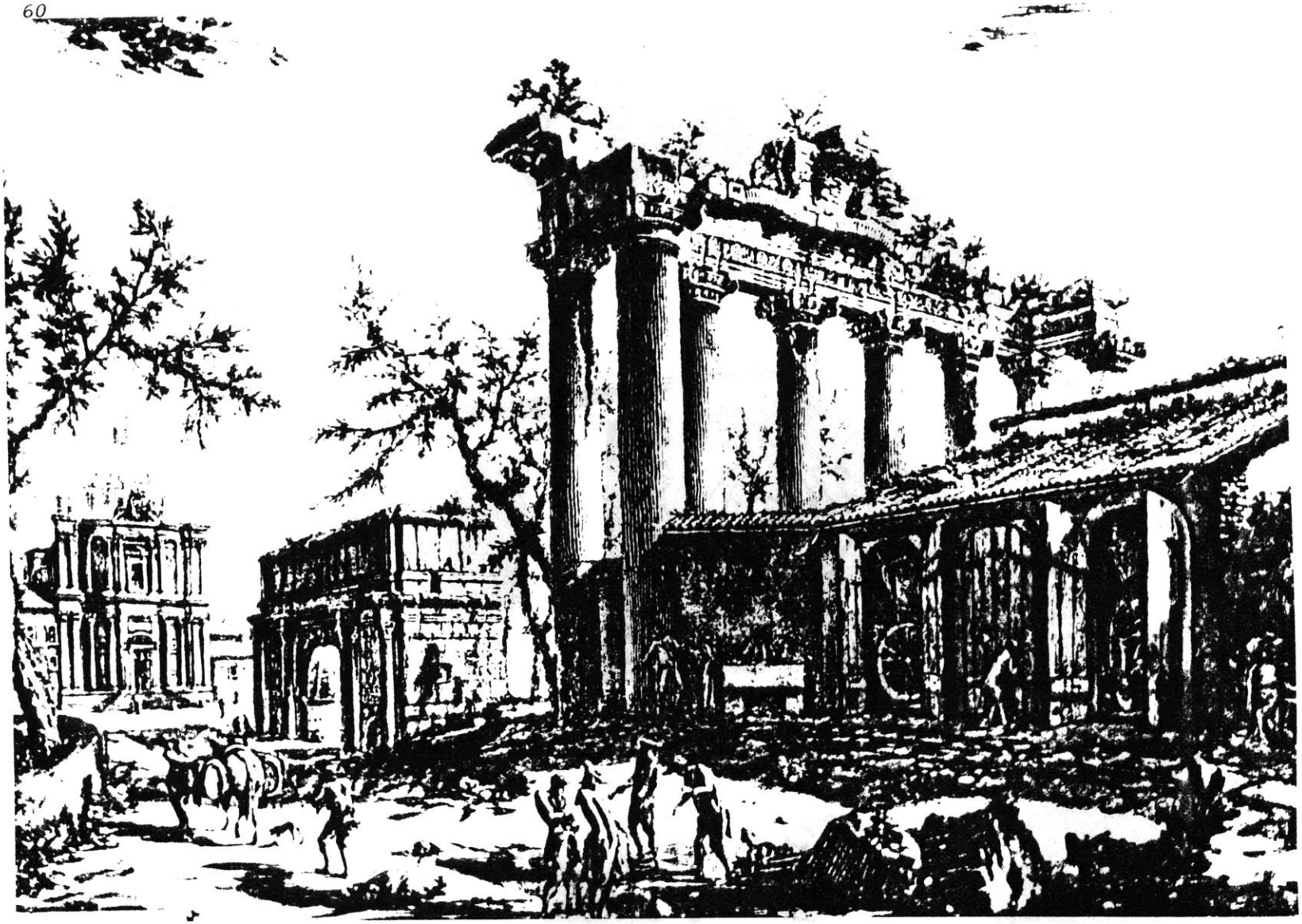
Frameworks and fields are essentially junctions of partial definitions.

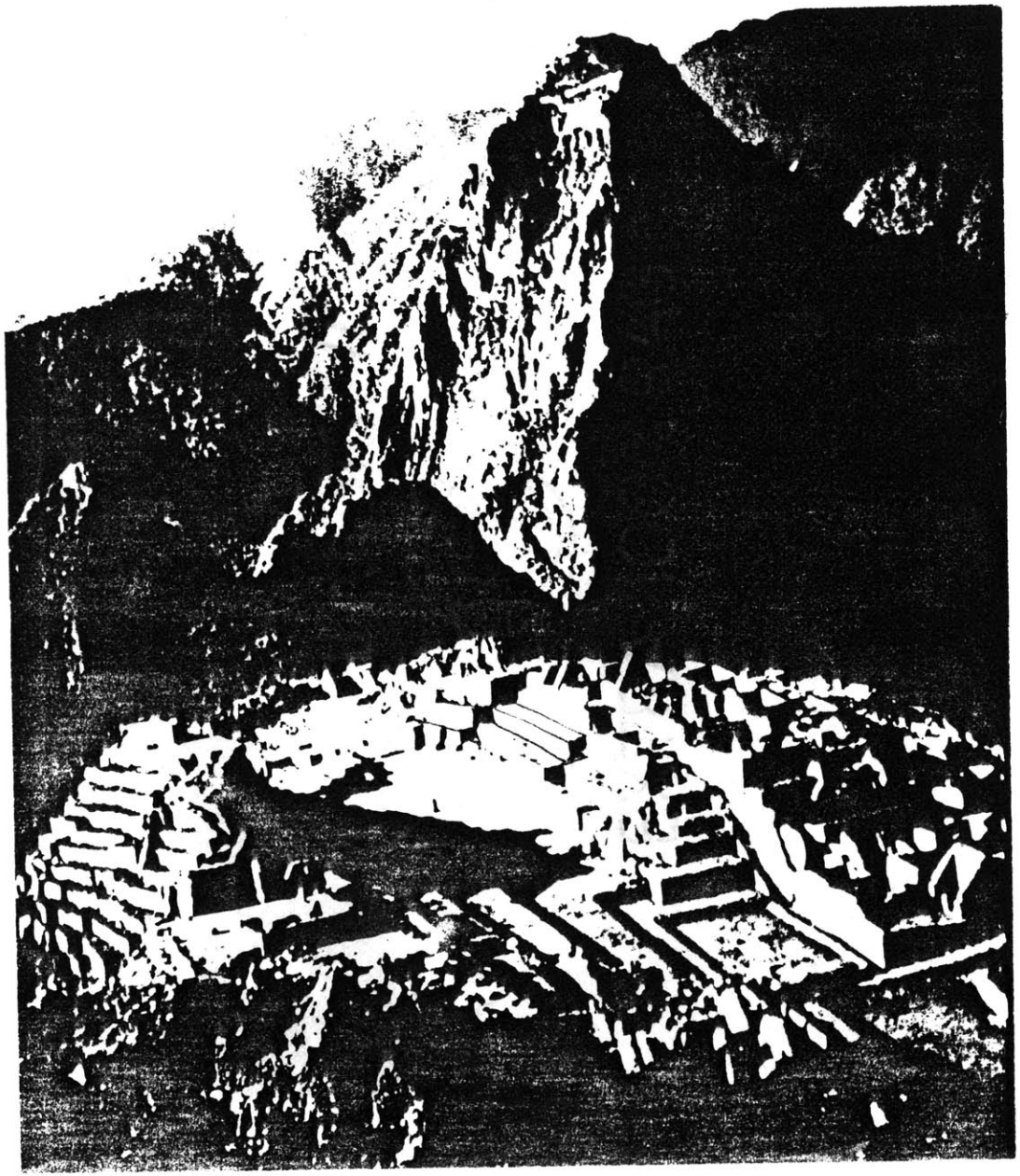


"Layering is used as a deliberate device of aesthetic expression-- the visible accumulation of overlapping traces from successive periods, each trace modifying and being modified by the new additions, to produce something like a collage in time. It is the sense of depth in an old city that is so intriguing."

Lynch, What Time Is This Place, 171.

One of the most powerful examples of a pure field framework house, Schindler's Lovell beach house is particularly appropriate to its southern California beachfront site.





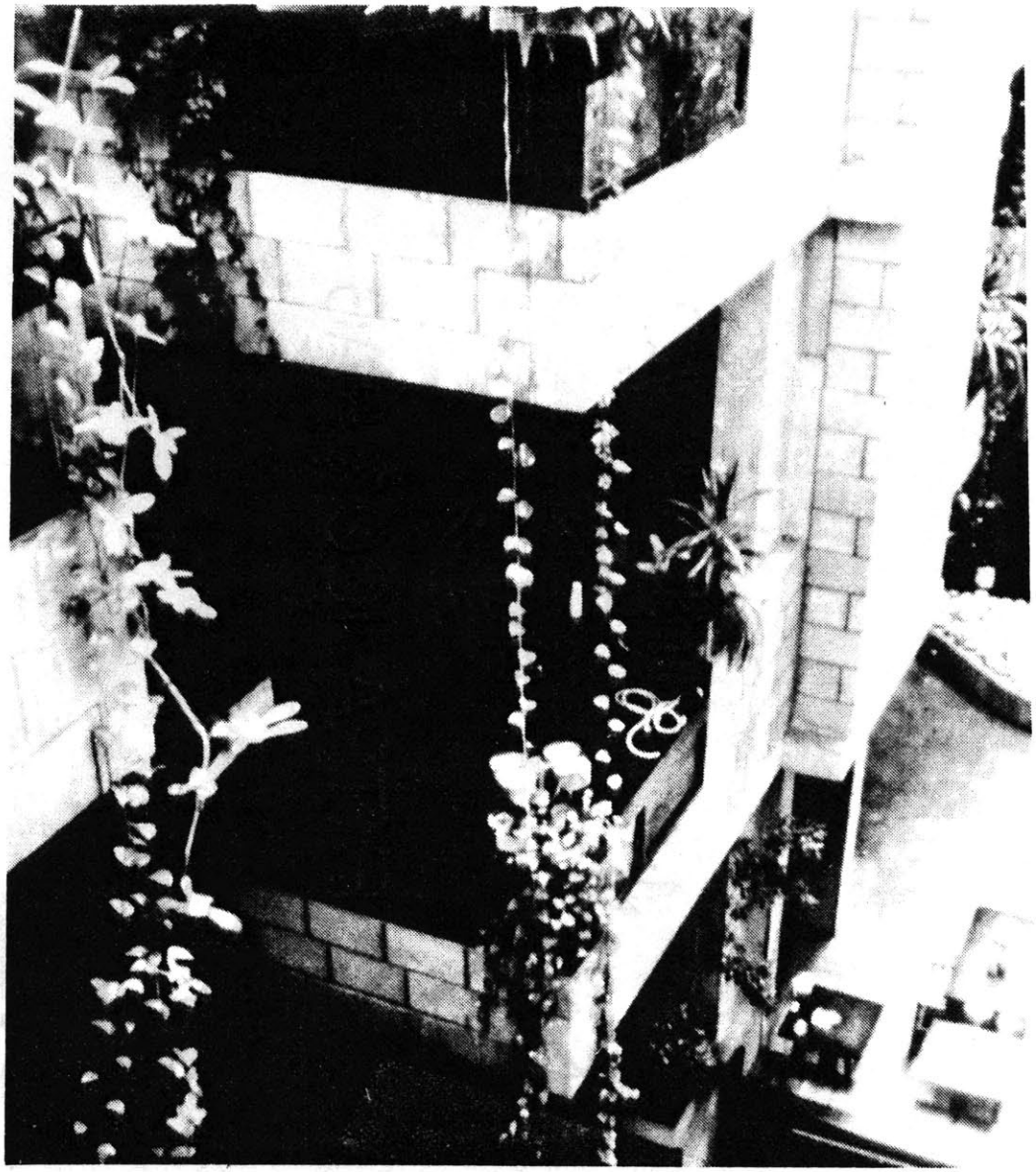
"Ruined structures, in the process of going back to the earth, are enjoyed for the emotional sensations they convey. This pleasurable melancholy may be coupled with the observer's satisfaction at having survived...But at the base the emotional pleasure is a heightened awareness of the flow of time."

Lynch, What Time Is This Place, 44.

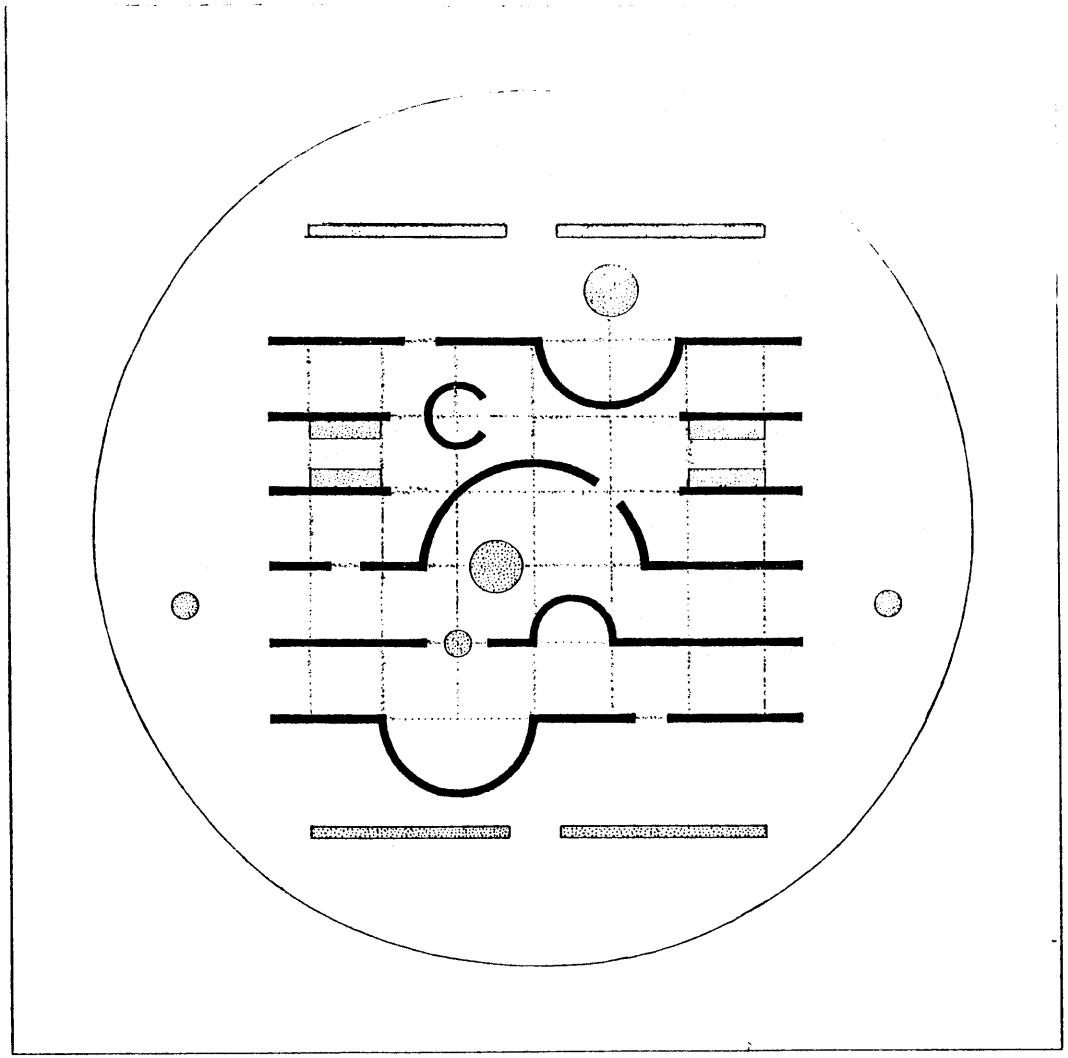
Compare this to the Japanese interest in "utsori" the moment of transition, or Aldo van Eycks' obsession with the "in between realms".

"There is a special poignancy in the moment of transition, in the pleasure of lingering in a doorway, the transition between spaces."

Lynch, What Time Is This Place, 44.

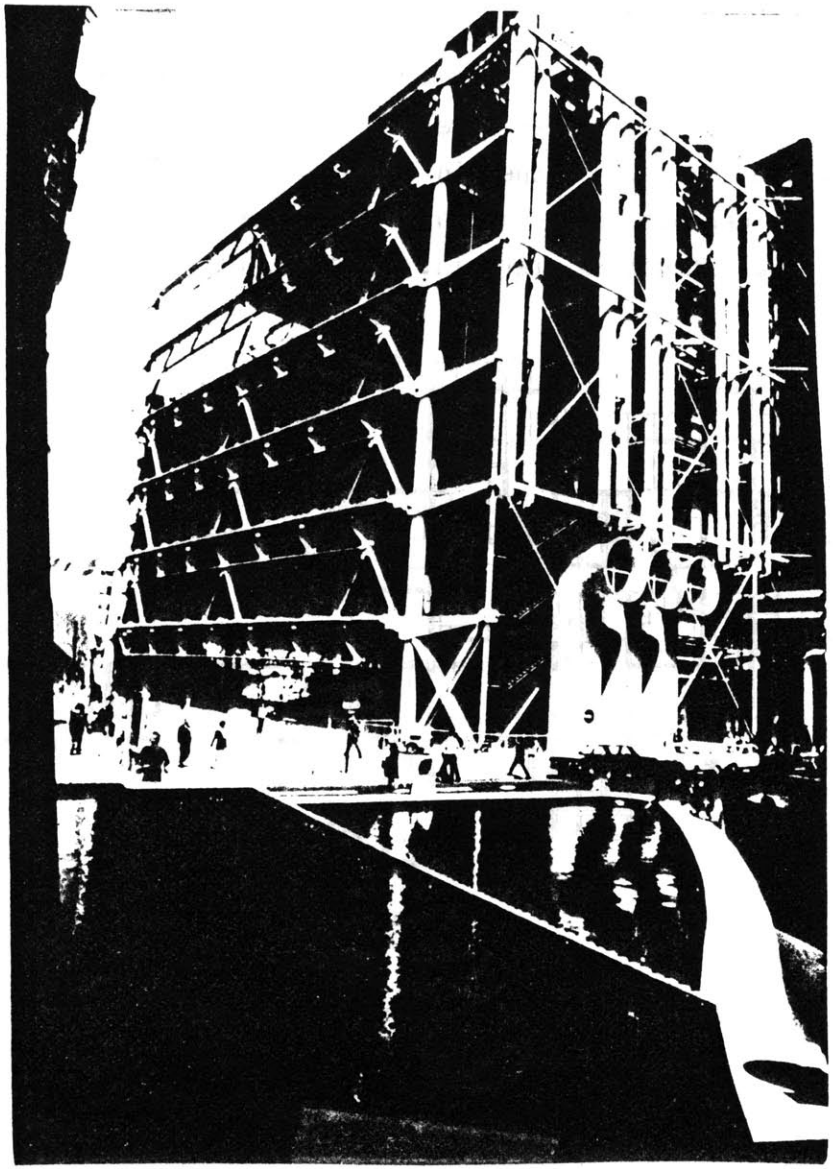


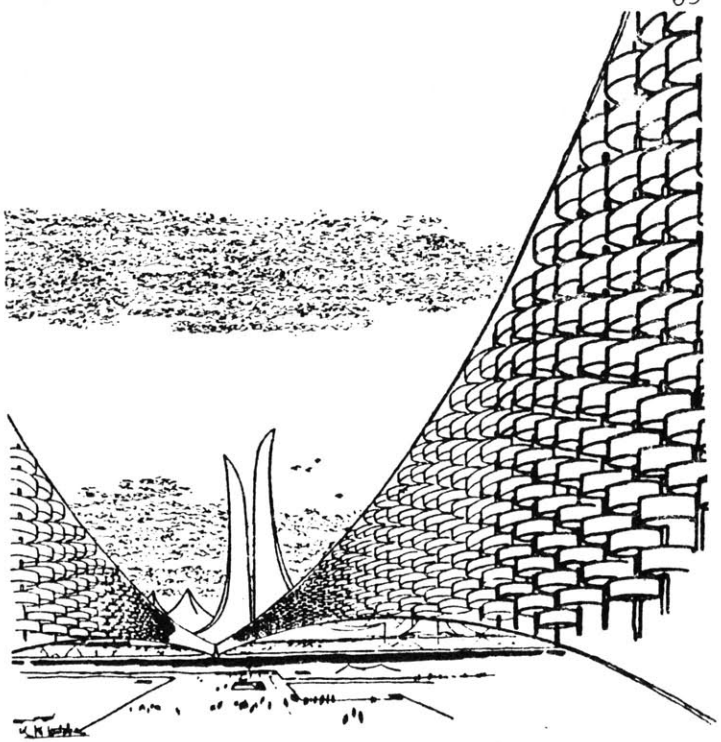
For all its compulsive rigor, Hertzbergers Centraal Beheer embodies the principle of partial definition. At a Harvard seminar on modern architecture, the post-moderns predictably attacked the building, but their only complaint was that "If you took all the plants away there would be no architecture left." This is, of course, precisely the point of the building.



A field form sculpture garden
by Aldo van Eyck

Frameworks were a favorite toy in the sixties, but the misunderstanding of their usefullness was overwhelming. The most common abuses were either totally frame dominated systems (Beauborg and the Metabolist Tokyo scheme) and totally infill dominated systems such as Habitat: overgrown birdcages and three-dimensional Levitt-towns.

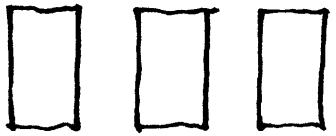




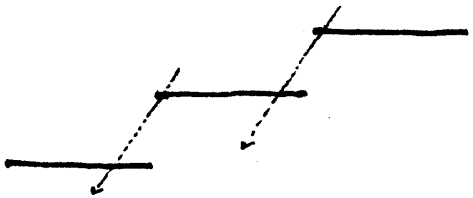
UNITS OF BUILD

*UNITS OF BUILD
*NETWORKS OF ORGANIZATION

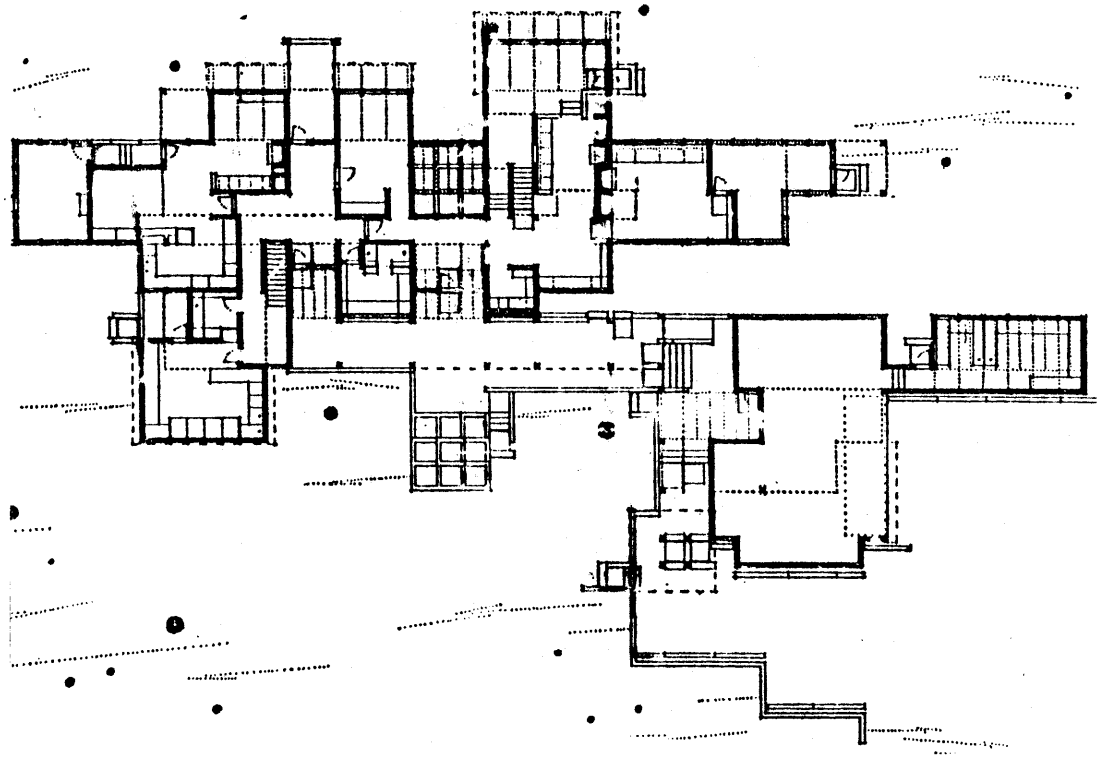
Larger buildings cannot be sustained as pure field/growth form, they require some deeper level of organization. It is often useful to concieve of them in terms of "units of build" which are they deployed in relation to the networks of organization: access, structure, terrain, services, etc.



Units of build.

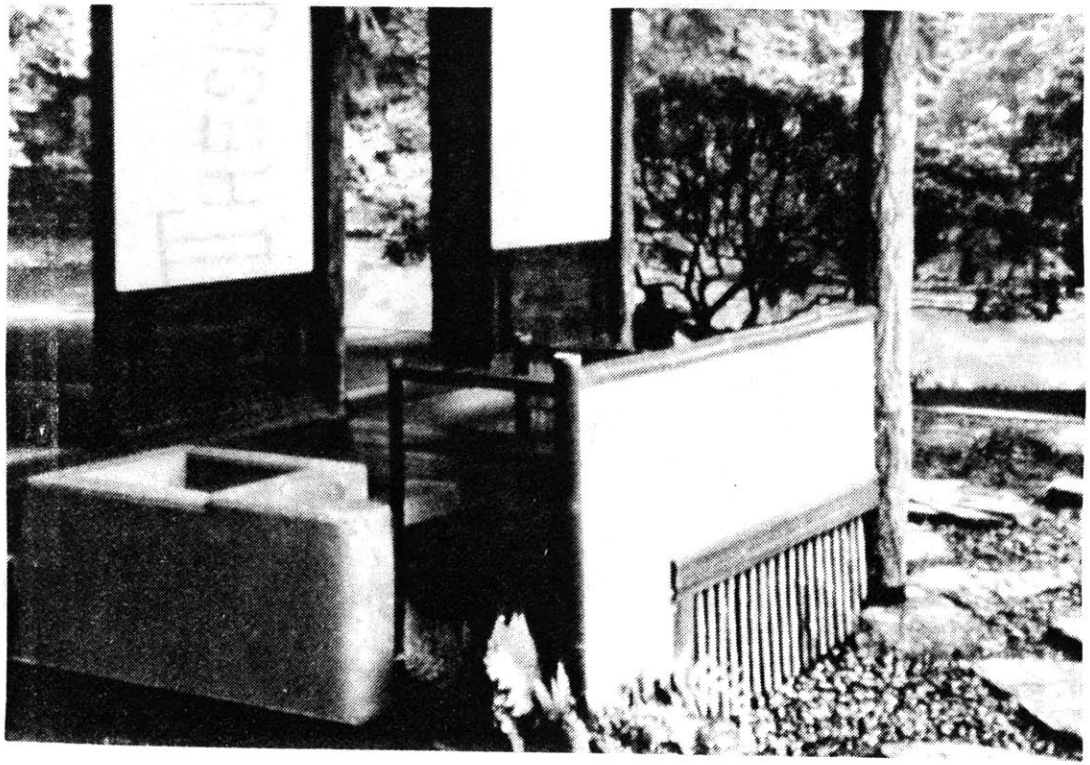


Networks of organization.

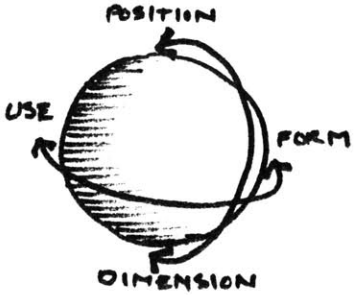


USE FORM

Use form is more than mere rote behaviorism: it is the implied imprint of human construction and use is essential to our ability to understand and relate to an object. It is more than ergonomics, use form says that the thing is "of" us, built and designed and used by people and yet with an integrity of it objectness: its own materials and vocabulary of construction. Not a grown thing or a technological, inhuman object, but a made thing.



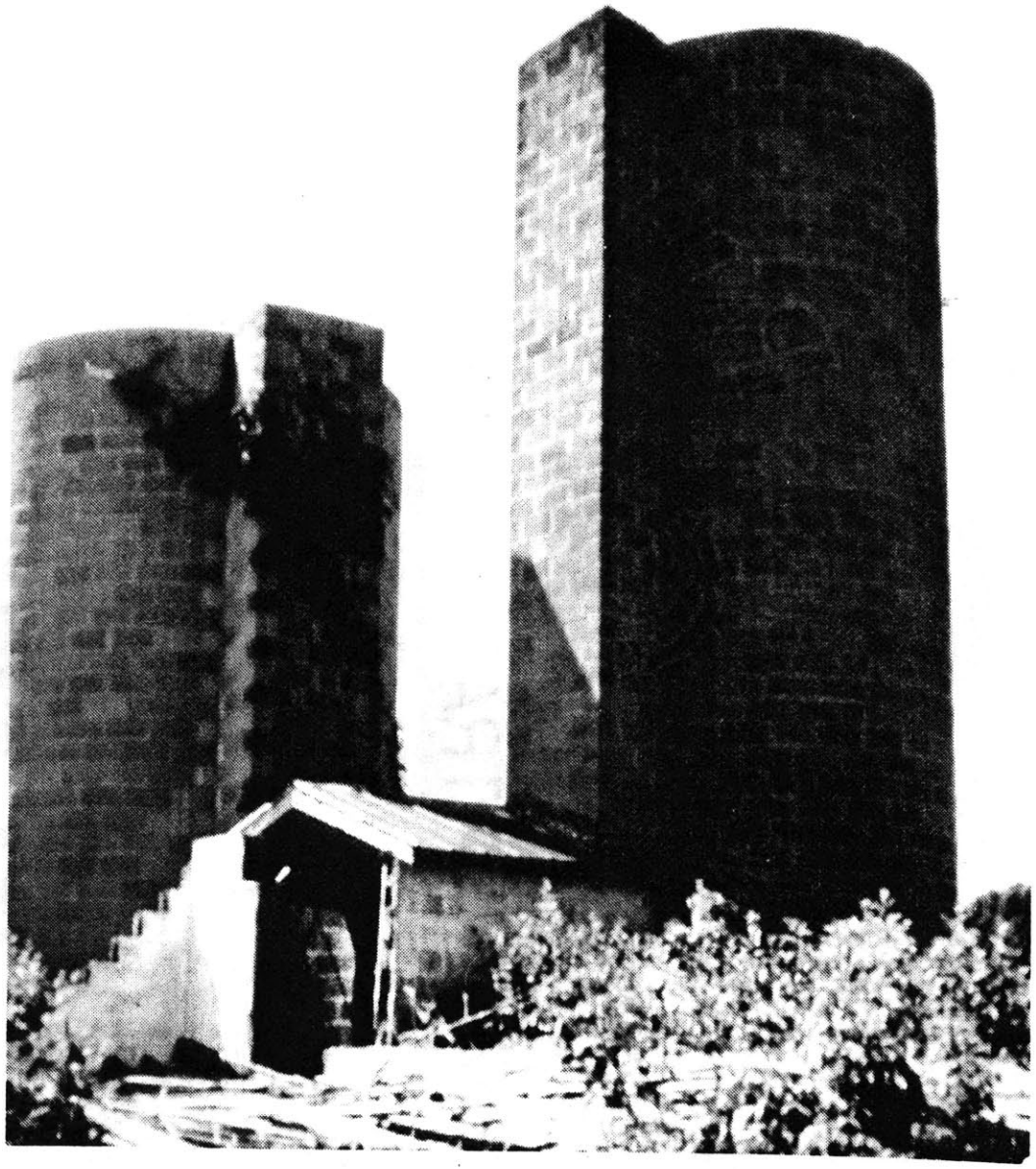
*USE DIMENSIONS
*INTERACTION OF ACTIVITY AND SPACE
*PHYSICAL FORM IS REAL



Use and form continually shape and define each other. in an unending cycle of reciprocal redefinition and thus form a union, not a division, of the physical and non-physical, the social and conceptual.

Aldo Rossi, among others, purports to have rediscovered the power of "pure form" (remarkable discovery for an architect), yet he seems to not be able to do anything with it except leave it laying about like terrorist, overgrown sculpture.

Form which derives from use (at all levels) can forge a powerful connection between the physical and the conceptual, while at the same time participlating as a piece of the physical definition, not just loafing in the corner like a beatnik poet expecting society to support him.



Use form is usually a part of he latency of the environment, it need not be singular, "designed" furniture. Even furniture will be used in wasys not anticipated.

USE DIMENSIONS

*DIMENSIONAL LATENCY

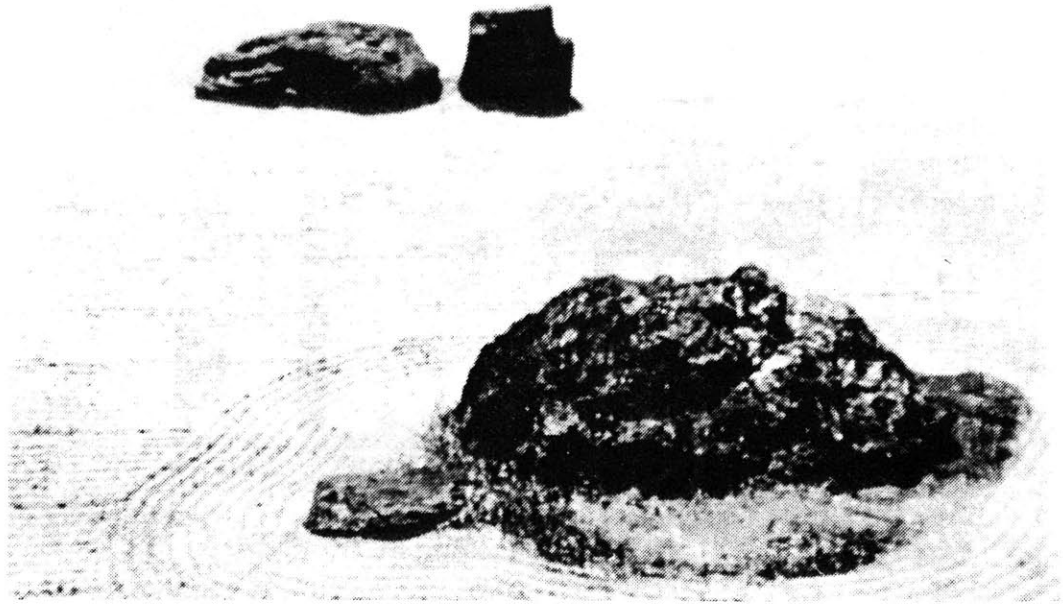
Habitable territory is usable territory. This includes implied use. Because we say that most dimensions should be use dimensions does not imply that every nook and cranny, every horizontal and vertical surface must have a singular, defined and explicit immediate use. If a place contains a large number of human use type dimensions we will perceive it as a "human" place".

RECIPROCAL DEFINITION

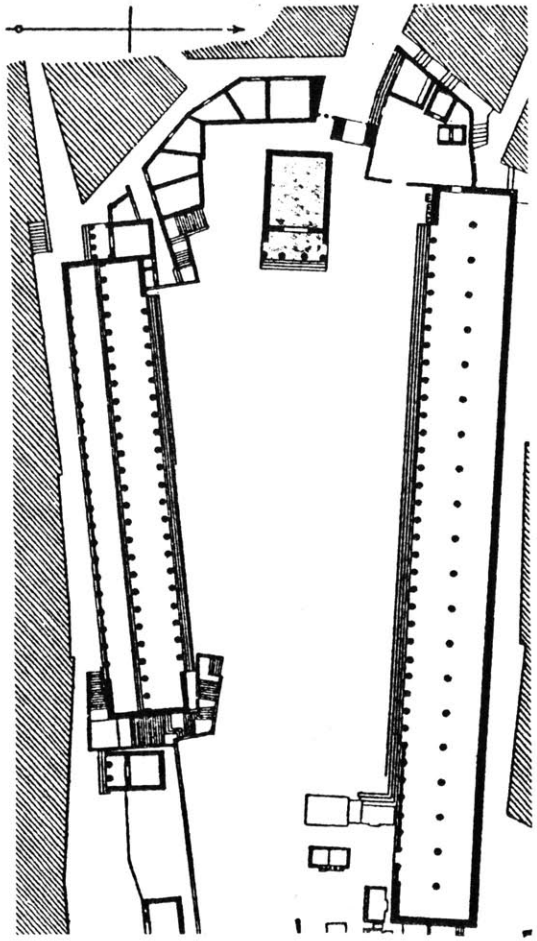
Zones which are isolated and self-defining can draw nothing from the definition of other spaces. We know a thing not only by what it is, but by what it is not. Zones must be defined by their polar opposite.

Public and private zones must interact in this way to be mutually defining. The actual privacy can be maintained in other ways: level change, privacy turns, screens, etc.

By this principle, every field needs its opposite: an object contained within it.



*ROCKS AND SAND
*CONTRAST
*INTERACTIONS OF PUBLIC AND PRIVATE

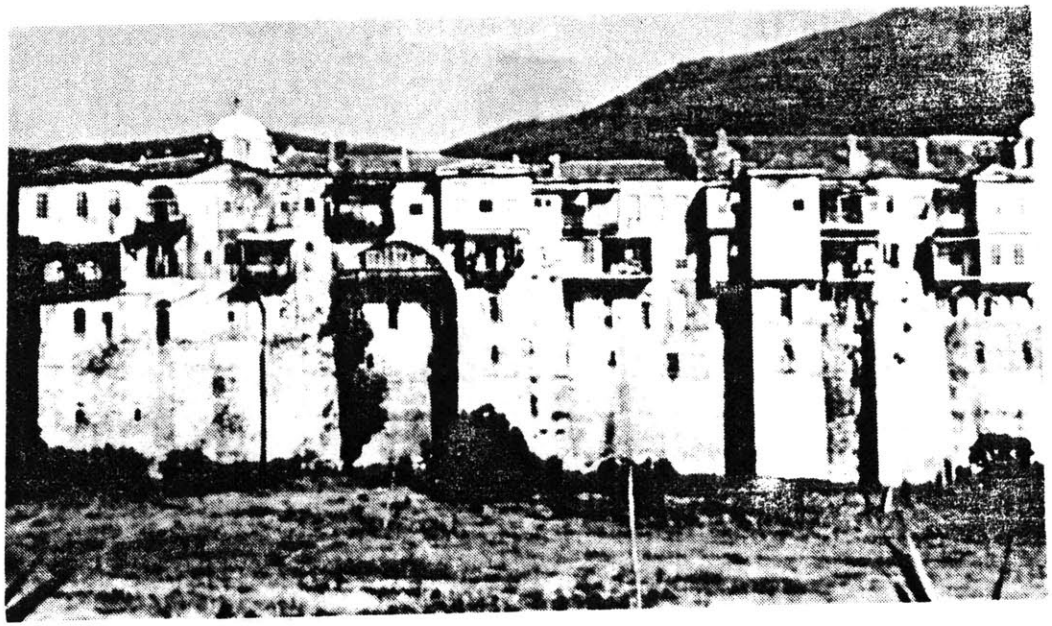


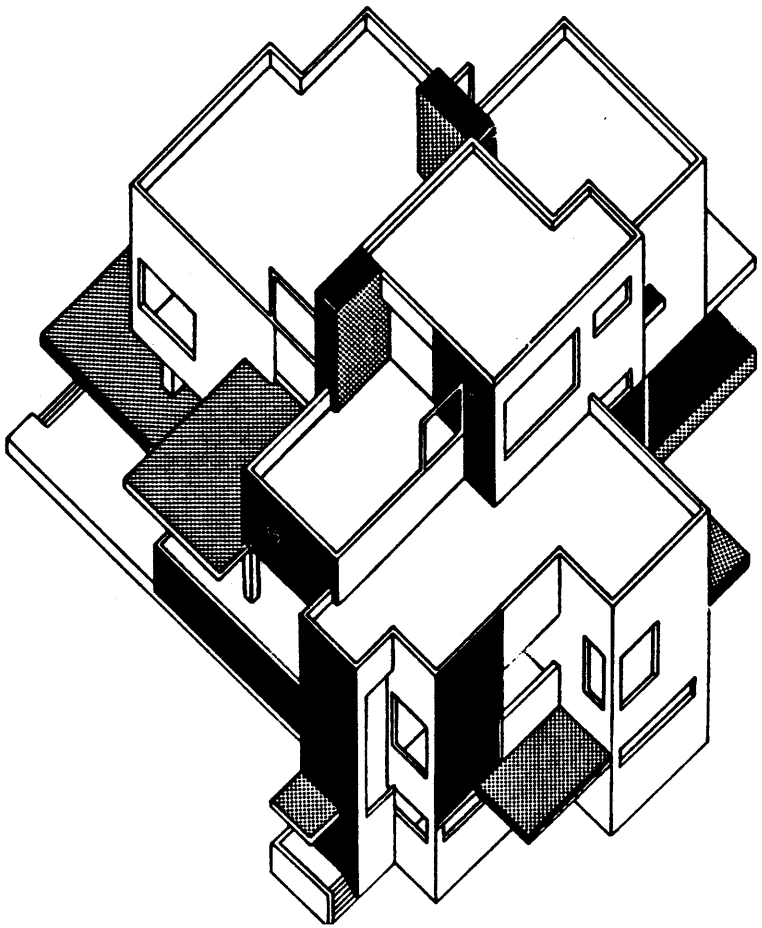
*NO DECISION WIPES OUT A PREVIOUS ONE

ADDITIVE

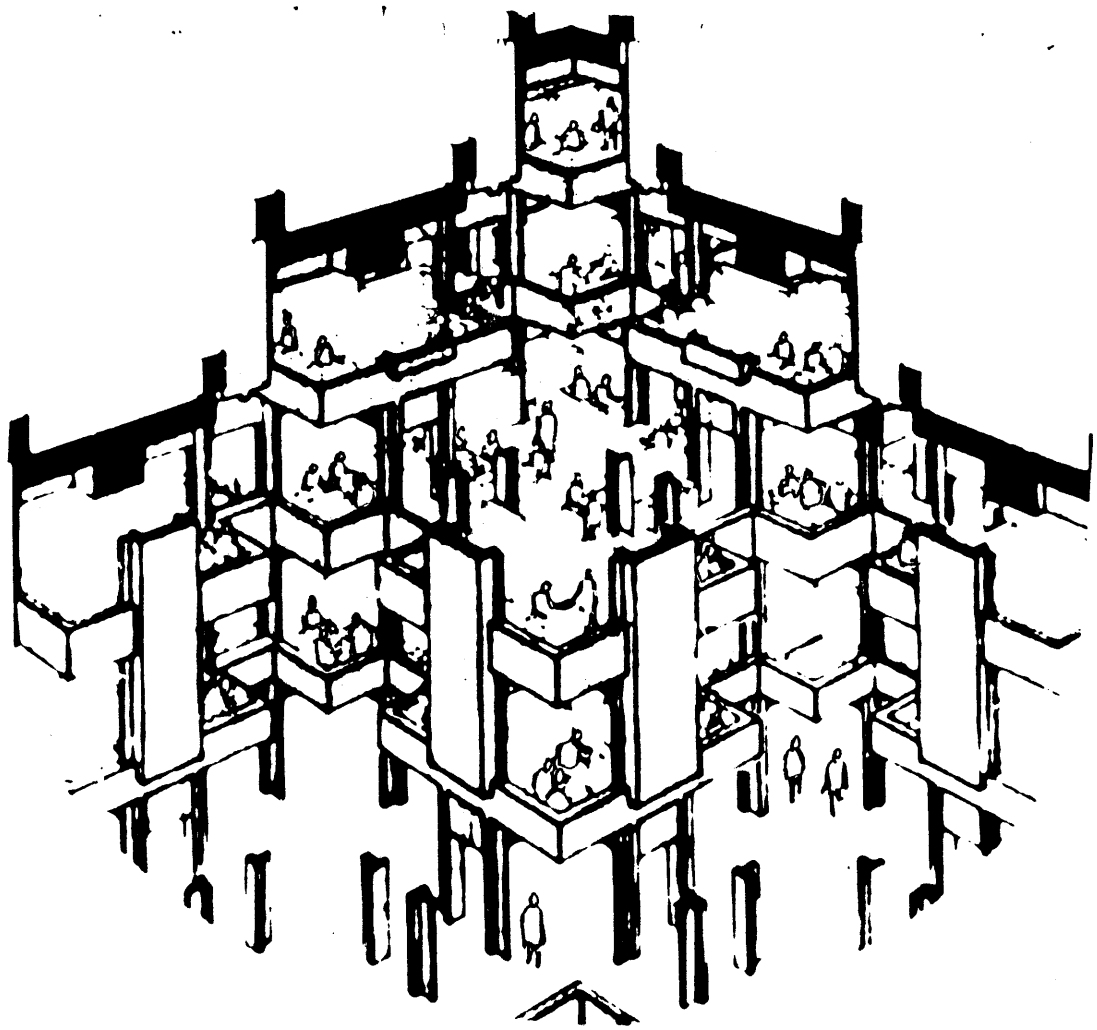
The fundamental idea of making zones, spaces, definition of materials additive is that no level of definition should wipe out a previous level of definition. If the building materials cooperate in some way which creates a synergistic or symbiotic relationship the user can enjoy the value of each material or zone plus the combination of the two.

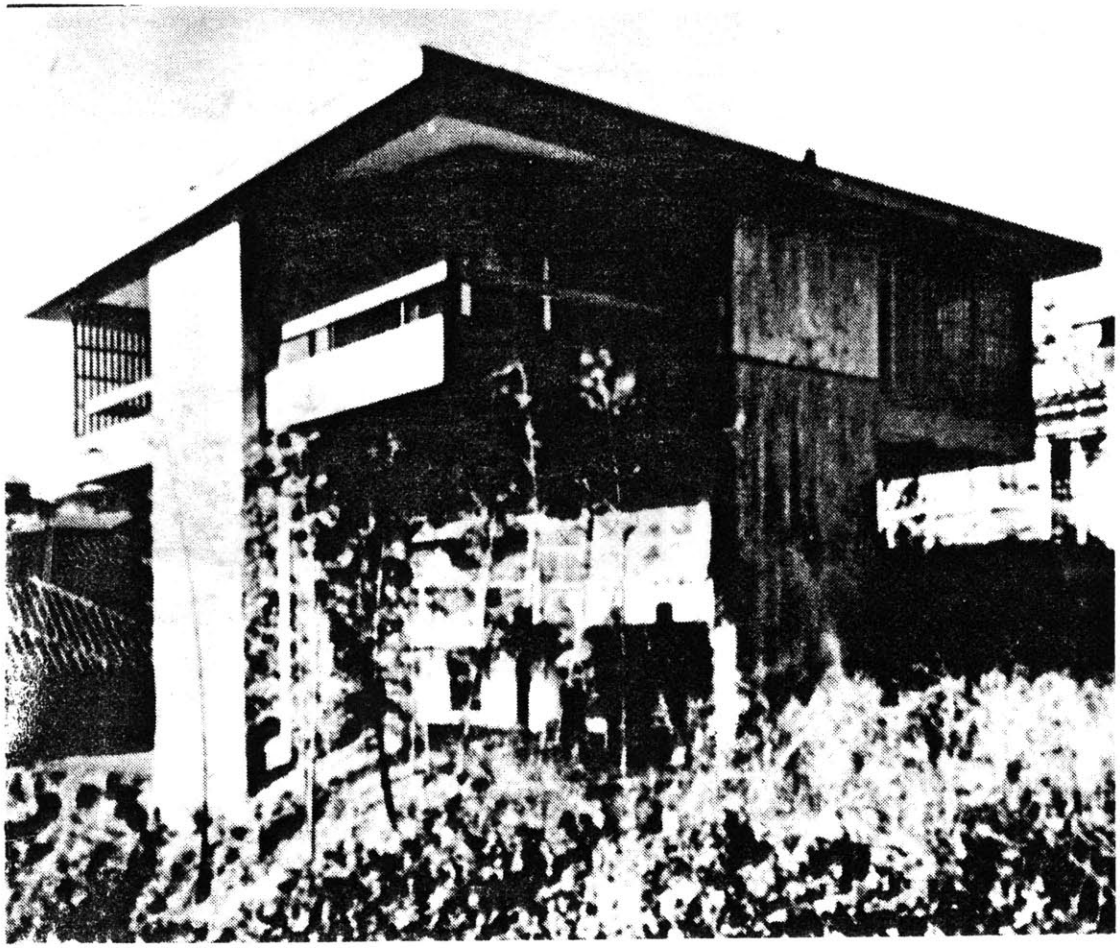
Further, each system, although a part of the whole, retains its own integrity, its own dignity.





In additive form, no level of definition should destroy or "cover up" a previous definition. It should all to it and modify it, but not make it unnecessary.





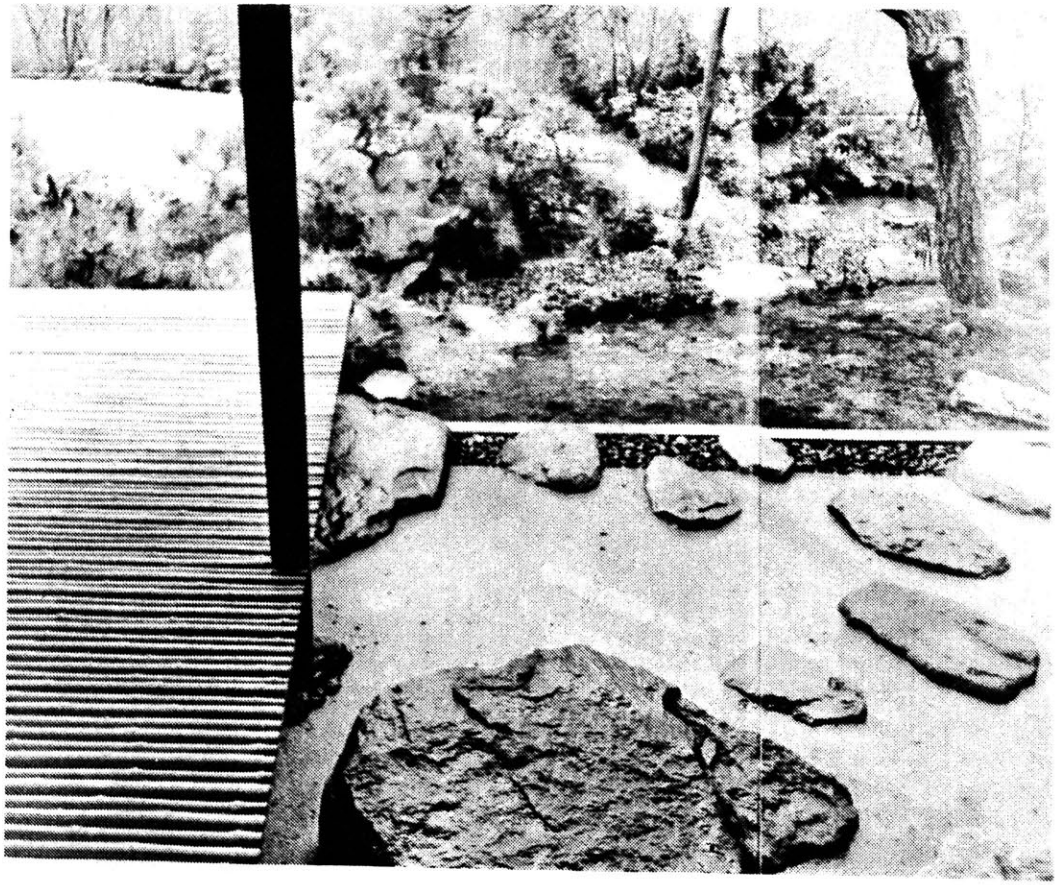
An illustration of the meaning of additive form: this Japanese house uses the same basic element as Hertzberger's Centraal Beheer, but because there is is only one, it becomes an overpowering and stiff object form.

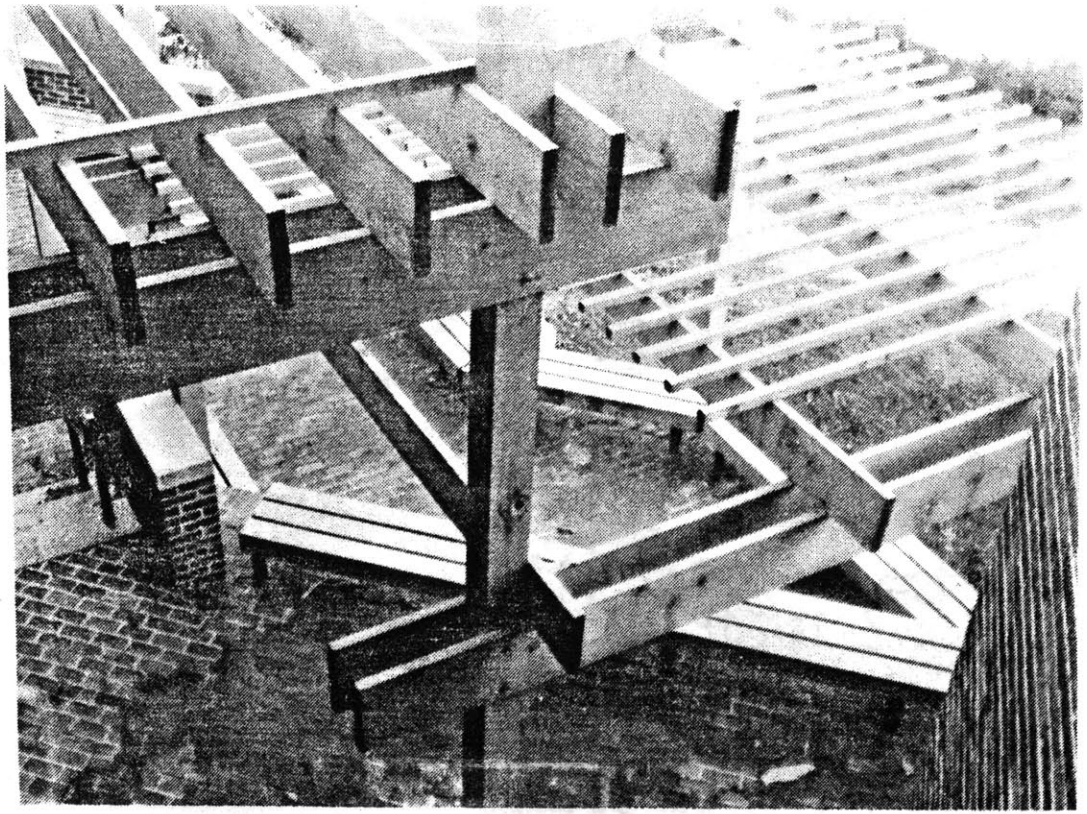
BEHAVIOR OF MATERIALS

*MATERIALS ARE REAL
*MAKING GEOMETRY BEHAVIORAL

A place can be built and associative only if the materials are used in usch a way that they are "real"

Materials are real only if their inherent behavior is recognized and dealt with and treated with respect.





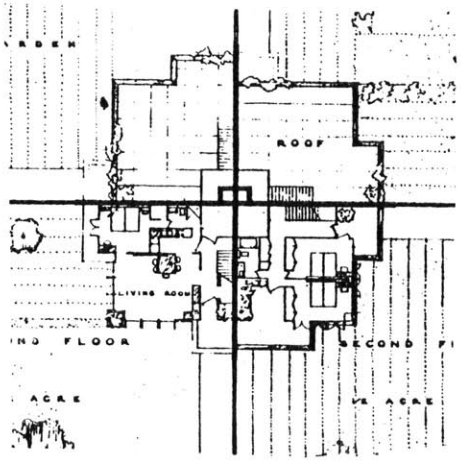
SYSTEMS INTEGRATION

*ENVIRONMENT AS COLLAGE
*EACH SYSTEM TELLS ITS OWN STORY

Within an additive framework method of building, each system must be able to exist somewhat independently, to make some sense by itself, not jsut be an afterthought to some other system.

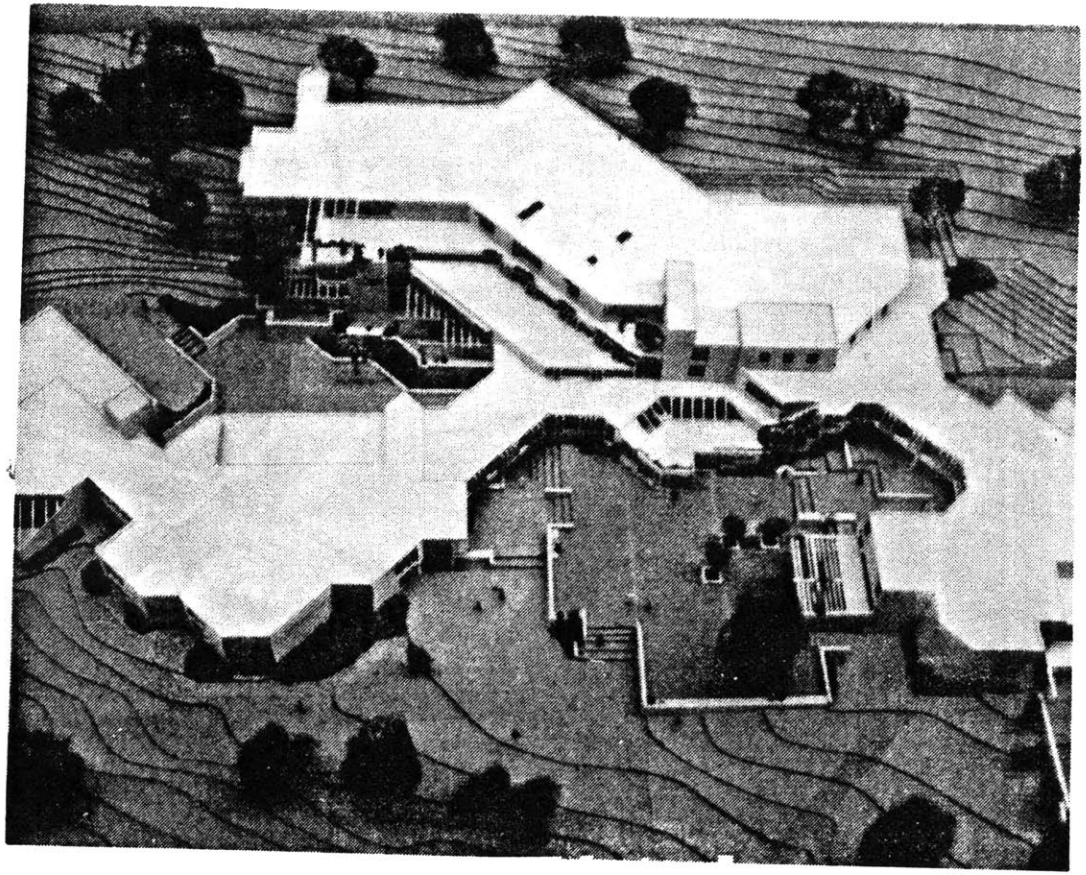
DIRECTION

*CONTINUITY
*CLARITY



The dominant direction of any field should be clear.

Without clear directionality, only rotation and incoherence remain.

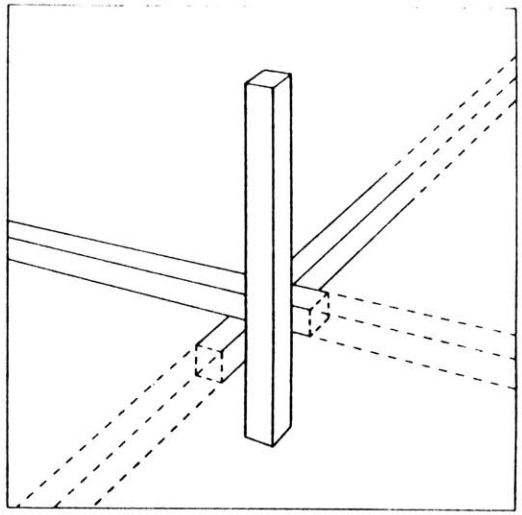


SPATIAL CONNECTIONS

If a zone or object is to be built, the inherent behavior of each piece must be respected. This means that building materials must be butchered as little as possible. For instance, two beans that meet each other should not be cut to an exact fit and butted.

A richer spatial definition is achieved if they pass each other for a space and are secured side by side. This is related to plate shift and slack. The same principle applies to circulation or built zones. Point connections are abrupt, they foster no spatial zones of interchange.

*PLATE SHIFT
*MATERIALS ARE REAL



SLACK

*PARTIAL DEFINITION
OF SYSTEMS
*NO "TIGHT FIT"
*PERMITTING ADDITIVE
SYSTEMS

Slack is part of partial definition. Systems should not be a "tight fit", as so many mechanized building researchers yearn for. Tight fit is a Mechano/Erector set environment. Everything is in its place. There is little room for change/addition/interpretation.

Slack in the major systems leaves territory to be built by the secondary systems, thus creating range.

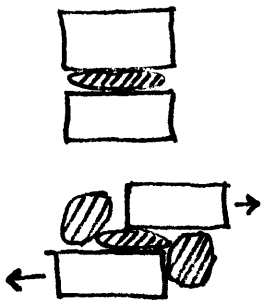


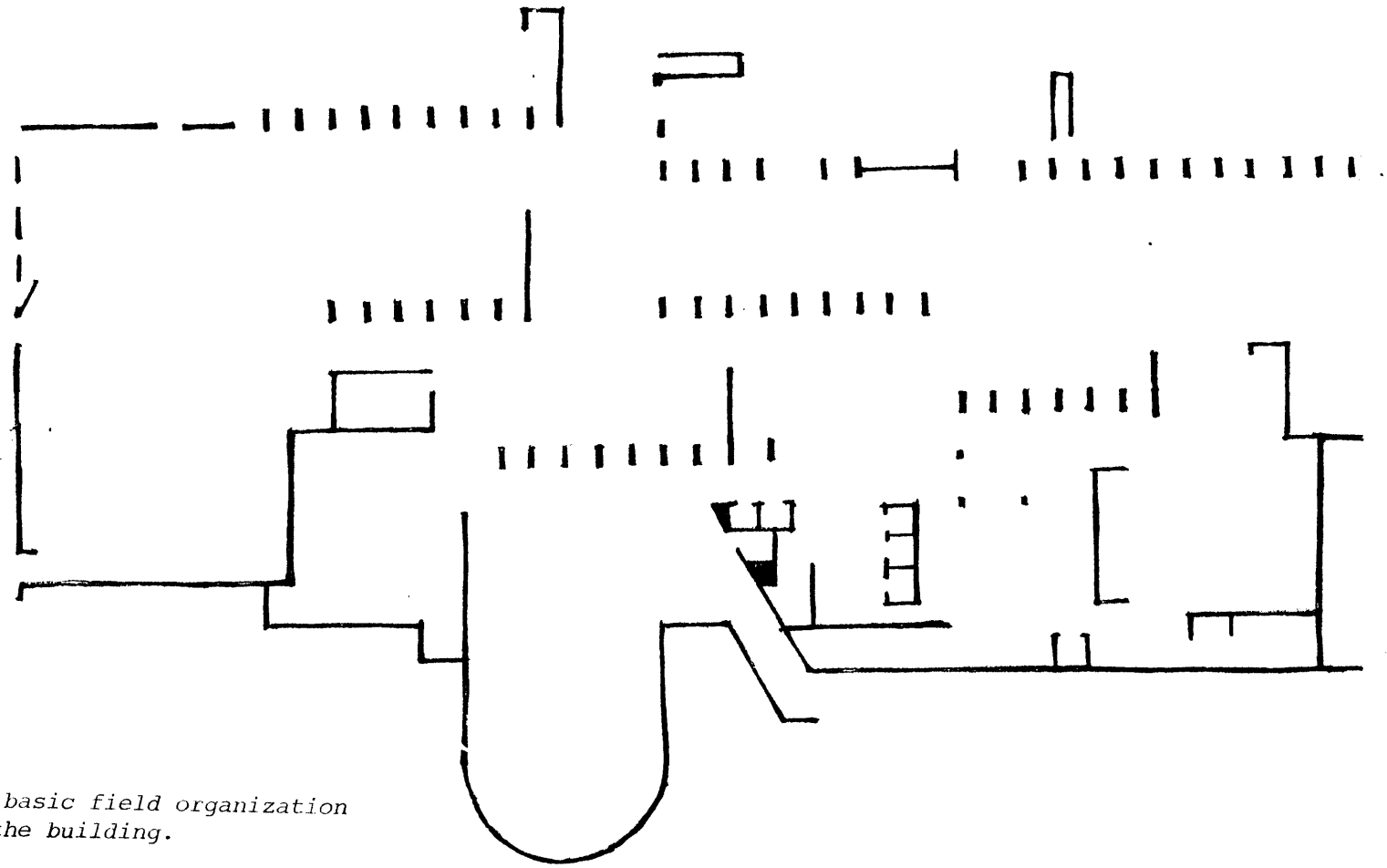
PLATE SHIFT

Exact registration of two objects has the ability to create only one zone between them. If they are shifted slightly, a number of interactive possibilities open up. They applies to any combination of elements.

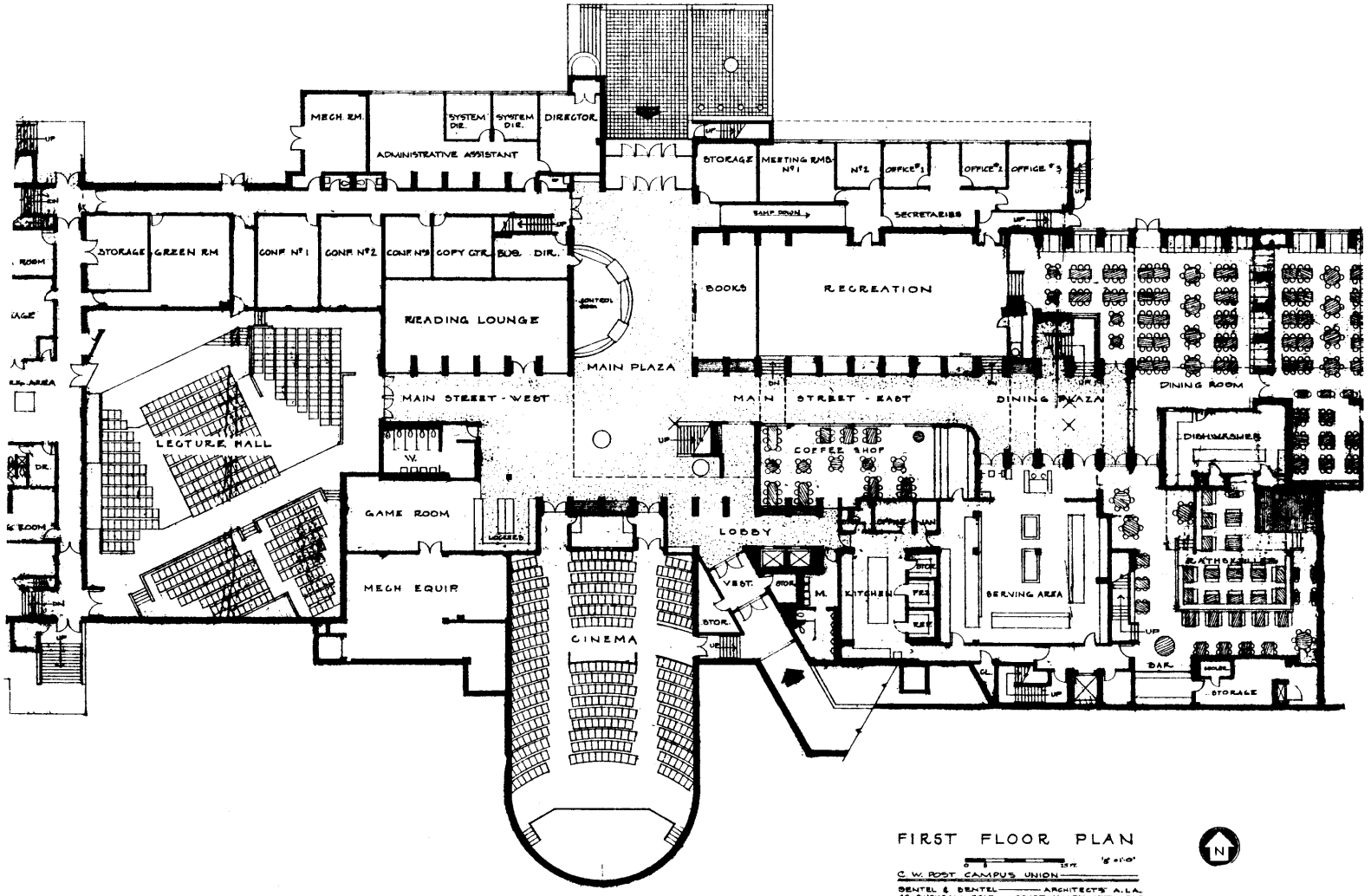
CASE STUDY: A FIELD BUILDING

Case study: Hillwood Commons is a student union at C.W. Post College by Bentel and Bentel, architects.

It is a field form, frame-work type building.



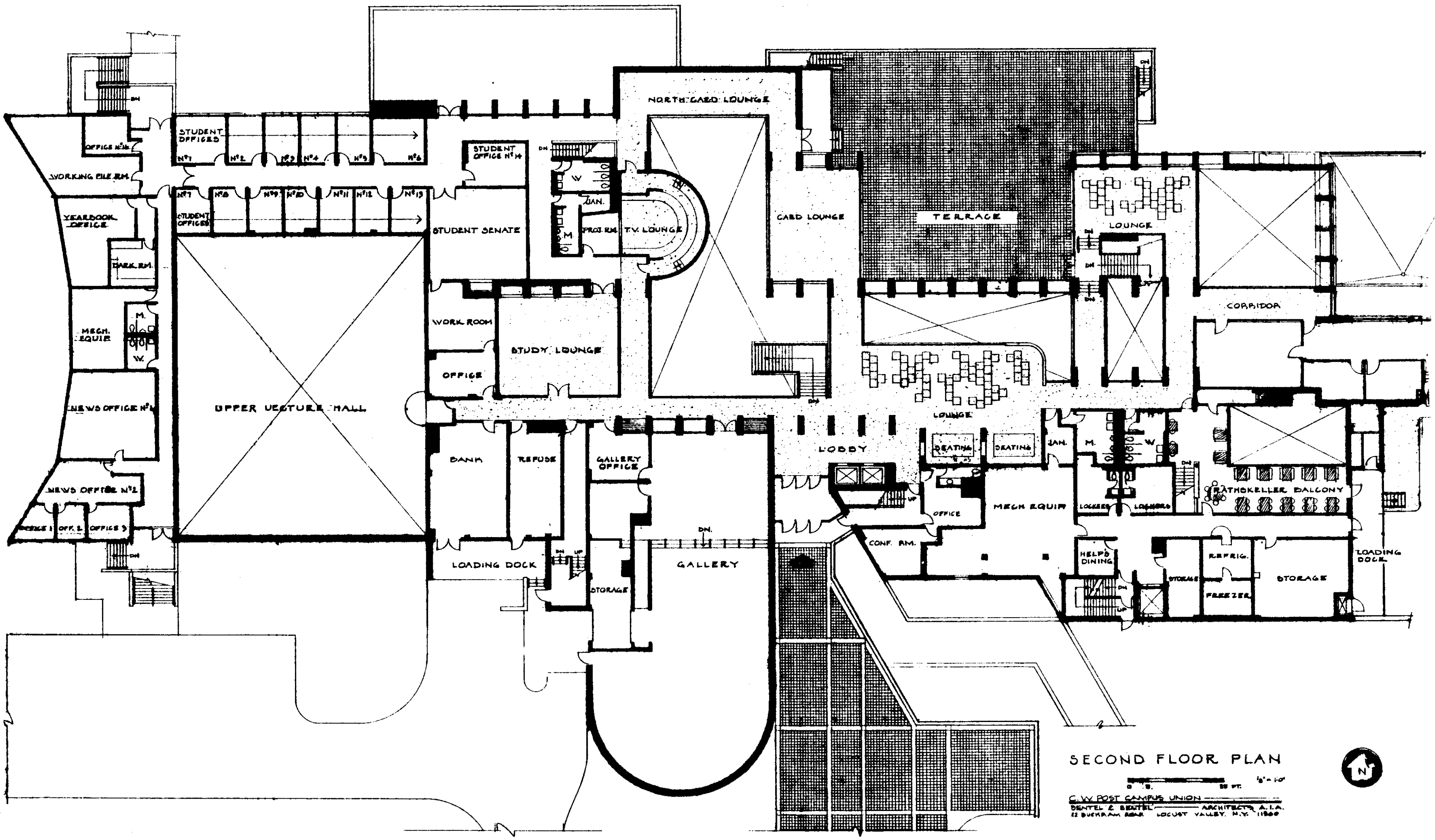
The basic field organization of the building.

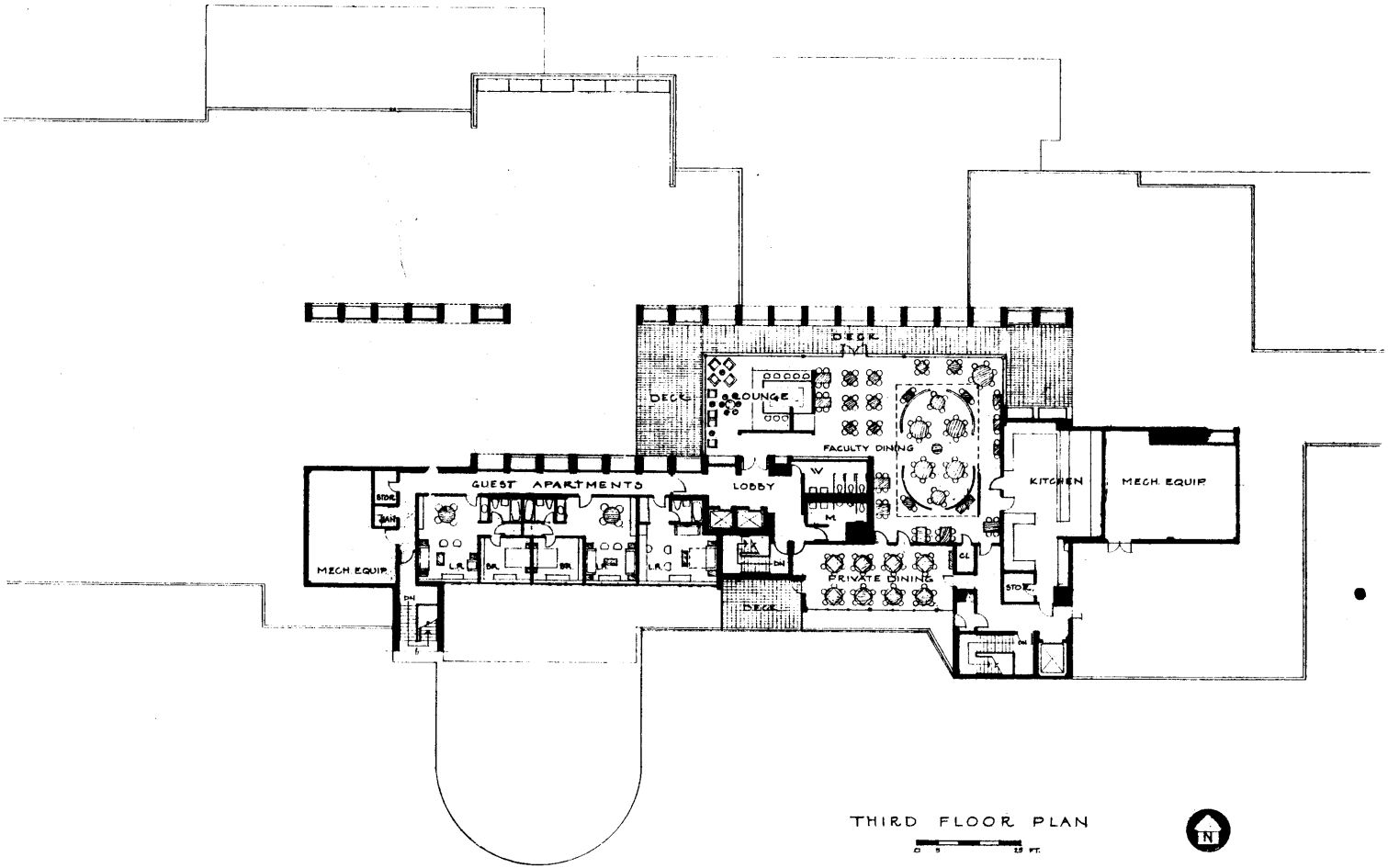


FIRST FLOOR PLAN

C.W. POST CAMPUS UNION

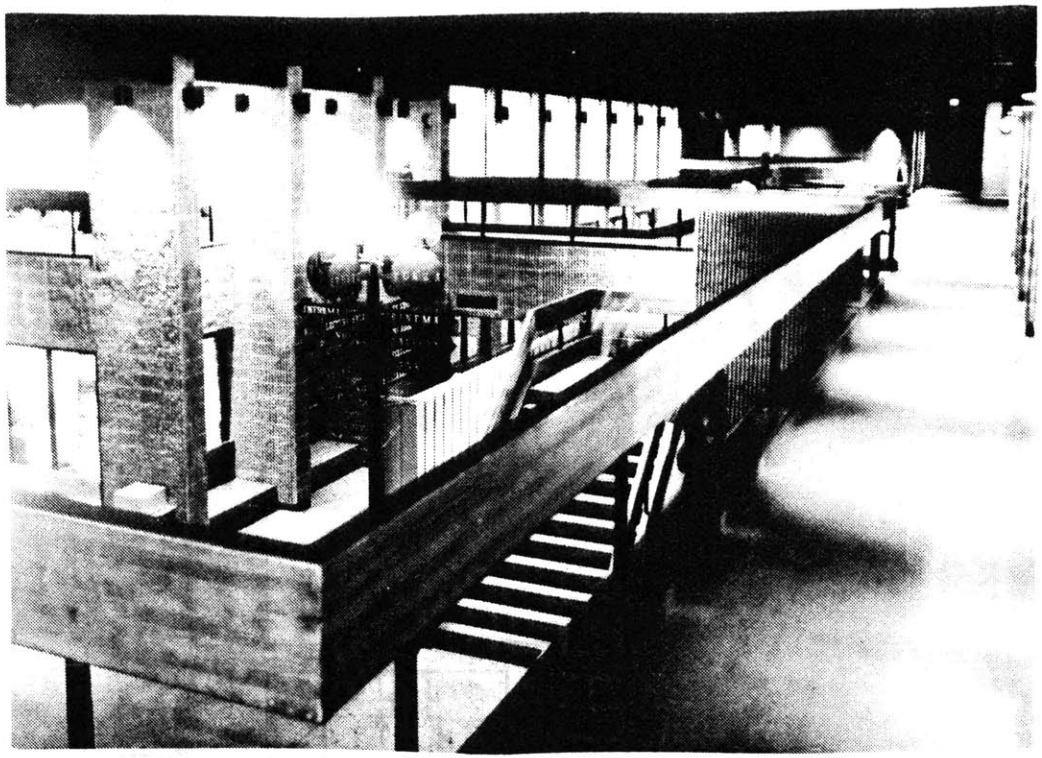
BENTEL & BENTEL — ARCHITECTS A.I.A.
12 BUCKRAM ROAD, LOCUST VALLEY, N.Y. 11560


NORTH CARD LOUNGE
STUDENT OFFICES
WORKING FILE RM.
YEARBOOK OFFICE
DARK RM.
MECH. EQUIP.
NEWS OFFICE Nº1
NEWS OFFICE Nº2
STUDENT OFFICE Nº14
STUDENT SENATE
JAN.
PROJ. RM.
T.V. LOUNGE
CARD LOUNGE
TERRACE
LOUNGE
CORRIDOR
WORK ROOM
STUDY LOUNGE
OFFICE
UPPER LECTURE HALL
LOUNGE
LOBBY
SEATING
SEATING
JAN.
BANK
REFUSE
GALLERY OFFICE
OFFICE
MECH. EQUIP.
LOCKERS
LOCKERS
RATHSKELLER BALCONY
CONF. RM.
HELPS DINING
REFRIG.
STORAGE
STORAGE
FREEZER
LOADING DOCK
LOADING DOCK
STORAGE
GALLERY
SECOND FLOOR PLAN
1/8" = 1'-0"
C. W. POST CAMPUS UNION
ARCHITECTS A.I.A.
LOCUST VALLEY, N.Y.



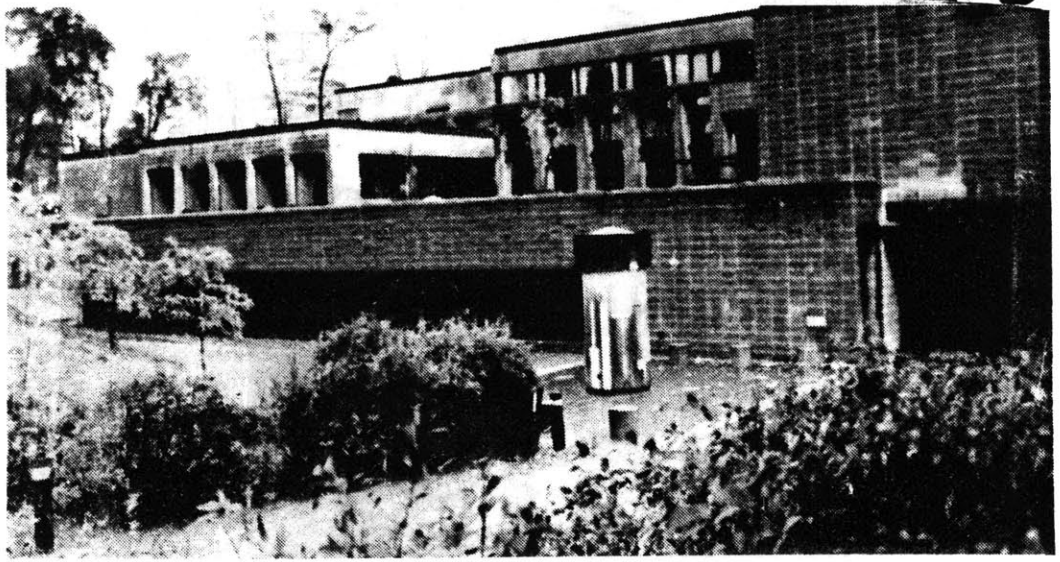
THIRD FLOOR PLAN

0 5 10 FT.

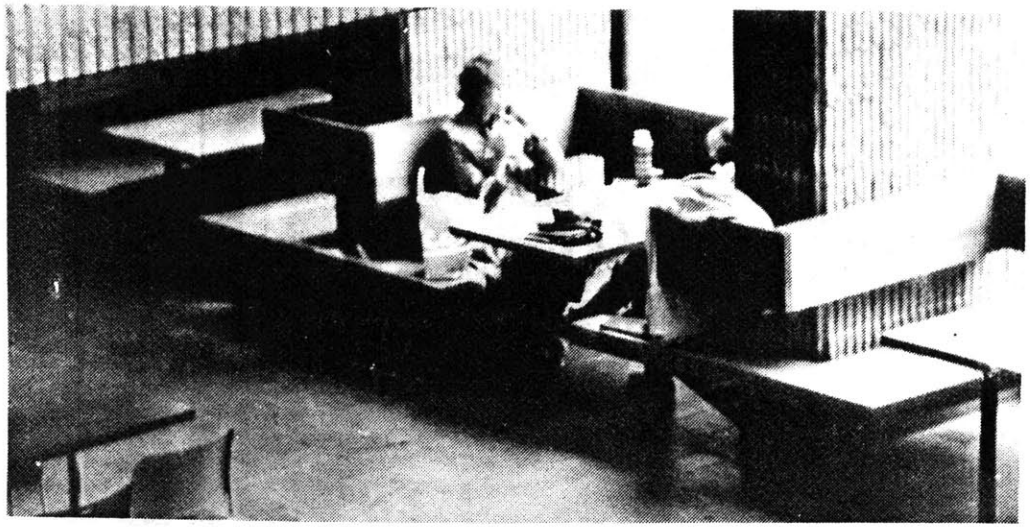


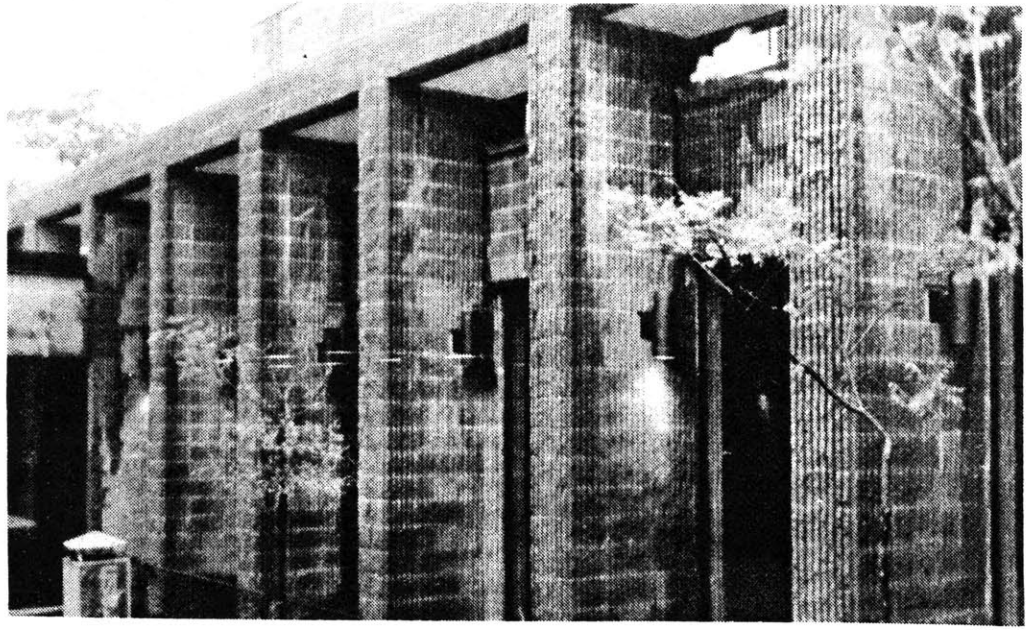
Access wanders freely through the field at the upper level. The two systems are independent but coexist gracefully and in a mutually reinforcing manner.

The field of directional piers at right angles to the direction of travel forms an additive field

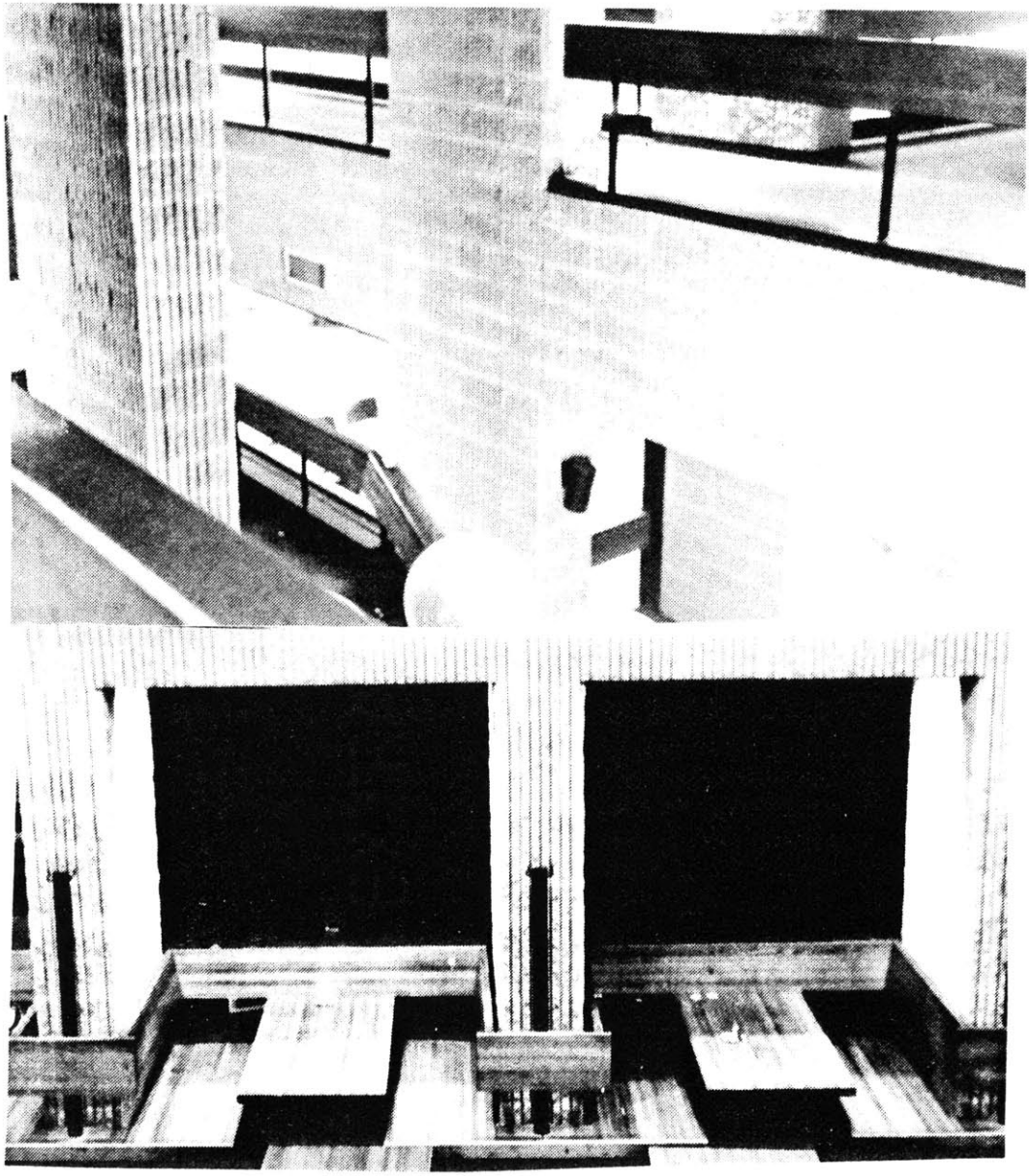


Employing the options of enclosure creates an additive external form which reflects the internal organization of the building and forms exterior spaces.





Where the framework gets to the outside, it forms a fairly classical facade as well as additional use-form definition.



The use dimension which governs the field network is a fairly general and useful size for public buildings, here it forms dining alcoves.

BIBLIOGRAPHY

Alexander, Christopher, The Timeless Way, Oxford U. Press, 1979.

_____, A Pattern Language, Oxford U. Press, 1977.

Lynch, Kevin, The Image of The City, M.I.T. Press, 1960.

_____, What Time Is This Place, M.I.T. Press, 1972.

Schultz, Christian Norberg, Meaning In Western Architecture, Praeger, 1978.

Smith, Maurice, "On built form....", article, Harvard Educational Review, 1968.

This thesis is dedicated to Maurice Smith and Imre Halasz, without whose clarity of thought it would not have been possible.