

Permanence and Change: Architectural Translation from Traditional Japan

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Permanence and Change:
Architectural Translation from Traditional Japan

by

Mindy Beth Lehrman

Submitted to the Department of Architecture on January 13,
1982, In partial fulfillment of the requirements for the
degree of Master of Architecture.

ABSTRACT

There is much to learn from traditional Japanese architecture.

*This thesis distills principles from traditional Japanese
house design. It also explores the synthesis of these
principles into an American context.*

*I have first analyzed the traditional house where I lived in
Kyoto. I have filtered general design principles, and then I
have transformed them to a Boston waterfront site. The design
is one prototype of how these principles may be interpreted.*

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Thesis Supervisor : Eric Dluhosch
Title: Associate Professor of Architecture



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I wish to thank everyone in Japan and America who helped me with this work.

The Western Eye Is an Outsider Among Japanese Paintings

THE NEW YORK TIMES, SUNDAY, OCTOBER 13, 1974

Is it possible that our Western estheticism, which reduces everything to an immediate gratification of the eye, is simply not equal to encompassing the complexity of experience that is embodied in art of this persuasion? I think this may indeed be the case. The refinements of execution and the richness of materials are often so seductive in the work of the literati painters that they can quickly enough be assimilated to our habit of easy esthetic delight, but to settle for this superficial experience is, I am convinced, to miss the real power of this art. It is wiser, I think, to face the fact that there will always be much here to which our own traditions deny us full access.

Bashō declared to his disciples that the two principles of his school of poetry were change and permanence. He wanted his poetry to "change with every year and be fresh with every month." He also said, "I do not seek to follow in the footsteps of the men of old; I seek the things they sought."

*Bashō (1644-94)
Master of free linked-verse and of the 17-syllable haiku*

My thesis has to do with the transformation of traditional Japanese design principles into an American context. My fascination with the topic became indelible when I lived in Kyoto, Japan from July 1978 to April 1979. I found that the most essential difference between the houses of traditional Japan (i.e. a style developed in the 17th and 18th centuries), and of America is that the Japanese houses embody theological principles based on an alert relationship of ourselves to others, ourselves to nature, and ourselves to ourselves. The traditional Japanese house is constructed with relatively strict systems, recognizable to the inhabitants. The houses could reflect what people have universally, but also promote individuality; not individuality despite the community but with it. The openness of the Japanese house and its active relationship with the vicissitudes of nature enables us to recognize ourselves in our everyday experience.

A problem in translating Japanese design into American is that the American has an obsession with outer forms, whereas in the Japanese the visual and physical is secondary to the philosophical and spiritual. However, to communicate ideas there must be an outer form. I am filtering the underlying ideas from each respective cultural and geographical setting and developing a bridge by which aspects of quality in the Japanese house may be used

in the American.

The thesis is organized into two main parts. The first is written and includes analysis. The second is design. In the margins throughout the entire thesis is an auxiliary section I call

a Book of Sources

which is a collection of raw, visual and verbal markers which I hope is an evocative experience for anyone with the desire to go hiking more deeply into those ideological woods.

The range of this thesis is limited to an urban setting, with an emphasis on housing issues. A site on the Boston waterfront was selected for the design project. The design is the result of an imposed system (mine), and eccentric clients (me, for the sake of this exploration). I recognize that a tradition or organizational system enhances moments of inspiration or innovation. I want the system to be born from something other than competitive economics and energy thrift, as is most often the case in Architecture today. Of course I rely on the materials and the techniques available, and sometimes even on other people's prototypes, in order to be understood. A great achievement for me would be to stretch the spectrum of understanding and thus to create a cultural magic carpet on which the observer may

The Japanese scholar, Donald Keene says that this was the reaction of a sensitive spirit against a 17th century "freedom" in poetry which often produced chaotic results, a spirit who also was wary of the staleness and sterility which might come from excessive study and imitation of earlier masterpieces. In this way, Bashō's greatest poetry is an "expression of the point where the momentary intersects the constant and eternal." This is reminiscent of "mythical time", which Mircea Eliade says people of all societies try to reach; when the present meets the eternal in a moment of rebirth.

*"Born of the same consciousness, but realized to a different scale and different materials."
Ma; A Sense of Place, p. 125*

Basho quoted from Japanese Literature: An Introduction for Western Readers

Eliade information from The Myth of the Eternal Return



In New York, the Whitney Museum of Art has an annual retrospective which is supposed to illustrate the best style of the times. One year, around the turn of the century, the work became so disparate there was no longer ONE leading style. Depending upon the critic, this was either freedom at last, or chaos.

"...both permit and induce all humanity to realize full lasting economic and physical success plus enjoyment of all the Earth without one individual interfering with or being advantaged at the expense of another."

I Seem to Be a Verb, p. 11

"A way of thinking that is directed solely to what is profitable cannot perceive the vital coherence of all things in nature."

Sensitive Chaos, p. 10

"Duchamp felt that the dead should not be permitted to be so much stronger than the living."

The Complete Works of Marcel Duchamp, p. 20

ride. To push to the limits of organizational restraints is for me the essence of creativity.

I have shied away from too much "reality" in this thesis - my personal expedition into design theories and potentials. The design is meant as an example of American architecture with sensitivity to the Japanese, but it is not the only possible solution. I am setting up a vocabulary for my own design work related to present technology and symbolism. This design is my model: how one designer puts the concepts to use.

This design is also my way of testing the hypothesis that principles of quality can be transformed from a Japanese context to an American. Still, it is merely an academic simulation and not an actual experience. It is still theory until tested in the physical world.

It is not assumed that the reader shares the belief that the synthesis of traditional Japanese design concepts into an American context should take place at all. Therefore, the thesis makes explicit the quality of traditional Japanese design which parallel intention of western architects: designers of the physical environment. The written chapters are purposely infused with appendices of illustration and analogy. In this way, I am piecing

together ideas from many realms. I hope these vignettes invite images and places from the reader's own repertoire as well.

In order to translate the essence rather than the physical commodities from Japan, I will first describe and analyse the traditional Japanese house, using the house in which I lived and with which I am most intimately familiar. Further, I will develop certain themes I find present in that house. Later I will try to use them in my design.

I initially chose three areas of focus: 1. renewability, 2. indoor-outdoor relationships, 3. scale and proportion. As the months passed, each of these focuses were altered so that they began to include many other headings. The headings which I can most clearly categorize and articulate are now listed in the main body of the written section. It is in the section called "Design Implications" that I give title to the focuses which have specifically influenced the design decisions I have made (page 107) By investigating diverse pathways and niches -- even when they seem to be tangential -- I hope that I have shed light on the elusive theme of "Permanence and Change".

Most of the time during the ten months I spent in Japan, I worked as an apprentice to a master carpenter. I came, I

Heraclitus

"Wisdom, then consists in grasping the underlying formula which is common to all things."

from The Wisdom of the West, p. 26

"With time, however, the spirit will show itself more powerful than matter."

Alvar Aalto, from Sketches, p. 95

"The visible form is not regarded as the reality."

Ma; A Sense of Place, p. 154



Fig. 360 Carpenter's Tools, from Siebold's "Nippon"

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from Houses and People of Japan, p. 193

アメリカで見た富大工の映画の中で、ひと筋の長いカンナ削が、生きもののように

アノ、まだ日本語が上手じゃないので英語のインタビュースにしてくださいますか？ まちがうといけないから。

＊

去年の7月4日、アメリカ独立記念日に、日本に来ました。MIT（マサチューセッツ工科大学）の建築科の大学院1年を終えたところです。MITの建築科は面白いところで、学生は少なくとも1年間、大工の修業を積むべきだ、という考えの先生たちが主流を占めてる。「図面屋建築家」ではなく、「生きた建築家」たれ、と。いつかどこかで大工修業をするなら、ぜひ日本で、と思いました。

だって、日本の伝統建築は、世界中でいちばんエキサイティング！ その融通無碍な造り、自然との連続性、戸外と室内との遷移空間の設定、それに、現場以外のところでパーツを準備して、それを

学生で、絵画、彫刻、美術史の勉強めたばかりでした。ボストンは学生で、年柄年中、どこかで、フィルムエスティヴァルをやっている。黒沢映画、ずいぶん見ました。当時、ボーンには日本レストランが軒ありゅうた。いま、もつとよえてると思っけ。日本食を食べ、日本の小説を読んで、本映画を見て、大学では、美術史における東洋の影響についても勉強して。

MITでは、ハーヴァードの大学院出た神田駿先生に建築デザインの実技教わりました。毎年4カ月を京都で暮というドイツ人の先生や、京都の造園に1年弟子入りして博士課程に戻り、園デザインの講座をひらいた若いアメリカ女性もいて、京都には間接的にはテがあったんです。奨学金を持っていは遅くなるので、少しの貯金と、友人

ミンディ・レアマン

(マサチューセッツ工科大学大学院)

大工ジン

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ANALYSIS

TRANSLATOR'S PREFACE

THE original German edition of *The Secret of the Golden Flower*, of which the following is the authorized English translation, appeared first in the autumn of 1929. On March 1st, 1980, Richard Wilhelm died. In May, 1930, memorial services in his honour were held in Munich, and Jung was asked to deliver the principal address. The latter finds an appropriate place in the English version,¹ which is published a year or more after the co-author's death. The address will be welcomed, not only for what it tells the reader of Wilhelm, but for the further light it throws on the standpoint of the East.

The relation of the West to Eastern thought is a highly paradoxical and confusing one. On the one side, as Jung points out, the East creeps in among us by the back door of the unconscious, and strongly influences us in perverted forms, and on the other we repel it with violent prejudice as concerned with a fine-spun metaphysics that is poisonous to the scientific mind.

If anyone is in doubt as to how far the East influences us in secret ways, let him but briefly investigate the fields covered to-day by what is called "occult thought". Millions of people are included in these movements and Eastern ideas dominate all of them. Since there is nowhere any sign of a psychological understanding of the phenomena on which the ideas are based, they undergo a complete twisting and are a real menace in our world.

A partial realization of what is going on in this direction, together with the Westerner's native ignorance and mistrust of the world of inner experience, build up the prejudice against the reality of Eastern wisdom. When the wisdom of the Chinese is laid before a Westerner, he is very likely to ask with a sceptical lift of the brows why such profound wisdom did not save China from its present horrors. Of course, he does not stop to think that the Chinese asks with an equal scepticism why the much boasted scientific knowledge of the West, not to mention its equally boasted Christian ethics, did not save it from a World War. But as a matter of fact, present conditions in China do not invalidate Chinese wisdom, nor does the Great War prove the futility of science. In both cases we are dealing with the negative sides of the principles under which East and West live, and it has not yet been given, either to individuals or to nations, to manage the vices of their virtues. Mastery of the inner world, with a relative contempt for the outer, must inevitably lead to great catastrophes. Mastery of the outer world, to the exclusion of the inner, delivers us over to the dæmonic forces of the latter and keeps us barbaric despite all outward forms of culture. The solution cannot be found either in deriding Eastern spirituality as impotent, or by mistrusting science as a destroyer of humanity. We have to see that the spirit must lean on science as its guide in the world of reality, and that science must turn to the spirit for the meaning of life.

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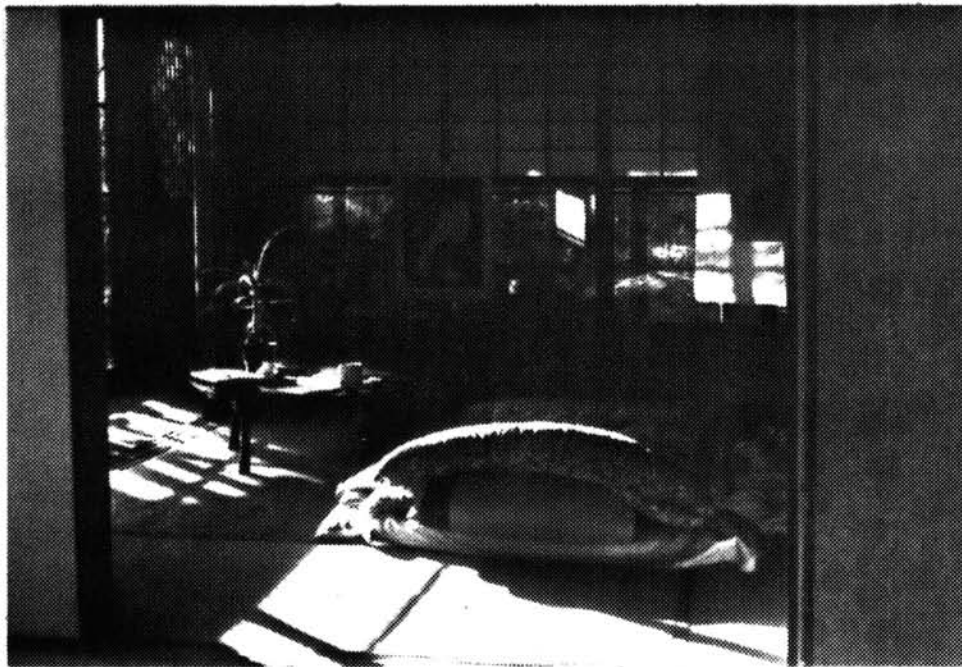
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Traditional House



"We of the west couldn't live in Japanese houses and we shouldn't. But we could live in houses disciplined by an ideal at least as high and fine as this one of theirs - if we went about it for half a century or so. I am sure the west needs this source of inspiration. For once, it can't very well copy. The ethnic eccentricity is too great. The west can copy nearly everything easier than it can copy the Japanese house or Japanese things for domestic use."

Frank Lloyd Wright

An American Architecture, p. 249

"Would a European ever want to build a Japanese house with European workmen? If one would work upon the bridge of culture, this is only possible by awakening understanding for foreign similarities and by showing how the human spirit works logically and reasonably although its conceptions may vary completely from place to place. In this way we become aware of the same spirit whose various products are merely the consequences of different conceptions. Houses and People of Japan, p. 37

"It is not for us to imitate what is organically foreign, or worse still, to send out missionaries to foreign peoples; it is our task to build up our own western culture, which sickens with a thousand ills."

Carl G. Jung

The Secret of the Golden Flower
p. 80

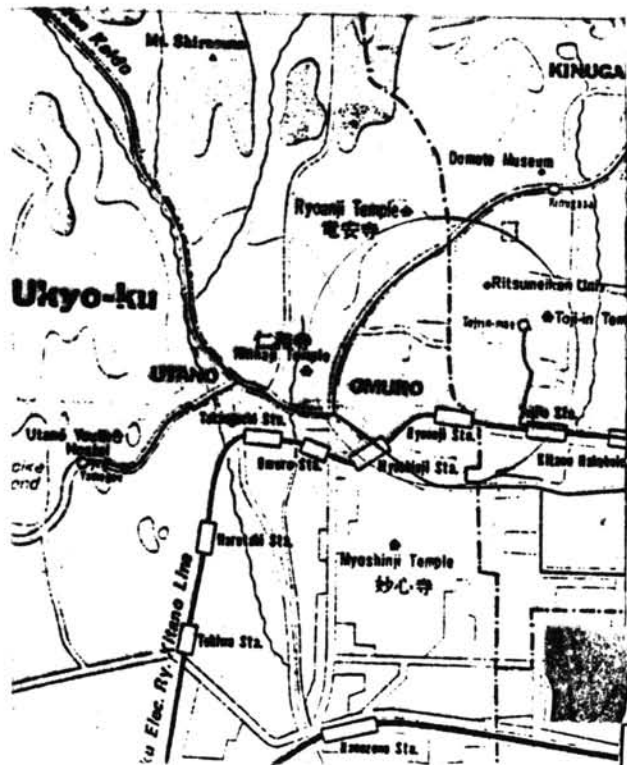
LET ME INVITE YOU TO THE HOUSE WHERE I LIVED IN KYOTO, JAPAN.

"...a suggestion to establish principles on a more profound level than that which deals with visual unity only."

The Japanese House, p. 46

"Is it possible that our western estheticism, which reduces everything to an immediate gratification of the eye, is simply not equal to encompassing the complexity of experience that is embodied in art of this persuasion? I think this may indeed be the case."

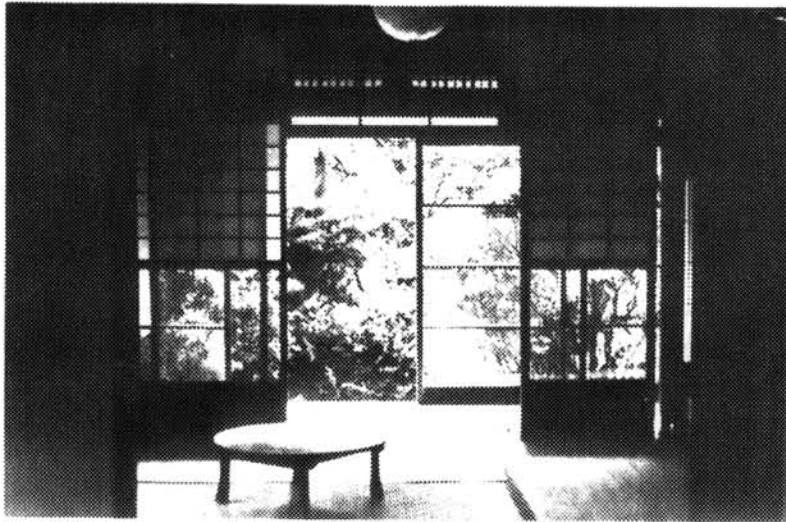
from *The New York Times*, Sunday, October 13, 1974, *The Western Eye Is an Outsider Among Japanese Paintings*



The house was built according to traditional Japanese principles, and with traditional techniques, though it is only about thirty years old. It is situated in the garden of a larger, western-style house where my landlord and his family live. Initially built for a grandmother, the detached addition connected to the main house by means of a narrow enclosed passageway. The door remained shut while I lived there. Since grandmother moved back into the main house, the small building has been leased to itinerant foreigners. Housing is scarce in Japan and any local family who rented the house would expect to remain indefinitely.

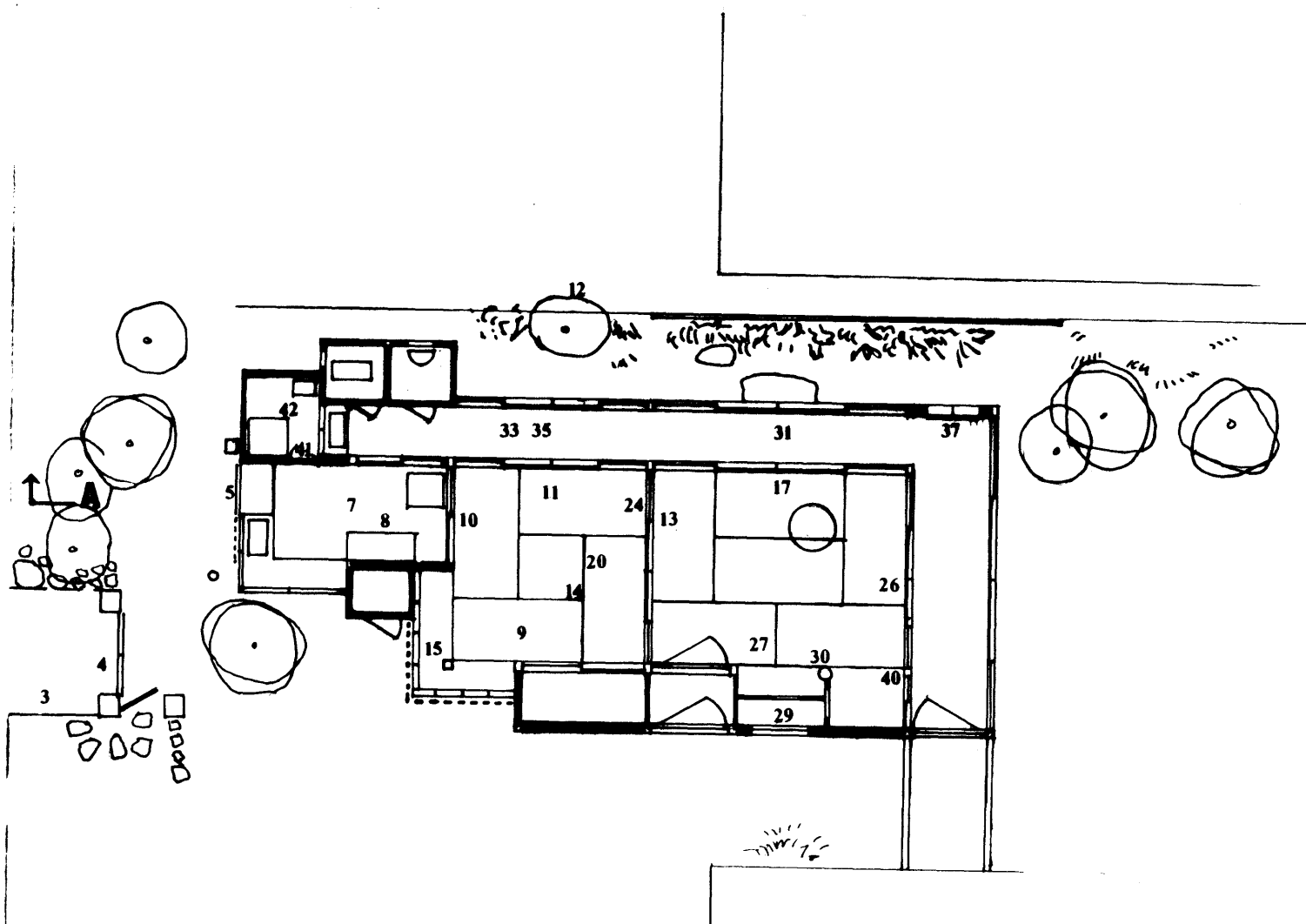
The description which follows uses photographs and words in close association with each other. In order to fully appreciate the elegance and beauty of the simple house structure, the reader is advised to give equal attention to both media. I took the photographs throughout the year I lived there, so they reflect different seasons.

This house is typical of a certain, semi-urban style. Japanese houses differ in scale and details -- determined mostly by financial resources -- but the traditional system of building in Japan became so refined and widely standardized that local variations in house design were minor except where climatic conditions are extreme. Therefore, to describe one traditional house in its general configuration, materials, built elements, and building processes is to describe nearly all of the houses of (traditional) Japan.



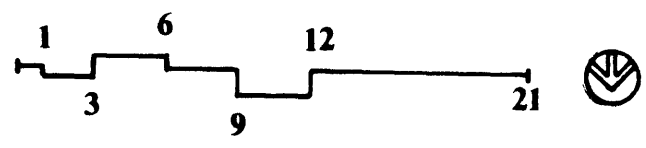
"There is more to the kimono than meets the eye. One might say that the outermost wrapper only serves to detract attention from the true nature of the garment - a combination of straightjacket and hobble skirt. Mary R. Beard (The Force of Women in Japanese History) observed that the kimono fills a need where too many people live in too tiny dwellings. When they wore kimono, she says, 'tightly about the figure and sat or moved within the smallest compass, domestic life could flow along better thus regulated.' "
The Kimono Mind, p. 44

The year I lived in Japan the population was said to be half that of the United States. Japan comprises an area the size of California, and only twenty percent of that land has been inhabited because the rest is agriculture or hills. Due to crowded living conditions people had to adjust either their space or their sense of space in order to avoid conflict or claustrophobia. Wisely, the Japanese have carved places for themselves outside as well where they can live privately. Rather than the exterior wall of the building, the outer wall of the garden is often considered the boundary of the house. The outside is taken as another "room". This is unlike the western street where homes have lawns in front (and the lawns' polluting fertilizer) and exaggerated house facades. The facade of the house is of minor importance compared with western counterparts.

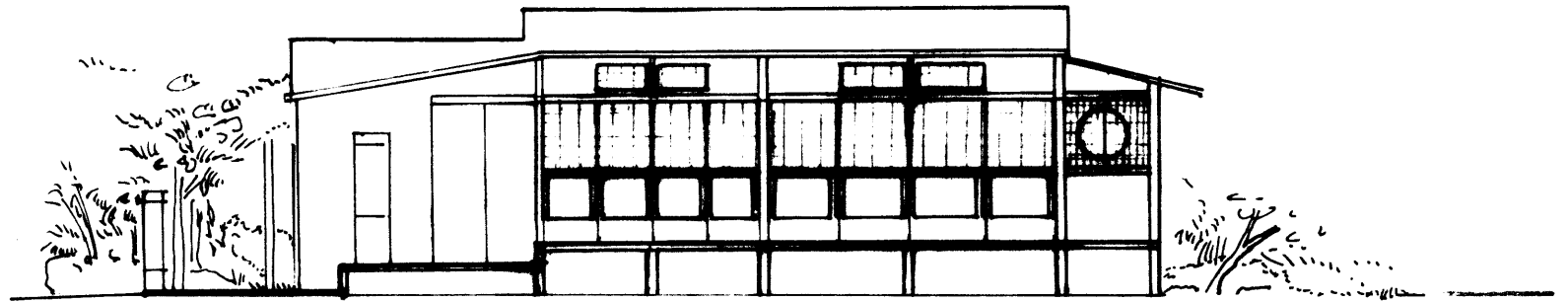


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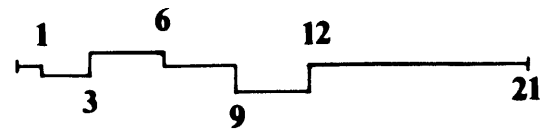
18



Plan



Section AA

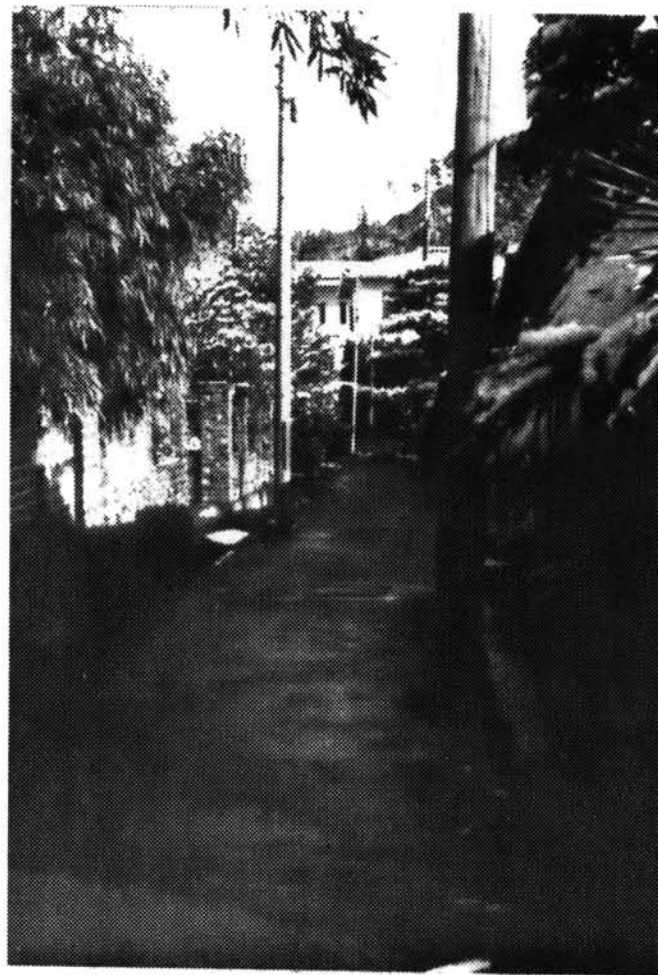
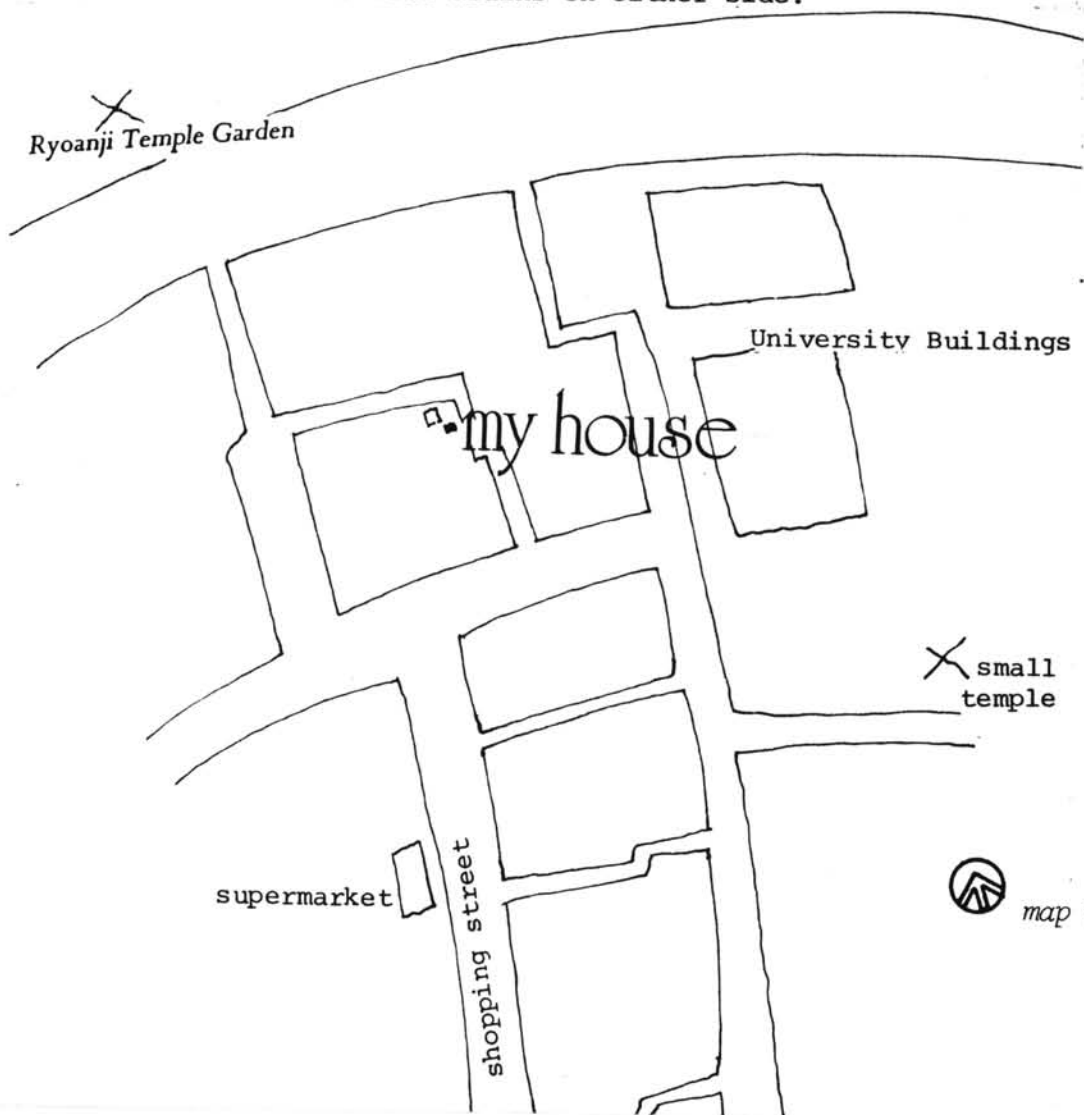


BEGINNING THE WALK

We approach my house from the market area which is a few blocks south. We have reached the middle of the block before it jogs to the left. The street is enclosed by walls which are approximately five to six feet high, made of different masonry materials or of planting.



We turn left at the jog in the street. My house is at the top of the street on the left.² This is a two-way street for cars and pedestrians, though the street is only about fifteen feet wide with drains on either side.



map is not to scale



My motorbike is parked in the driveway. There is no vantage point from which the entire house can be seen all at once as it is screened by walls and trees. Here we can just make out my landlord's house to the right; a two-story European style structure, painted white. The garden plants bloom throughout the year, but the garden is never fully in bloom; never fully "complete". One snowy morning a tree at my door had red flowers, and in the spring there was a bush near the door which gave off a sweet, powerful aroma.



Here we are walking around the right side of the gate to a smaller, informal entry gate. You can see the stepping stones³ leading to the smaller gate in image **2** to the right of the motorbike.

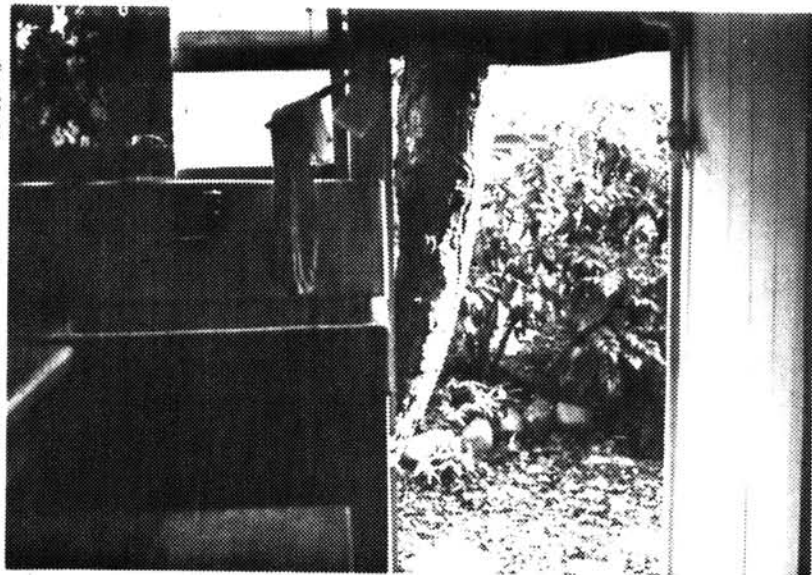


The door swings to the right.⁵ We are standing at the entry door, looking in.
Notice that the step is about one foot high; more than a subtle difference.

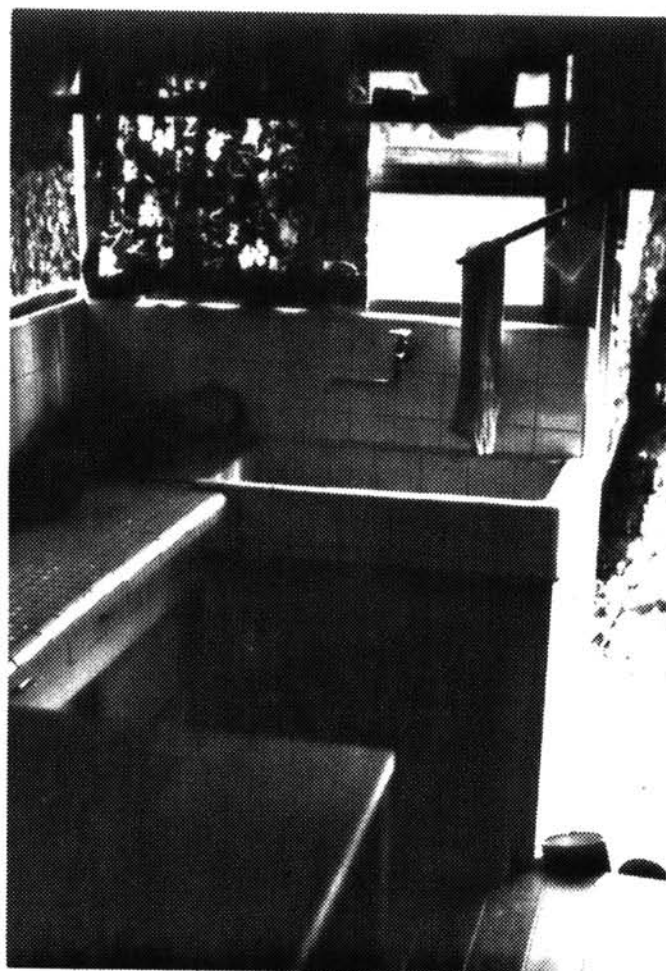
24

We have entered the house from the kitchen side, taking off our shoes on the earth level, and then stepping up to the wooden floor of the kitchen. The kitchen floor is smooth, almost slippery underfoot. The practice of leaving shoes at the entry keeps dirt outside.

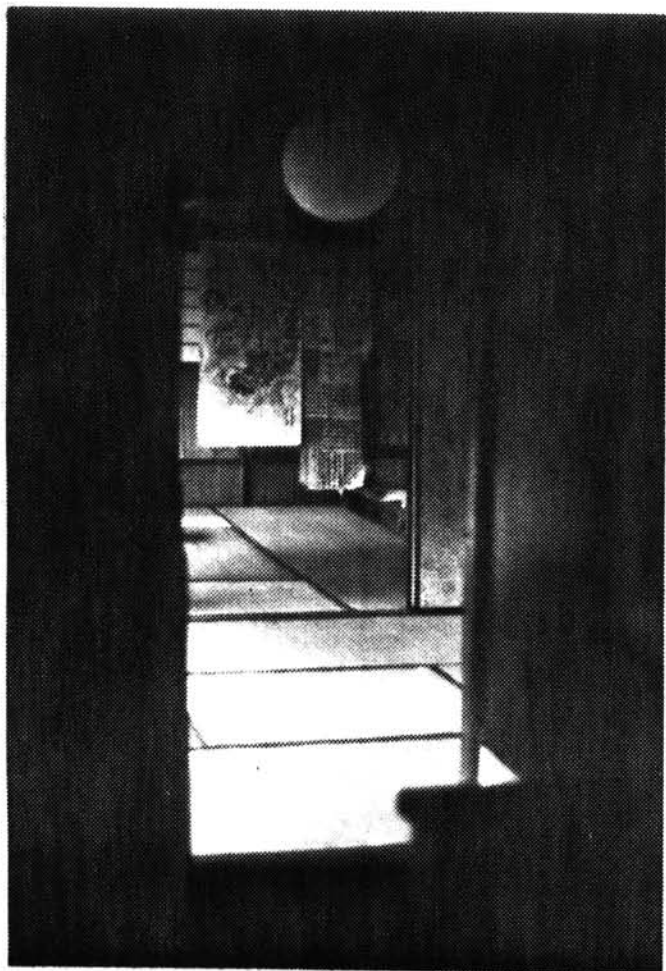
Since there is no stove I assume that grandmother always ate with the family. I used portable gas stoves. There is no hot running water in the house, only cold.



7a



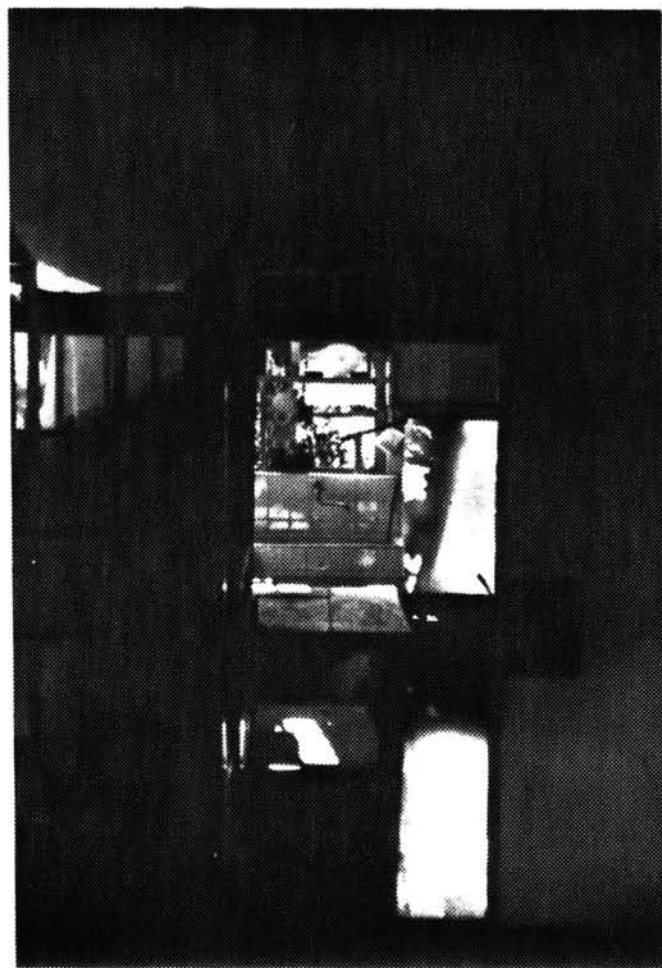
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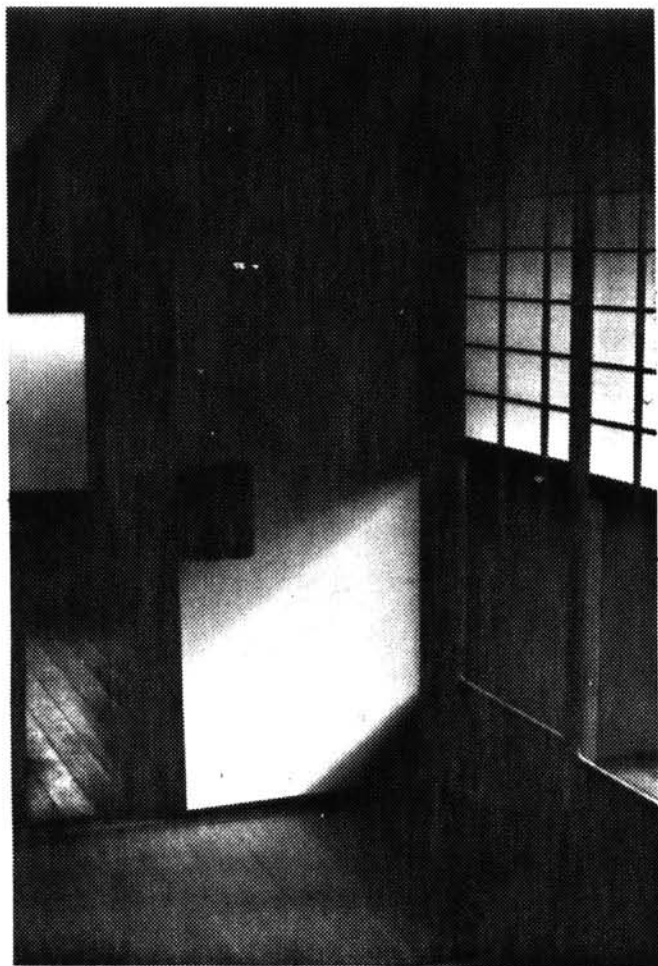


The transitions between kitchen and living rooms, and between indoors and out are signified by a change of level which gives a strong sense of going from one place to another but does not disassociate one space from another. There is a subtle change of sensation underfoot when we move from earth to wood and then to the resilient straw mats. There is also a change of smell; the mats in particular have a warm, rich smell something like that of incense. Another, very powerful change from one place to another is the color. Not only do the *tatami* mat rooms have a warm, yellow-ocherish color, but they also have a warmer temperature. The southern sunlight falls directly on the mats (and releases their fragrant aroma). The kitchen receives indirect, northern light, and diffused southern light through the translucent glass door of the bathing room. Unfortunately, this cannot be illustrated well in black and white.

8

Moving from the kitchen we proceed to the *tatami* mat rooms, which serve as "livingroom", "bedroom", "diningroom", "den", and "study". We have just stepped up from the kitchen to the first room. It is a four-and-a-half mat room, which is to say, nine by nine feet of floor space. I used this room to store my clothes, bedding, and paintings, and in the mornings I dressed there. A small platform along the window periphery accomodated my cosmetics and makeup mirror. Closets in a Japanese house are essential to the aesthetic having to do with the contemplation of the single object. By putting things in closets there is an absence of clutter.





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Looking back into the kitchen from this room we can see sliding doors of light wooden frames with paper and glass. These are the doors to the veranda. Notice that the glass is at the level where we could see a distant view only if we are sitting on the floor. When we are standing, what we see is the floor of the garden.

Looking out, we might see my neighbor tending her garden where she cultivates fruit and vegetables, and we can just see mountains, far in the distance.

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Here is a window niche in the northeast corner of the smaller room. This is a sitting bench with storage below. In this niche, the windows have translucent glass at the lower part and above head height. There is transparent glass in between. We can look out this window when we are standing or when we are sitting on the raised seat, but we only see trees and sky when we are sitting on the floor. These corner windows entice the summer breezes through the house and it is the only light area on the north side, except in the kitchen. The entry to this house used to be in the larger room where there now is a closet, so that visitors would pass this window when arriving.



14



15

The quality of light in the house filters differently from north to south, or through transparencies and translucencies. Here is the window seat in summer with the windows open.



16

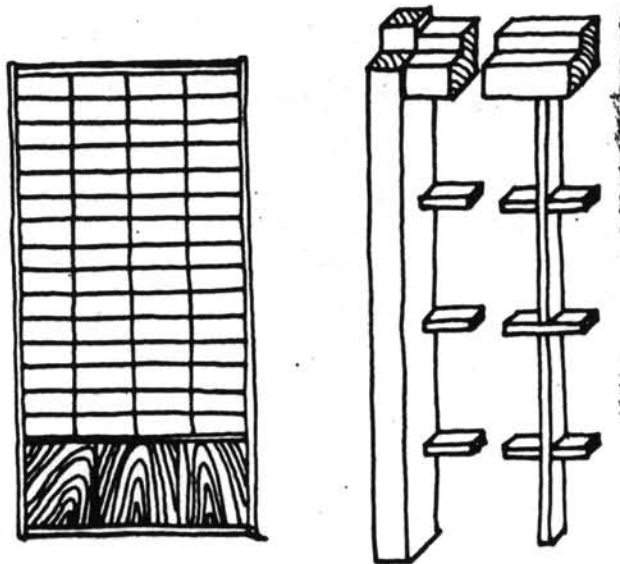
An interior door to the veranda.



17

Shoji paper is fragile, and patching may be a creative activity. Patterns may be cut out and pasted over the holes. Sometimes the shape of a chrysanthemum is used. There is a saying in Japan that *where children grow so do the flowers*.

The inside doors of the veranda are made of light frames with glass and paper. The outer doors are mostly glass. Therefore, the inner doors are adjusted for privacy while the outer doors let in as much light as possible.



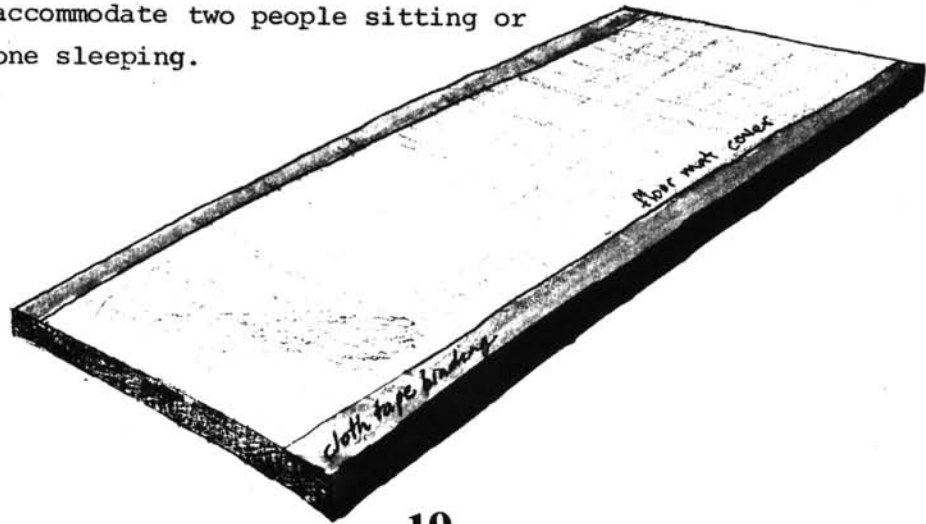
SHOJI

18

The *tatami* is a tightly packed, stiff rice-straw mat, 1.8 - 2.4 inches thick and approximately 3 X 6 feet in floor area. The proportions are always 1:2.

The mats are lightweight and easily removed for cleaning or airing. They can be managed by one person. They are a resilient floor surface.

Originally the dimensions of the floor cover were chosen to accommodate two people sitting or one sleeping.



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Tatami are approximately --not exactly-- the same dimensions throughout the country. They are used in plan by the carpenter (architect) to communicate with the client (users). Knowing the number of mats in a room, everyone has a sense of the dimensions and proportions of that space.



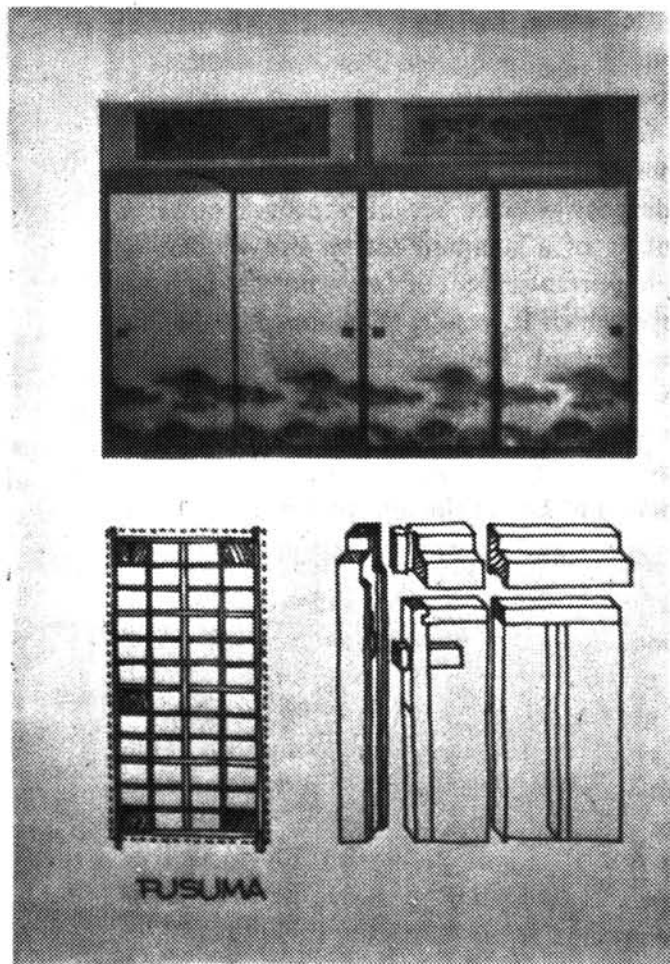
34

We are standing in the four-and-a-half mat room and looking into the six mat room, which is approximately nine by twelve feet. The room seems to extend into the garden. The south and west walls are made of glass and the veranda wraps around these sides of the house.

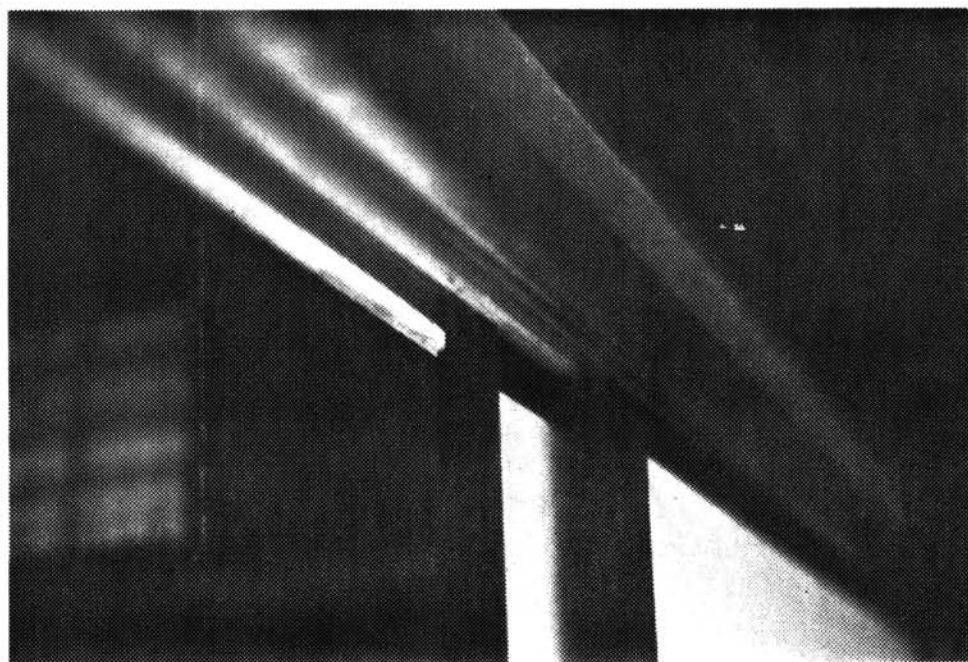
My only furniture was a low, portable table with folding legs. In a Japanese house people move the furniture around them rather than moving themselves from room to room.

It is obvious that a foreigner lives here because no Japanese would hang paintings on the *shoji*.

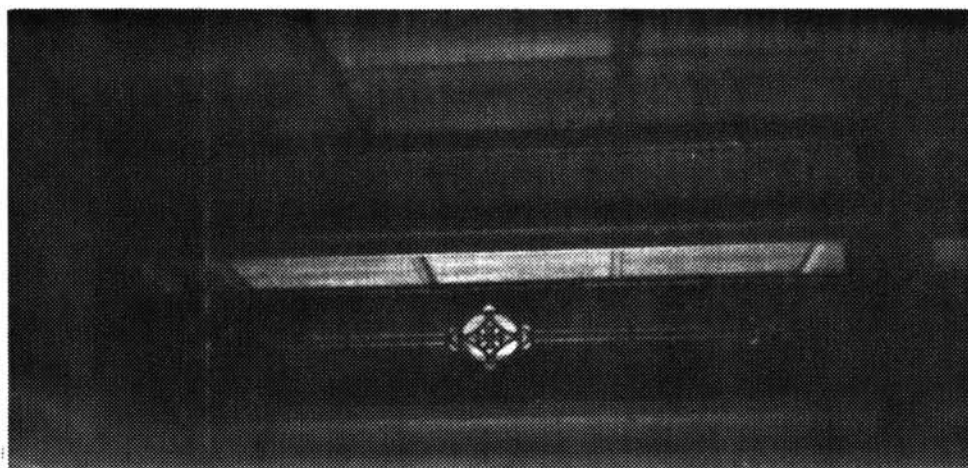




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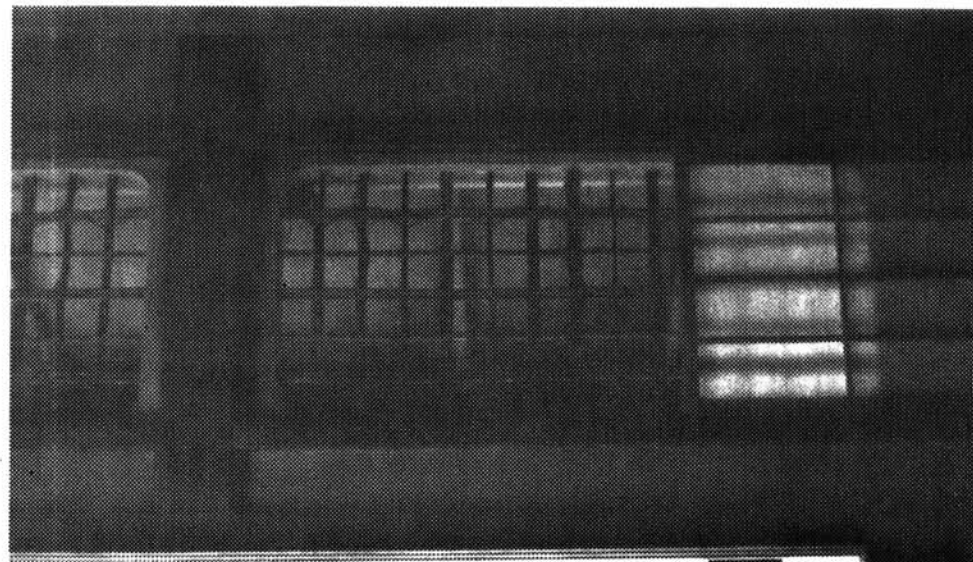
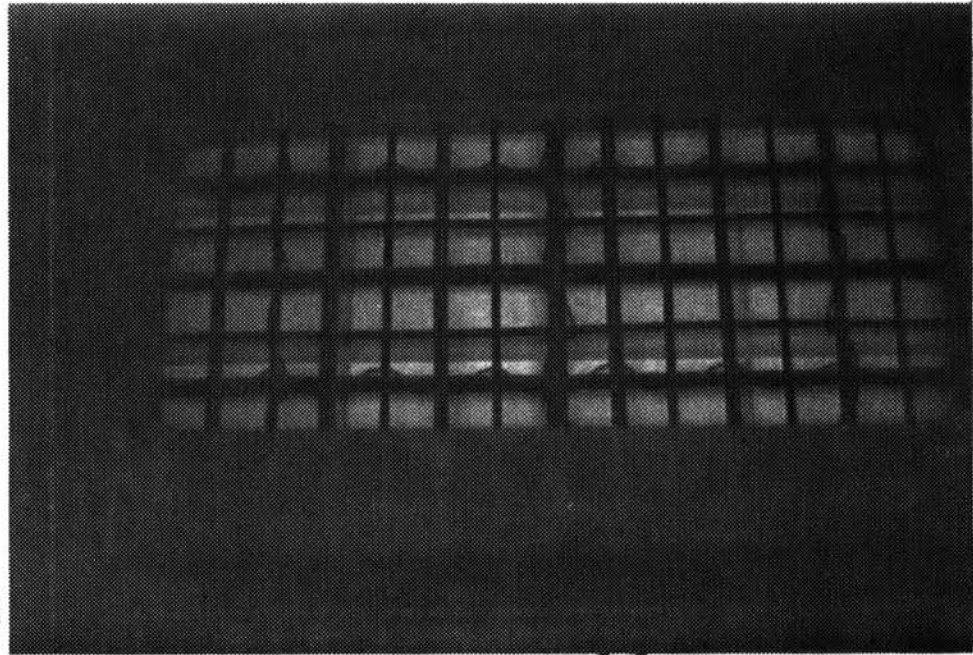
Fusuma are the sliding screens between rooms. They are made of opaque paper, pressed together.

Ramma are open, ornamental work over the screens which form the partitions in the house.

The groove in the track above the sliding panels is about $\frac{1}{2}$ inch deep. The groove in the lower tracks is only one eighth inch and this track is flush with the mats. The panels can be easily removed, just by lifting them. They are light enough for one person to manage.

Above the sliding screens there is a horizontal band which is carried throughout the building at a consistent height with little or no interruption.

These are views of either side of a *ramma* which are above the *shoji* to the veranda.



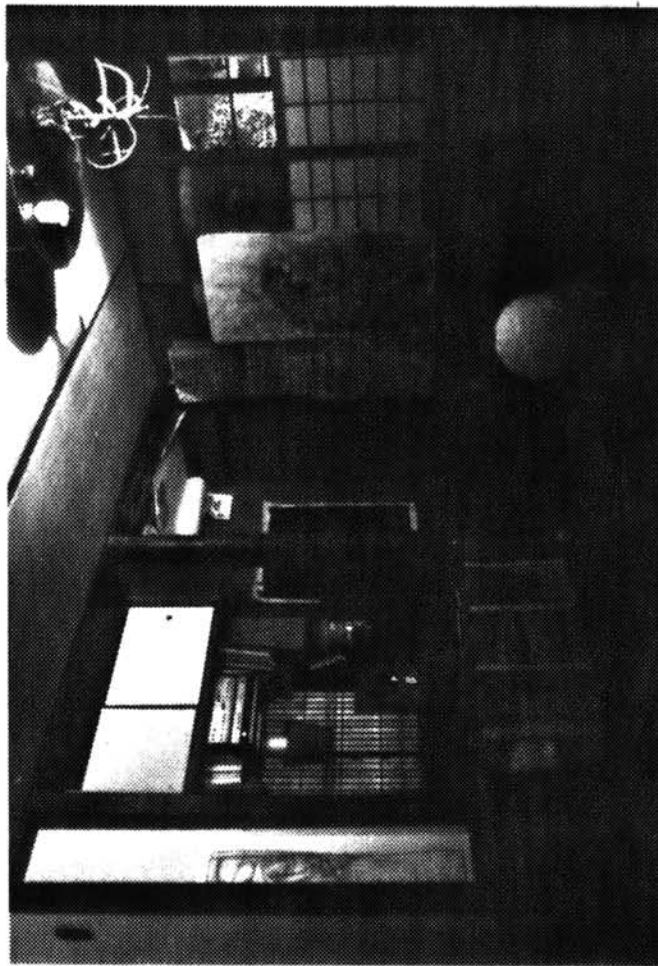


27

In the six mat room is a picture recess, or *tokonoma*. There is a shelf niche to its right and a closet beyond. In some form or another these elements may be found in every traditional Japanese house.

The *tokonoma* is traditionally used for a painting which is changed seasonally, or selected to honor a particular guest. There may be a flower arrangement, appropriate for the season, or a sculpture. Nowadays, the *tokonoma* is often cluttered with gadgets and stuff, resembling the room as I used it.

138

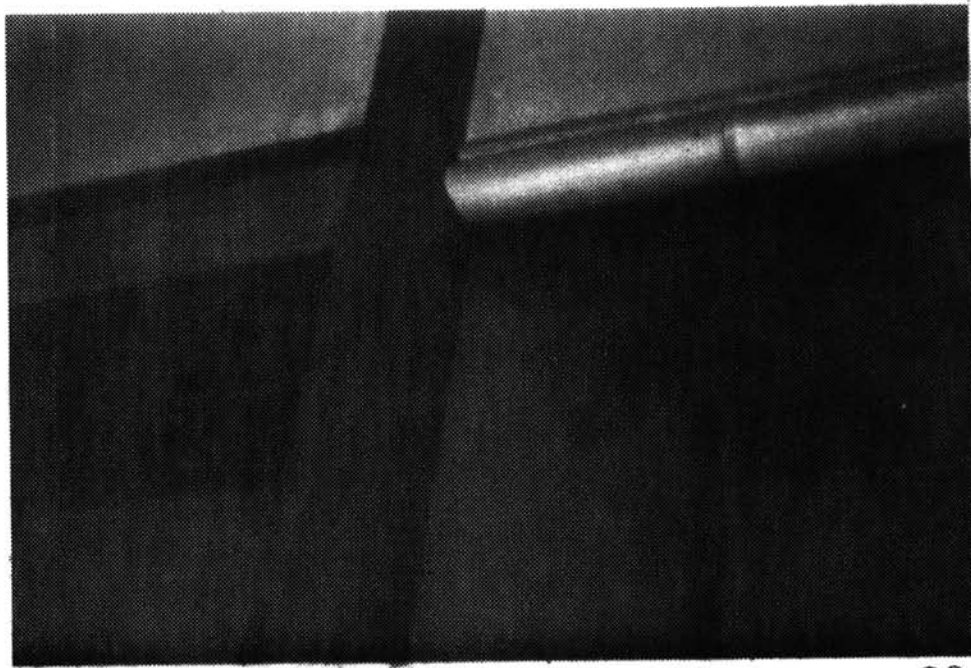


28

The opaque north wall is made of bamboo lathe and plaster. The six mat room has only one window on the north side; in the shelf niche. Through it we see the wall of my landlord's house ... and a bamboo plant.



29



30

Toko-no-bashira -- column of the *tokonoma*

This wood is selected for its beauty or uniqueness. Sometimes the column is not structural. It may not even touch the ground.

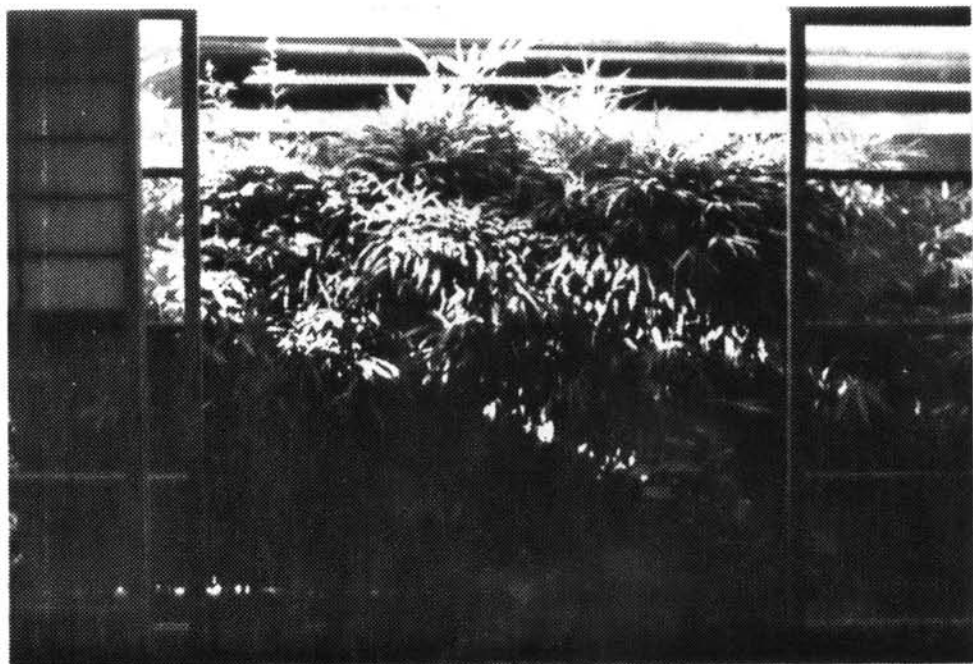
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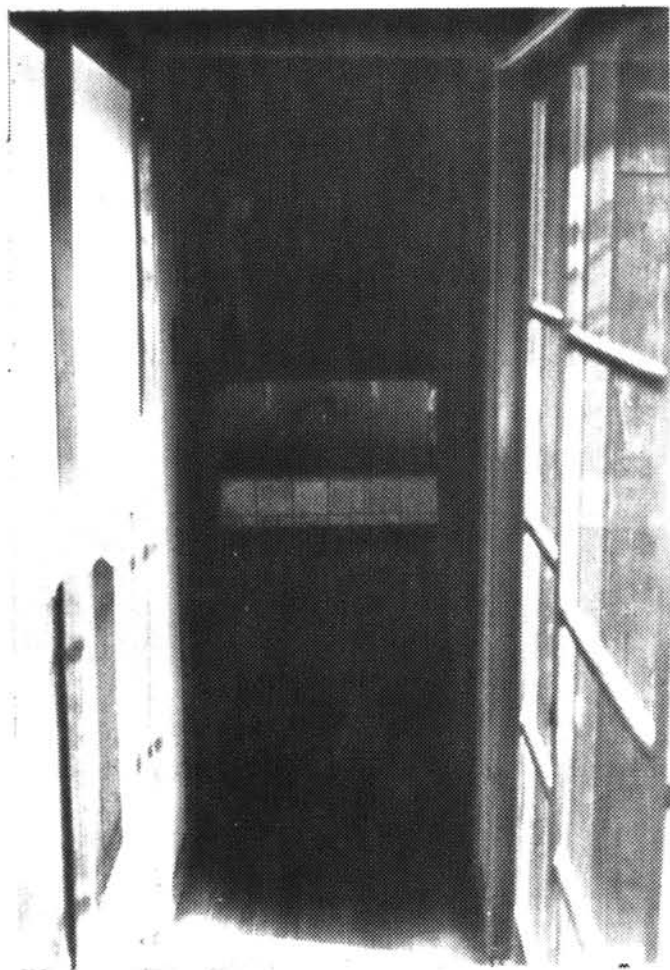
The view towards my neighbor's house is screened by bamboo and a high wooden fence.

40



32

The gardeners came at least once a season to tend the garden.



We are on the veranda, looking towards the toilets, which are on the right, and the sink near them. A wooden sliding door on the left separates the veranda from the kitchen. Going from the kitchen to the six mat room, one could bypass the four-and-a-half mat room by detouring through the veranda.

33

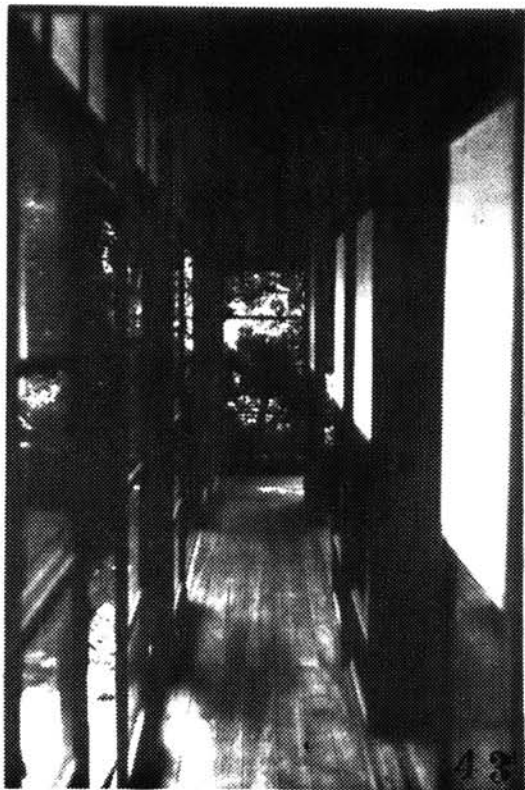
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34

This is the ceiling of the veranda. Eaves project beyond the veranda so that the sun penetrates deep into the house only in winter when it is low. Thus, the fragile elements of the house are protected from rain or snow.

We are standing in the veranda, looking towards the west. The two rooms are on the right.



35

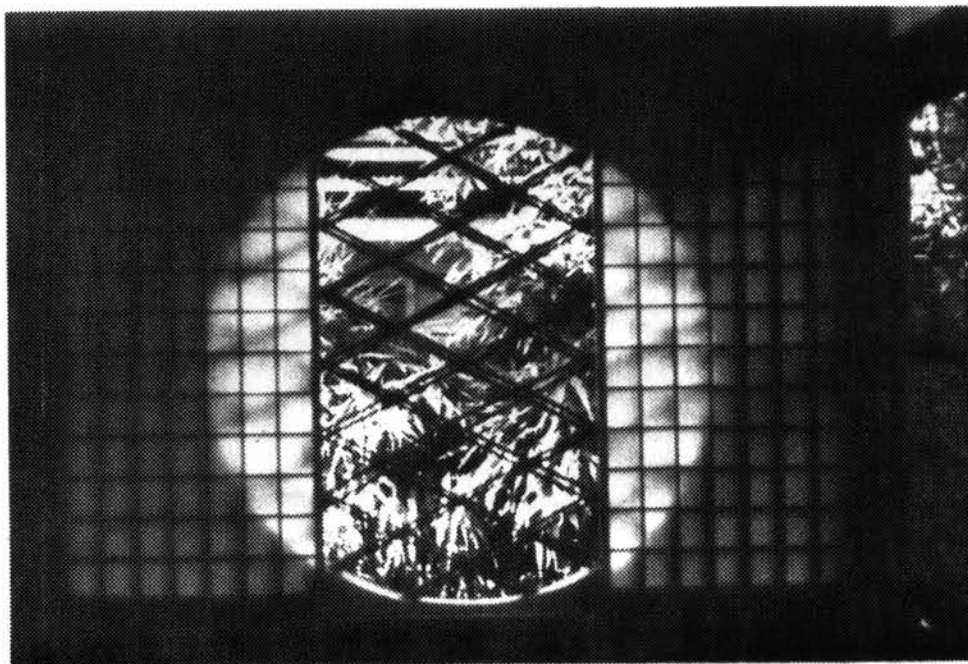
43 43



36

At the end of the corridor there is an
ornamental window.

The design of this window is derived from the building technique of covering bamboo lathe with plaster while leaving some of the lathe exposed as a "window". In this case, the lathe is reed set into the plaster and it is not part of the reinforcement. The light paper and wood screen slides on a track on the inside.



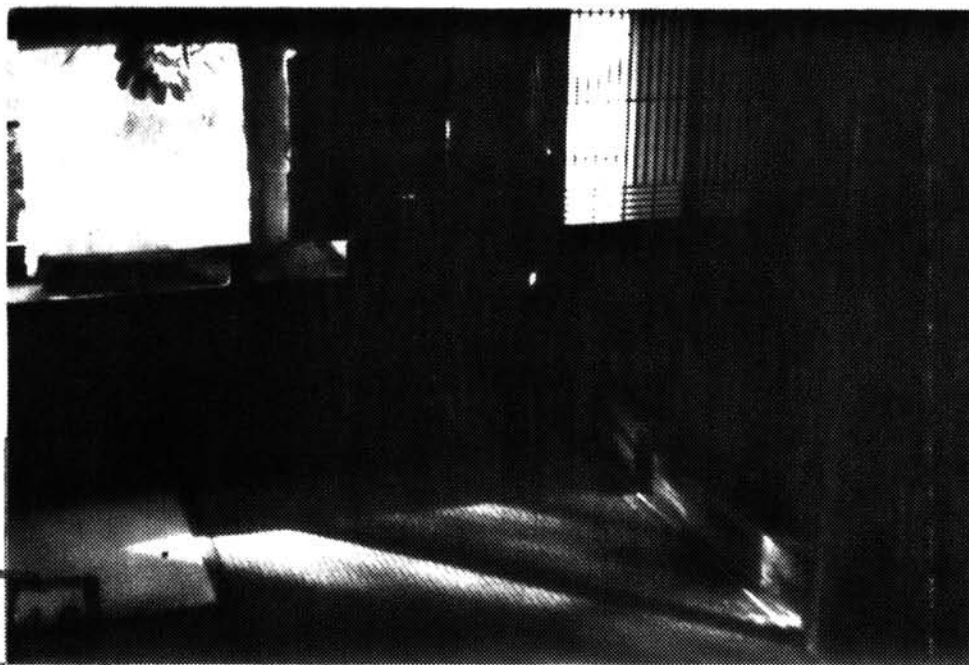
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45



At different times of day the light filtering through the trees makes a kinetic painting on the planes of the house.

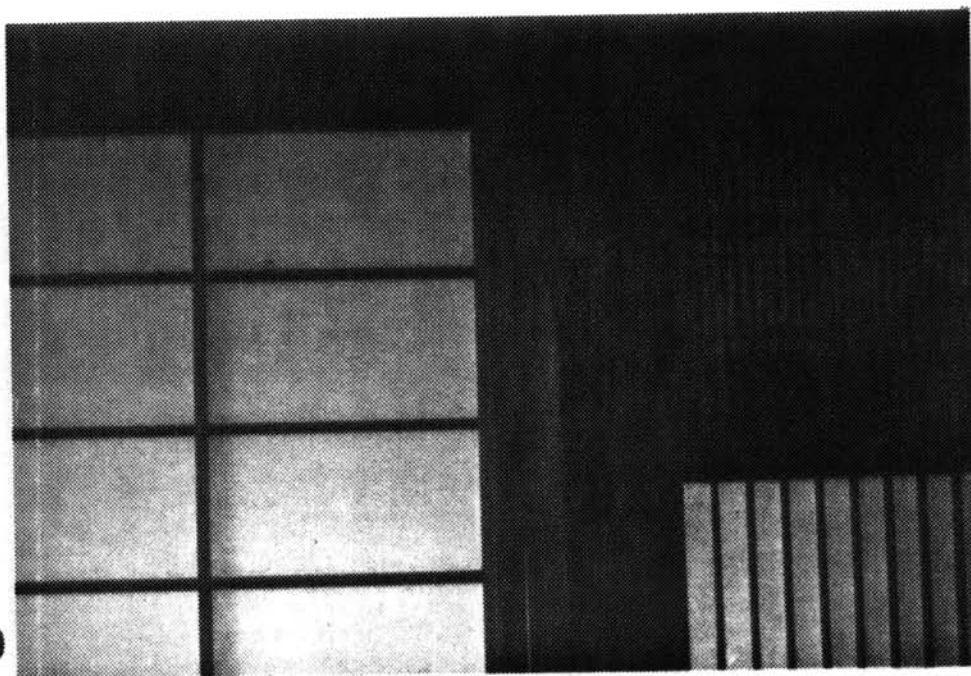
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39

Against the monotone walls and orthogonal planar grids, anything with vivid colors or curves, like flowers and people, stands out in contrast.

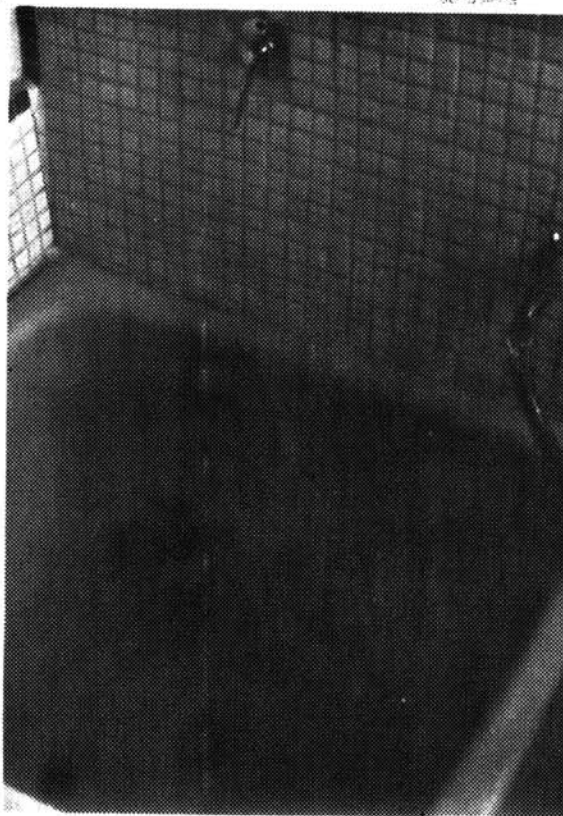
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47



41



42a

The bath in my house is not a visually beautiful object, but the bath added more to the serenity and luxury of the house than any other single element.

The bathing room is completely splash-proof, and it is separate from the toilet compartment.

48

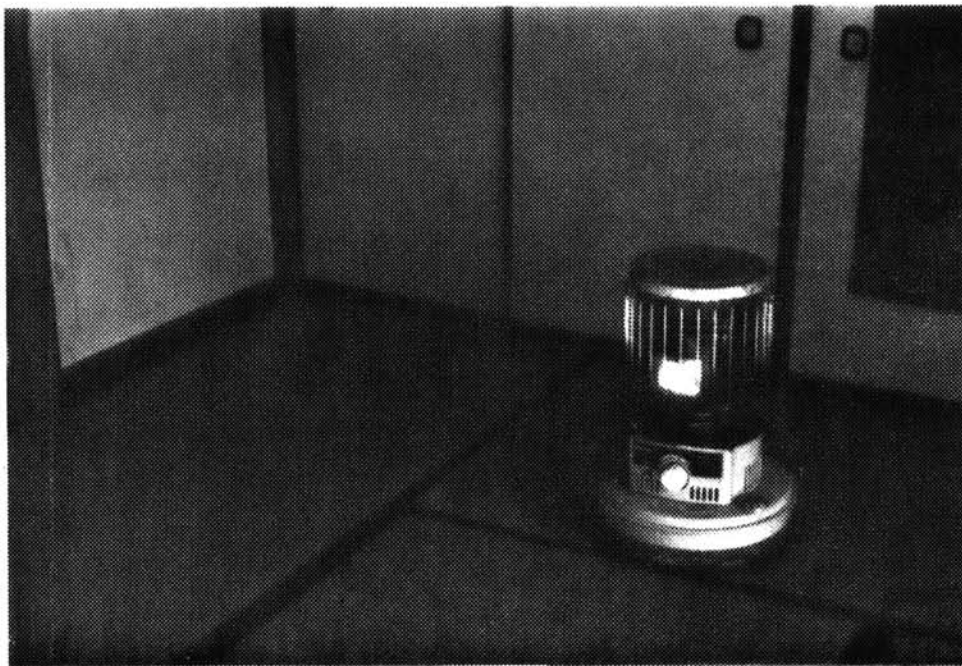
(see section -- Temperature, Comfort, and the Bath, page 53)

The Japanese interpretation of seasons differs from that of the West. Traditionally Japanese people would try to avoid the harsh rays of the summer sun. They would build their houses to provide shade and to catch breezes. Since my house was drafty, keeping warm in the winter was an effort. In the daytime I could open the doors to the garden and the sun would warm the house enough. If that was not enough, I used the gas heater.



42b

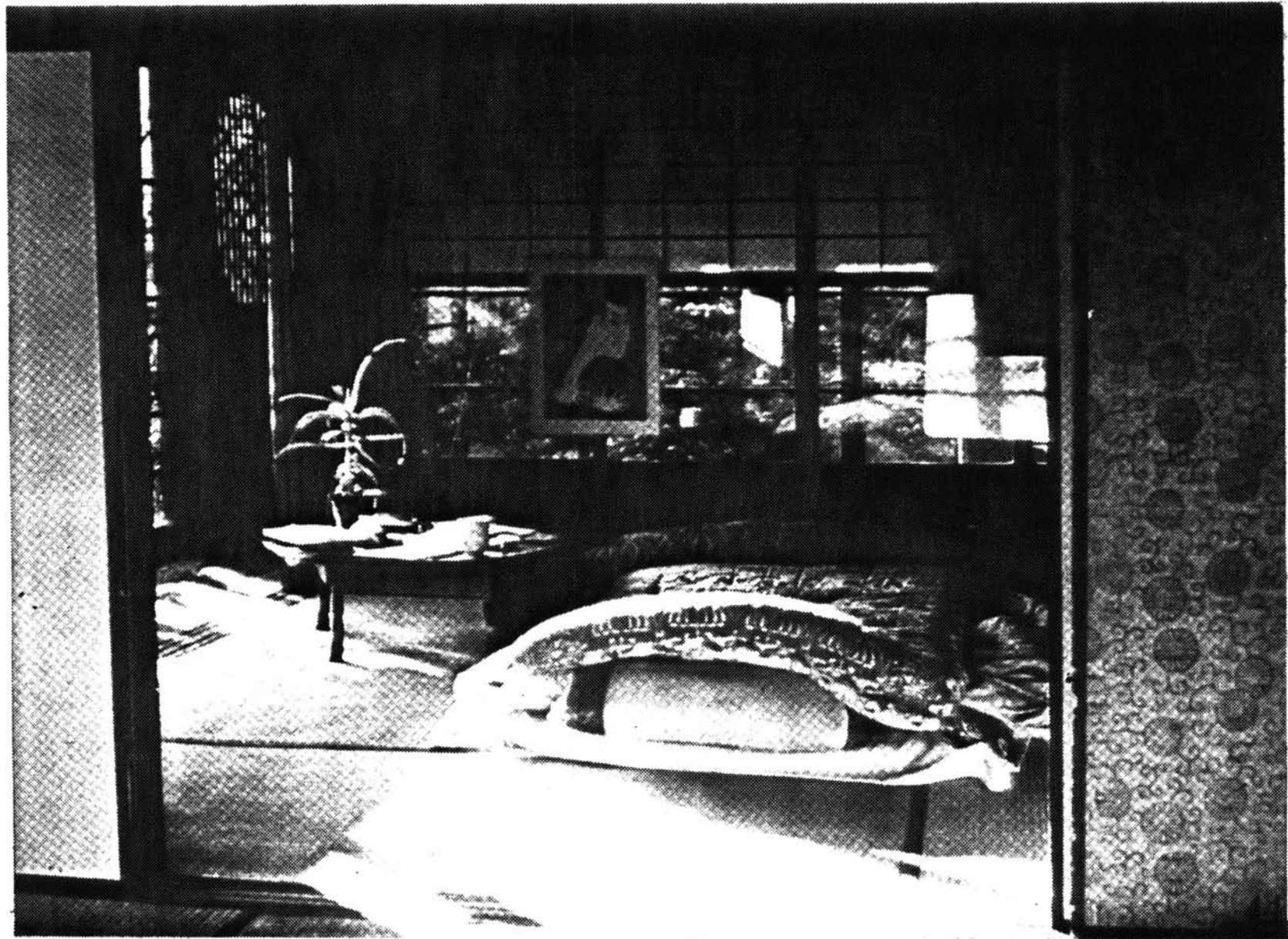
At night I would take a bath and the warmth would last until the time when I went to bed under layers of blankets. If I used the gas heater I would turn it off before going to sleep, and I was reminded to do so by a neighbor who would walk through the streets, clicking two wooden sticks together around eleven o'clock. Winter mornings were the most difficult. I would rush to get dressed as quickly as possible. Warm drinks helped. The days were mild that winter, and I was usually outside and moving while I worked as a carpenter.



43

49

One morning I woke up in the middle of a garden in snow.
I didn't get out from the warm blankets to take a picture.



PAR AVION
航空郵便



THE NEW ADDRESS!

KYOTOSHI UKYOKU RYUANJ
KINUGASA SHITAMACHI 19
HARUHIKO KIMURA T61

EXCERPTS FROM A LETTER TO A FRIEND

Dearest Patrick,

It's Monday morning, December 11, 1978.
...Where will I find a place to live in Cambridge which will please me as much as this house pleases me now?

On mild days I can open the glass on two sides of my house, as I like.
The Garden is all around.
The trees and plants shelter me from the neighbors. If I walk through the other room (a room I hardly use except in the morning when the light is good for my dressing and makeup), I see beautiful patterns of leaves on the translucent glass.
...The grids all over and varied in contrast to the plant shapes.
The tatami is a dream. Even the smell. A sea of golden warmth. Soft beneath the feet or body. The bed: quilts laid upon this sea at night or out of the way in a closet when not used.
The space... the place is vast.
Looking from the veranda to the outdoors I am enlarged. The wood polished beneath the bare soul.
The taking off of one's shoes to feel the tatami. To keep the house clean. To change from outdoors to indoors. To learn about the in-between. To learn patience. To relax.
Flexible choice. Subtle simplicity.
Not to mention the bath!
The rooms change their size. Heat and furniture move with the person... the person with the light. Easily and understandably crafted. If needed, easily repaired.
Easily moved.
Ok, you can hear your neighbors sometimes (in America too).
But not burglars. You can hear the cats.

But can you taste the moon in Cambridge?
Can you smell the sun?
How easy is it to clean around the furniture?

Which you have got to live in a room with tatami mats. Should I become wealthy so that I can afford tatami mats?

with these. too much money
"Key money" appreciation money
note - 250.



RM
EY
FEET
#6
TCHUSA

Tuesday 5
I ate dinner tonight in my new house
don't officially move in until tomorrow
morning, but I've crept in through
back porch and stayed in the park
house where no one would see me.
beautiful place and I think we like
other. I will send photos and plan
the + the landlord in advance...
morning I look at 60 TO keep
in Japan's (Walden) TO Change
Paterson, and TO lead
visit

How much dust is in the corners of a
Cambridge mind?
the Cambridge ladies who live in furnished souls
are unbeautiful and have comfortable minds
Do you sleep with April?
Will May be?

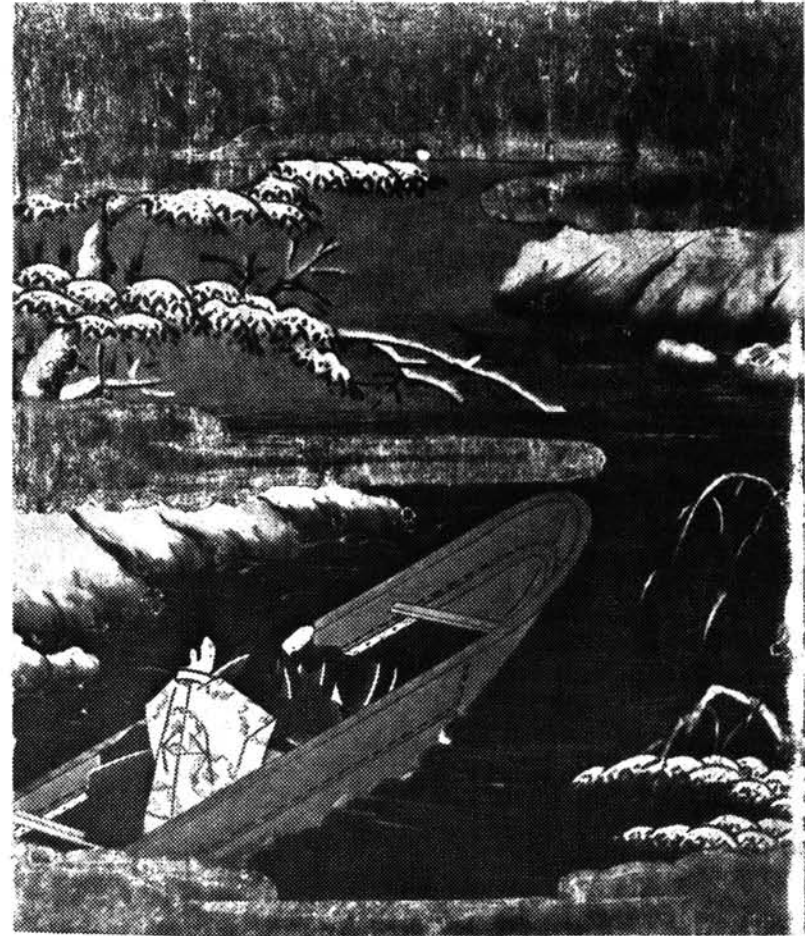
Love, Mindy

Temperature, Comfort,
and the Bath

THERMAL ASPECTS OF A TRADITIONAL JAPANESE HOUSE AND HOME

The traditional concept of shelter in Japan is very different from the one in the West. As Bernard Rudofsky explains; it is traditional for the Japanese to avoid the harsh rays of the sun and to seek refuge in the shade (The Kimono Mind). For the Japanese, it was a sign of high breeding to be pale. A suntan would have been as much of an embarrassment to a Japanese as rough hands were to Scarlet O'Hara. People carried parasols to shade themselves, and poems were written while contemplating the garden in snow. In winter, people liked to be outside. The house was built as protection from the sun and to catch any cool summer breezes, not as shelter from the winter's cold. The traditional Japanese house is adapted for summer conditions rather than for winter. In the traditional Japanese house, the walls can be almost completely removed, and the sense of protection or enclosure comes from just the constancy of floor and ceiling and the northern wall. Thus the garden becomes another room for the house and it is necessary to relate to the "out-of-doors" in a particular way; as we can see from the examples of my house in Kyoto.

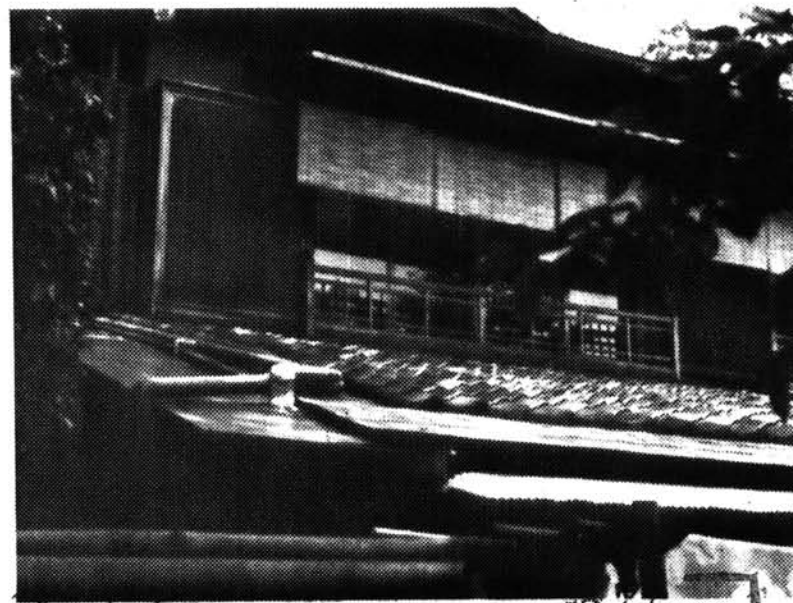
The Japanese house in its lightweight skeleton and screen and its sense of two-dimensional composition presents a charming aspect. For example, there's an image from a



Japanese movie, very vivid in my mind, similar to the feeling I had while living in the house in Kyoto. In the movie, a house was situated in a bamboo forest and in many of the shots, it was difficult to tell the inside of the house from the forest. A scene was taken from the forest, through the house and to the forest behind, and the thin columns of the house looked like the trees. The unbuilt and built landscapes were nearly inextricable. One questionable result of the Japanese attitude towards shelter is that the house is open to the wind. In the summer this is the desirable condition, but in the winter it can be troublesome.

Physical elements which encourage the ventilation in the Japanese house include *shoji*, *fusuma*, *ramma*, and *tatami*. *Shoji* and *fusuma* are doors of lightweight material which make up entire walls. Each panel slides along grooves in the floor and above. *Ramma* are ornamental wood, or wood and paper screens over the interior sliding doors. Sometimes they are fixed and sometimes moveable. *Tatami* are mats used as floor covering of approximately 2 1/2 inches thickness made of pressed rice straw. Even when shut, none of these elements are airtight, and each present small openings through which cool summer breezes -- but also icy winter drafts -- do blow.

Used to protect the fragile parts of the house are wooden shutters called *amado* which slide on a single-grooved track near the exterior *shoji* panels of the veranda. "*Amado*, or rain-doors, by which the verandah is closed at night and during stormy weather, are in the form of light wooden screens about the size of the *shoji*." Japanese Homes and their Surroundings, page 247. These shutters are drawn across the outer wall in the winter nights or in inclement weather. I would like to suggest a possible transformation of the *amado* by fusing them with contemporary technologies having to do with the flow of heat. My suggestion is that if *amado* are fused with thermal shutters they might be made out of fiberglass insulation and lightweight aluminum or wood casing. In this way they would retain the helpful characteristic of being lightweight and therefore moveable while acting more efficiently to keep heat in at night during the colder months. Still, one problem with shutters is that they close off the house from the outside. This is alright at night, and even offers privacy, but if the shutters are used during the day, as they are in winter, they keep out light and block one's view of the outside. (A view at night may be desirable at times.) The shutters are drawn at night and opened in the morning, and to wake up in the morning without the sun's rays can be disconcerting to some of us. There is a new material called "heat mirror" which is transparent on one side and reflective





shutters on a building at Stanford University, CA.

on the other. To make an *amado* of a substance like heat mirror might let in light and heat, and trap the heat inside the house. This needs testing.

The veranda or *yengawa* and deep eaves of a Japanese house are more than just a luxury. They protect the delicate fabrics of which the house is made and prevent rain and snow from reaching the vulnerable materials of the inner rooms. In my design I have used the *yengawa* as a regulator to help keep the temperature within the house more or less constant throughout the year.

During the winter the sun is low in the sky and it is able to penetrate the *yengawa*, and through the light post and beam skeleton of the house, to warm the area of the *tatami* where people sit. Frequently the house is oriented to maximize southern exposure. The south face may be made entirely of glass, or more traditionally, of translucent paper, with light wood frames which are the *shoji*. In summer, when the sun is high, the deep eaves provide shade for the house. In the house in which I lived, it was possible to keep the *shoji* on both sides of the veranda open, even during winter days if they were mild, which meant literally pushing aside the walls on two sides of the house.

Another problem with adapting the Japanese house for America is that it has little or no thermal mass to collect heat in the day and radiate it at night. But perhaps thermal mass could be incorporated with the skeleton of a Japanese house and add to the existing benefits of flexibility those of a masonry element. If the thermal mass is incorporated with the fireplace area for instance, it could act as a heat collector and bring a sense of solidity; a psychological center which a Westerner may associate with solid walls and fireplace hearths. Some Japanese houses do have fireplaces which are used as heat sources as well as for cooking. The Japanese *irori* is in the center (never the exact center), of the room, and the smoke goes out by first rising to the rafters and then escaping through the open sides of the gabled roof.

The Japanese way of keeping warm is local rather than general. Keeping warm in Japan usually involves heating the body directly rather than distributing the heat through the air. In the West, we use a central heat source for the entire room or the entire house, whereas in the East, heat may be carried around, more like those people all over the world who are accustomed to practicality rather than to the luxury of "active" heating systems. Both hikers and farmers, as well as the traditional Japanese of any occupation need portable heat and they will wear layers of clothing in the

"This is the way in which a Japanese fights against the cold. He does not warm the air but he warms himself. Thus the disadvantages resulting from a system of warming the air, namely a greater amount of dust and a great consumption of fuel necessitated by less airing, are avoided. This last is a thing not necessary in the Japanese room, as there always is enough airing, even too much."

Houses and People of Japan, p. 93

A lot of people don't realize that it is our own body heat that keeps us warm, and all we have to do is keep it up next to us," said Houghteling.

Where parkas and heavy sweaters are obvious survival wear outdoors, indoor wear calls for more finesse and style.

Fortuitously, the "layered look" is fashionable these days, a happy instance of fashion being in step with common sense. There is even a unit of

FRIDAY, JANUARY 8, 1982

THE BOSTON GLOBE

cold weather. Many layers retain body heat better than one thick layer. The heat gets trapped in the air between the layers of fabric. They will also wear "natural" fibers (i.e. non-synthetic), which allow the sweat to escape; the clothing to "breathe". In olden days, the Japanese might carry a small charcoal heater inside the folds of clothing. In a stationary situation, a person could sit near a *hibachi*, a device similar to the small, electric heater or kerosene stove. Nowadays the Japanese also use electric or oil heaters.

Best of all, to regulate body temperature in any season,
there is

THE BATH

The process of bathing in Japan has been refined throughout the years and is now an art form, practiced every day by everyone. The Japanese bath is separated from the toilet area, which is nearby but in another compartment (see the plan of my house, page 18). This helps to keep the bathing room sanitary. The bathing room is made of completely splashable materials. It must have been wooden baths and walls with stone floors in the past, but now it is more often a fiberglass or metal or plastic bath with tile walls and floors. In the public bath there is sometimes a steam room as well. The showers are around 18" from the ground, and there are buckets, and sometimes small, low stools.

Formerly, few households were wealthy enough to afford baths of their own and bathing was the only occasion when a Japanese woman was allowed out of the house. Bathing defined the woman's leisure time and provided for social exchange. Now, more and more, the bath is becoming a private ritual, as it is in the West. Nearly the only place where people in the West may politely and unabashedly take clothes off in public is in the locker room at a swimming pool, or on a beach, infrequently. In the East

*"The bath, too, plays its part in the rebirth, just as it does in the baptism preached by John and in the Christian baptism as well."
Secret of the Golden Flower, p. 9*

according to the customs, a special form of decorum is used so that people are not infringing on each other's privacy. For instance, in an inn, a person going to or from the bath is politely, but totally ignored.

THE PROCESS OF THE BATH IS SOMETHING LIKE THIS.

AN ART FORM, PRACTICED EVERY DAY BY EVERYONE.

"The Roman bathhouse was based on the same fundamental principles as the Finnish sauna; alternating hot and cold air and hot and cold water."
Scana, p. 7

"CLEANLINESS IS NEXT TO GODLINESS"

One first takes a shower by drawing water from the tap into a bucket and throwing it over oneself while sitting on the low stool. After thoroughly cleansing, the bather steps into a tub which may be large enough to hold many people or small enough for only one person. The bather sits in the bath tub, immersed up to the neck in luxuriously hot water, as hot as one can stand. There the bather relaxes for as long as he/she may wish. The showering may be repeated with cool water, followed by another immersion in hot water, and so on. This process relaxes one physically and spiritually along with balancing the body temperature. In the summer, the bath is an efficient substitute for air conditioning, and in winter for central heating. The bath is commonly taken daily and in the evening. The resulting coolness or warmth lasts for several hours.

Other cultures have also used bathing as a temperature regulator and all over the world it has been associated with a ritual having to do with a cleansing of the total

being. The bathing ritual is related to philosophies accompanying rituals of regeneration, maintenance, and cleansing. In Central Europe, the *sitsbad* is a bath to sit in and soak. And in Scandinavia the *heat bath* of a sauna has existed as an institution for one thousand to two thousand years.

It is my belief that if we learn nothing more than the adoption of this activity into our Western culture, we will have gained immeasurably from our contact with Japan. Already, certain factions of our culture in tune with the body have accepted the hot tub or *jacuzzi* into their way of life.

The proper use of water is a question in terms of adopting the bathing ritual. Japan is surrounded by water and the quantity of this resource is not in question, whereas in America, there have been a number of droughts within the last few years alone. Still, the same water is used in Japan for all members of the family or for many different people, even at the same time. This is different than in the West, where we each have a separate bath water. A person is absolutely clean before getting into a Japanese tub. And if we adopted the Japanese bath into our way of life, we would have one advantage the traditional Japanese did not have. That is, we can pour hot water directly

"Aside from the undoubted tangible benefits of sauna, there is the intangible, the almost mystic quality that pervades the rite. It is a Way of Life, a method not only of cleansing mind and body, but also of inducing an almost Oriental abstraction of mind, of forgetting for a space the worries of every day, the scaling problems down to proper size."
p. vi in the preface to Sauna



elderly woman performing cleansing ritual, near Kyoto, April, 1979

"I've got another case trying to get the state to give local communities variances to allow them to discharge "grey water" (the H₂O that comes from showers, sinks and washing machines, i.e. no fecal coliform content in H₂O as in the case of toilet water) to fertilize agricultural products instead of wasting the water by pumping it, along with black water (shit water) to the sewage plant where it is treated with chemicals and dumped into rivers. That's something you may be interested in - in designing "energy efficient" homes. There is no need to waste the grey water - it is loaded with nutrients such as phosphorus and is very good to fertilize plants with and contains no harmful bacteria. Millions and billions of gallons of useful "grey water" is wasted every year when it could be used to water lawns in suburbia, crops in aggie lands, and parks in urban centers. But many states classify all water that enters the pipes as "sewage waters" even though the only real sewage is the crap from the toilet. "

from a letter by Randie Denker,
Attorney at Law, Tallahassee, Florida
October 1981

"Comfort can lull you into a dangerous tranquility."
Andre in My Dinner With Andre

64

Movie listings for a theater, including titles like "Peanut Butter & Jelly", "My Dinner With Andre", "Hungry for Reunion", and "Montenegro".

into the tub from the tap.

In the movie, My Dinner With Andre, Andre makes the point that we must check and regenerate ourselves continually. In a sequence, Andre begins with a discussion of an electric blanket, and says, if we could really feel the cold, we would have more of a link to life, to nature, and to other people. He develops the theme that comfort can be a dangerous tranquilizer, like a lobotomy. A house can embody renewal. The Japanese house needs continual regeneration. By actively relating to the house, we are made alert everyday.

In America, we have sacrificed health for the sake of comfort, in the name of "Progress". Western dwellings reinforce the separation between interior and exterior as they relate to our lives. Children in Japan grow up with an implicit understanding of nature and a change of seasons because parts of the house move in accordance with the changes of weather, and because the garden is part of the living space for observation or strolling at all times of year. In contrast, the Western way is to close ourselves off to any interrelation of inside and out. For the elderly or invalid, we are fortunate to be able to regulate and control temperatures and atmospheric conditions which might mean survival to them. Also there are extreme

climatic conditions where "passive" systems may not be sufficient. Nevertheless, I wonder how a person growing up closely associated with the weather would feel about being closed up in the American boxes we call "homes".

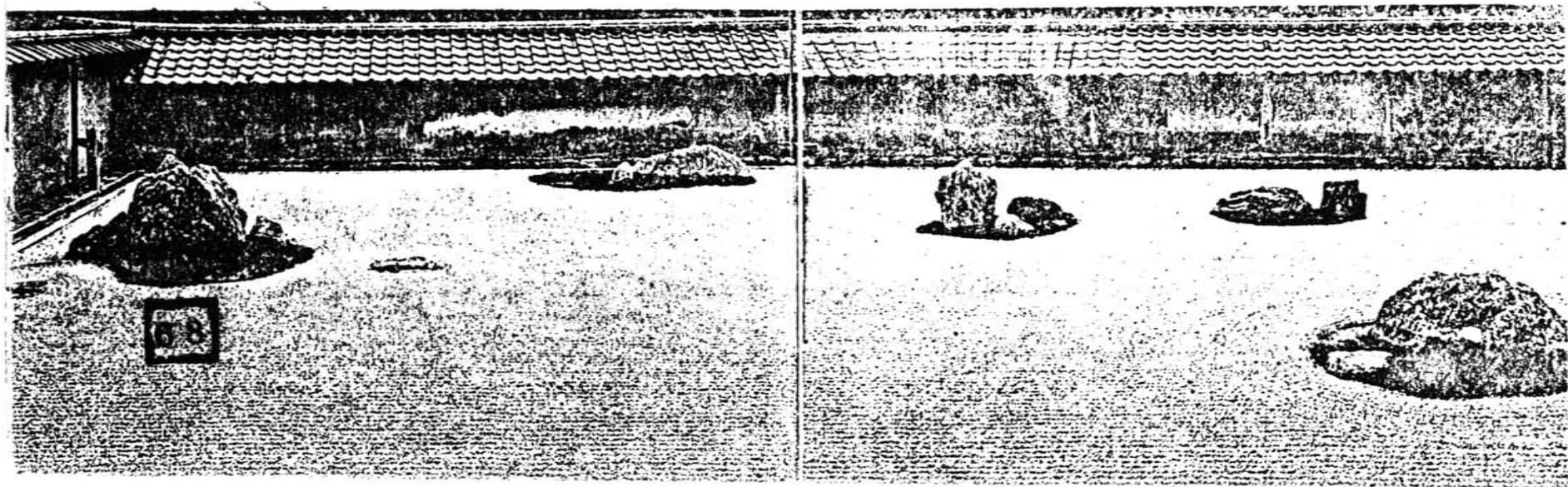
66

Zen

*The beauty of the mind
is more honorable
than the beauty of the outward form.
Plato*

*"Thus, the noted simplicity of Japanese architecture was originally the very expression of lack of means and poverty, not that of wise restraint. The merit of Zen is that it showed the beauty inherent in conscious simplicity, dissolved the stigma of simplicity as being the accidental result of unwanted circumstances, and instead made simplicity an intentional expression of profound significance. Through Zen, then, not simplicity, but the aestheticism of simplicity was discovered, and herein lies an essential contribution to the world's civilization."
The Japanese House, p. 372*

There is an aesthetic in Japan which has to do with tantalizing mental involvement which springs from objects only partially seen. In Ryoanji garden one cannot see all of the rocks at once from any place on the viewing platform of the veranda. Also, the rocks are "planted" so that they project only in part above the surface of the sand.



A major factor that distinguishes Japanese aesthetics from American is that the Japanese sense of form and beauty has for hundreds of years been completely interwoven with the philosophical ideas of Zen Buddhism. Several other religions have influenced Japanese life, but none has had such a profound effect on aesthetics as Zen Buddhism. In Zen philosophy and art, there is a fusion of the past, present, and future. The most lasting traditions, contemporary trends, and futuristic visions seem to have a place. To me this is very apparent in the architecture which has been influenced by Zen, and even the house in which I lived in Kyoto is an example.

For hundreds of years, most of the people of Japan were poor. It is a happy circumstance therefore, that the highest philosophical ideals of the times justified, and even commended the conditions of poverty. Zen preached beauty in the everyday life having to do with simplicity, economy, and restraint. "The poorest, uneducated farmer in Japan can experience and also create beauty within his own dwelling and may therefore grasp, if only subconsciously, the meaning of inner human life," said Engel in The Japanese House, page 432. Zen Buddhism brought beauty, grace, and style within the reach of everyone. Enlightenment, in Zen teachings, is within everyone's reach. The doctrines of Zen actually were introduced to Japan through

"...make it a suitable vehicle for conveying the spirit of Zen..."
Slawson's Seminar Paper, p. 2

about the new American Academy of Arts and Sciences in Cambridge, Massachusetts:

"...the kind of discipline and restraint that have been at the heart of the modernist esthetic..."

New York Times, Architectural View
Classical Clarity In an Academy
Design

Ada Louise Huxtable



"We pursue those trivial, idiotic technological encumbrances and imagine them to be the luxuries that make life worth living, and all the time we are losing our potential for social rather than individual survival, for hating as well as loving, losing perhaps our last chance to enjoy life with all the passion that is our nature and being."

The Mountain People, p. 295

"Indeed, it seems to me that western gardens lack the specific religious meaning consciously incorporated into the Japanese garden."

Interview with Nakane Sensei, p. 147

the common people and moved to acceptance within the aristocracy.

Zen was a philosophical and religious idea at first. Only afterwards did it effect form. Engel says (page 423), "This aestheticism, however, did not change the existing physical characteristics of the dwelling, but merely changed their psychological effect." There is a point where our striving for physical comfort seems to be entirely missing the point, and almost pathetically ridiculous. Human beings are resilient creatures. With cognizance, we may benefit from a somewhat discomfoting environment. I would not go so far as Hamlet who said, "If I were bounded in a nutshell I would be master of infinite space...", but I will admit that we may be happier with our physical surroundings if we see ourselves as a more integrated part of them and if we accept the vicissitudes of them. Through the acceptance of Zen in Japan, many people were helped through a most difficult dilemma -- architectural dilemma -- that of very scarce resources. Eventually the limited resources became the desired state, because through limit the spirit was set free. It is reminiscent of blind people in Shakespearean plays who seem to be among the few who truly see. In America, we would do well not to mistake comfort for what is meaningful in life. It is our attitude that makes a difference.

Traditional Japan was truly a conservative society in the sense that elements of design were multi-functional, and complexity was reached through economy of means. At times this could involve moments of great ingenuity. The energy of imagination replaced the waste of materials. There was no covering-up with trim or decoration, and craftspeople had to be clever and talented. Labor also replaced an extraneous use of materials. For example, my house in Kyoto was restricted in its materials, layout, and construction techniques.

*Jung said, "It would be simple enough to do, if only simplicity were not the most difficult of all things."
(The Secret of the Golden Flower, p. 90)*

We can see, the Japanese traditional house is very simple. By "simple" I mean the use of an economy of basic elements. Rooms in my home, as in any traditional home, had many functions. There was not a separate "livingroom" and "bedroom". Rather, one place functioned as either.

Our own concept of "limit" may be misleading when we attribute it to Zen philosophy, because we think of deprivation rather than extension or enhancement. "Yet Zen does not consider this poverty as a cause or an effect of limitation. Instead, Zen aims at seeing poverty as a

WABI

*"poverty"
"aesthetic of primitive simplicity"
"not deficiency but liberation
from external awareness of internal
value"*

SABI

*"tranquility" or "peace"
"as an aesthetic concept, received
the connotation of something that
had gracefully grown old and was no
longer perfect"*

Definitions from The Japanese House
p. 284

we "...must never let the development of the machine get so far away from its sources in art and handicrafts that we could not reinvent the art all over again if its higher secrets are lost."
Art and Technics, p. 72

mental state of being, independent from things worldly such as wealth, power, and reputation, and of being self-satisfied with what is given." (The Japanese House, page 283)

Further, the writer Tanizaki describes the sense of limit that has become part of everyday life: "...we Orientals tend to seek satisfactions in whatever surroundings we happen to find ourselves, to content ourselves with things as they are... .. and there discover its own particular beauty." (In Praise of Shadows, page 31)

In both the East and West, people are incessantly searching for universal ORDER. From time to time, people limit their world view using order for definition and interpretation. Using the limitation of order, there can be limitless innovation.

Within the classical orders of architecture, many versions and interpretations could be realized. With only two colors plus black and white (i.e. yellow, red, black, and white), look at what the limited palette of Velazquez produced. Think of how much has been said using only the twenty-six characters of our alphabet. If Albert Einstein tried to do everything rather than limiting his range, would he have made the discoveries he did? Duchamp said, "I understood, at a certain moment, that it wasn't necessary to encumber

one's life with too much weight, with too many things to do..." (Dialogues with Marcel Duchamp, page 15).

In the past, there was a continuity of life which no longer exists. All generations of students read the same books. Communication and transportation over a vast geographical range did not allow us to change our theories quickly. One result was that grandparents, parents, and grandchildren could have a forum upon which they could stand as equals. The designers of the Duomo in Florence did not have the technical solution and so left the dome for a generation 100 years later to complete. Knowledge was additive and refineable, if it didn't become dogmatic.

Tradition in the form of dogma can inhibit progress. But tradition does not have to be dogma. Freud found minute organisms that needed to be continually irritated in order to survive, and it struck me that human beings might be of the same nature as those organisms. It makes us happy to have a realization; that is, to perceive change brings us a sense of well-being. There are certain times when reinforced change, diversity, and even contradiction are called for in design. But we should not neglect the sense of well-being that accompanies stability and -- from the standpoint of stability -- a perception of change. It is a delicate balance (one which Basho was walking, page 6).

"When I teach at the Osaka University of the Arts, I often speak of you two to my students. Among them all (over 100), not one is engaged in the study of gardening as you are, going to old gardens and studying areas related to gardening like the tea ceremony and Zen Buddhism. Of course there are many who come to Kyoto as sightseers to view the famous gardens, but there is no one who comes to really study and understand them. I tell them that you two have a more profound knowledge than they. And it's sad but true: nowadays, perhaps it's like this all over the world, but Japanese who really understand Japanese things are very few."

Interview with Nakane Sensei, p. 148

Pierre Cabanne: "You have said, 'A painting that doesn't shock isn't worth painting.'"

Marcel Duchamp: "That's a little rash, but fair enough. In the production of any genius, great painter or great artist, there are really only four or five things that really count in his life. The rest is everyday filler. Generally these four or five things shocked when they first appeared. Whether it's 'Les Demoiselles d'Avignon,' or 'La Grande Jatte,' they're always shocking works."

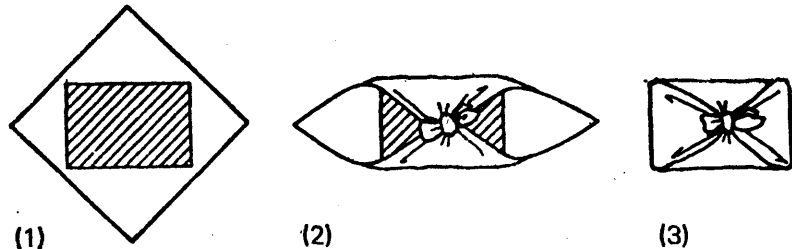
Dialogues with Marcel Duchamp, p. 69

The FUROSHIKI

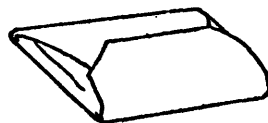
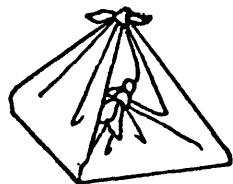
an ancient and versatile form of Japanese packaging.

The furoshiki appears in all sizes and materials:

To tie the furoshiki, spread it out and place your contents on the diagonal. Bring up two opposite corners and tie them in a loop-knot that can be undone by tugging at the tail. Bring up the other pair of corners and tie snugly the same way.



Many variations are possible. The second pair of corners can be tied loosely to form a carrying strap (over the shoulder or across the back), or the corners can be folded rather than tied.



The name of this all-around wrapper comes from its use for bundling clothing at the public bath (furo).

74

"The 'eternal' quality of Rome therefore resides in a very strong, perhaps unique, capacity for self-renewal."

Genius Loci, p. 138

The fading of tradition, either physically or emotionally, has been dealt with in a particular way within Zen Buddhist practice. Maintenance and repair became an integral aspect of Zen life, tightly connected with some formal aspects of traditional Japanese design. Shun Kanda (professor of architecture at M.I.T.) has characterized this cultural attitude by saying that Japan is a wrapping society rather than a bagging one. The scarf used to wrap goods, called a *furoshiki* could be used over and over again.

In the West too, objects of admiration can become faded or in need of some sort of regeneration. Duchamp said, "Men are mortal, pictures too." (Dialogues With Marcel Duchamp, page 67) And in "Apropos of Readymades," 1961, page 110, "I WAS AWARE AT THAT TIME, THAT FOR THE SPECTATOR EVEN MORE THAN FOR THE ARTIST, ART IS A HABIT FORMING DRUG AND I WANTED TO PROTECT MY "READYMADES" AGAINST SUCH A CONTAMINATION." Art -- even as architecture -- is a non-sectarian place of worship in a shrine which asks to be renewed from time to time.

There are a number of ways that people everywhere combat the physical or emotional "fatigue" of a good thing. On the large scale, Eliade talks about every culture re-enacting the Original Creation as a form of regeneration. In Japan, there are many rituals of renewal. One village will throw away the shrine which houses their god ... and the next

village will pick up the scraps for their own shrine. The trend of one time will be the laughing stock of the next. On the other hand, something which seems awkward or strange to one generation, will become the high style of the next. Each wave of "new" music has sounded dissonant and perhaps even unlikeable to the people who are used to the last. It is in this way, however, that music progresses. Beethoven's first notes of the fifth symphony sounded like the end of a symphony to the critics who rejected it. Stravinsky, more recently, was too avante garde for most people's tastes. Cultural objects fade in interest, but so too do they sometimes take time to be accepted. In creative endeavor, innovators often go against the tradition in which they were brought up or trained, and eventually others catch up.

There is some sort of movement, the pieces of which have something in common with all the other pieces, but it is continually swinging and shifting and changing. Tradition, in Japan and elsewhere, does not break with the past but metamorphizes it.

It is only a cultural trick, closely linked to economics and probably far removed from spiritual growth, that keeps us thinking that there is something unquestionably desirable about The Unique. We can never go into our closets



"In order to hasten style obsolescence, they (i.e. publicity directors and industrial designers) introduce fake variety in departments where it is irrelevant -- not in the interest of order, efficiency, technical perfection, but in the interest of profit and prestige, two very secondary and usually sordid human motives.

*...
The perversion of technic in our time naturally saps the vitality of real art."
Art and Technique, p. 80*



"If carelessness does cause damage, repairs can easily be made. ...And it does not offend the Japanese eye if the repaired part of the wall differs from the adjacent parts."
The Japanese House, p. 128

"A way of thinking that is directed solely to what is profitable cannot perceive the vital coherence of all things in nature."
Sensitive Chaos, p. 10

"Those among them who were marked by high station or favorably recommended have come down to posterity with a name that will last forever; for instance, Myron, Polykletus, Phidias, Lysippus, and others who have attained to fame by their art."
Introduction to Book III of Vitruvius' The Ten Books on Architecture, p. 69



for last year's fashions but must go out and buy The New. This is bound up with the gears which keep our society going though, and there is perhaps no simple solution. All of this is intertwined with the employment of many people and what keeps food on the table. A complicated issue.

Zen also gave rise to the acceptance of the unusual, which was sometimes a quality which came from age. A pot which was deformed when it happened to fall over in the kiln might be more valuable than the ones which came out "perfectly," as planned. A tree with a special knot in its trunk might embody a spirit, so it was designated sacred. Such a tree, branch or trunk, would be used as the special column of the *tokonoma*; the *tokobashira*.

In my design, I have considered how materials age in order to make it easy to repair the pieces which need repair most often. The primary elements are the stage upon which the secondary and tertiary exist. The former remain permanent while the latter change. The entire design may be looked at as the inversion of a ruin.

76

Order and Participation

... SCALE AND PROPORTION

KIWARI

The order encompasses the wooden architecture of the entire nation; it is unique because of the following reasons:

- 1. It acknowledges economy and practicality as important factors,*
- 2. It subjects form to structural and utilitarian requirements,*
- 3. It functions by means of a constant module that is not relative to the size of building,*
- 4. It has evolved as independent module for residential architecture in particular, and*
- 5. It is applied universally over and above differences of wealth or social standing.*

The Japanese House, p. 57

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I have been hearing and reading about "user participation" since I began to study architecture. "User participation" is usually relegated to the jurisdiction of the city planner rather than to the architect. However, in terms of how growth may take effect, and how repairs may be made, surely it is beneficial when the architecture speaks for itself. That is my three-part premise: 1. that architecture inform the users how they may participate in a symbiotic relationship with it, 2. that renewing one's place is one of the greatest and most common forms of human participation with the environment, and 3. that participation can be enhanced through the use of a simple and legible order of scale and proportions.

Architecture need not be a mystery. If a system is simple, if it is recognizable to the layman, and if the construction procedures are not too complicated, then the inhabitants may alter the place in which they live... if they are not hampered by politics.

People participate when they feel they are part of the environment and when they are able to effect a change. Users can plan with an architect during the design process and thus participate in a multi-sided and elaborate process. Usually that is what is meant by "user participation." Further, they can participate by continued actions

"Since the house is decided in all its components, everyone is familiar with both design and construction of a building, even in detail. Therefore, residential architecture is not a particular craft or art to the Japanese, but it is just a part of daily life of which everyone has sufficient knowledge to be his own architect. Consequently, the professional architect, as he emerged with the introduction of the West's new materials and constructions, is as recent as he is little respected, and he is not at all necessary for the design of traditional residences."
The Japanese House, p. 66

"There is nothing to which an architect should devote more thought than to the exact proportions of his building with reference to a certain part selected as the standard."
Vitruvius - The 10 Books on Architecture, Chapter 1, Book VI

"The Sistine Chapel is magnificent, but it asks our admiration rather than our participation. The stones of Ryōanji, irregular in shape and position, by allowing us to participate in the creation of the garden may move us even more."

From Slawson's paper, a quote of Donald Keene in response to Derek Clifford's interpretation of Ryōanji garden.

About Myoshinji and Daitokuji:

"The precincts cannot have been conceived in their entirety from the start; they were built up over a long period by many men, all of whom worked in accord with the principle of composition first ordained, though this itself allowed for individual freedom and the changes requisite for its continual survival. The Japanese word saobi meaning 'becoming so', best describes this system of order, with all its connotations of an organic development, whether evolving, static, or dying or even regenerating. There is not final and complete form, the whole is in a constant state of evolution and change and the very nature of the layouts as processional routes is designed to reflect this basic tenet."

Ma; A Sense of Place, p. 147

"The new is always conceived within the framework of tradition, unlike the Western custom of rejecting or even destroying an old form in the making of a new." e.g. calligraphy evolution

Ibid, p. 147

once the structure is built. Beyond that, the architecture itself can be understood and allow for choice. My definition of "participation" is physical on one hand, and on another, it is in the mind -- what I have elsewhere called "psycho-architecture".

When an object is "complete" and will not change there can be no physical nor emotional participation. The user cannot move hands, eyes, or mind. Therefore, I have tried to make my design an "incomplete" design while still having it maintain a sense of wholeness. I am trying to design a place which stimulates growth and life. My role as architect is to set up a flexible frame of zones, partially delineated by the structure, into which people can build their places. The design of housing does not stop at the physical world but also goes into the mechanisms which allow or inhibit growth and change. The design may give boundaries in which the diversity of additions and extensions may be incorporated.

A symmetrical image seems complete.

An asymmetrical image allows us to be involved.

We never step into the garden at Ryoanji. We watch it from a viewing platform. But our minds and eyes move freely among infinite compositions which are always shifting and

changing. Slawson says that in a Zen garden "the mind does not dwell." In The Secret of the Golden Flower (page 88), Jung talks about the therapeutic worthiness of such a detachment. He writes, "What, on a lower level, had led to the wildest conflicts and to emotions full of panic, viewed from the higher level of the personality, now seemed like a storm in the valley seen from a high mountain top. This does not mean that the thunderstorm is robbed of its reality; it means that, instead of being in it, one is now above it."

In Genius Loci, Christian Norberg-Schultz devoted himself to comprehending a sense of identity which people have with their environment. Questions are posed about how a place can adapt to historical and sociological pressures and still preserve a *stabilitas loci* (sense of place, MA), which the writer contends is a basic human need. He thinks that today we blindly welcome change and reject tradition. Norberg-Schultz attributes today's alienation to the "scarce possibilities of orientation and identification offered by the modern environment." (page 180)

Optimistically, the book points to certain cities as examples of complex human environments which have been able to "...preserve the *genius loci* over considerable periods of time without interferring with the needs of

"Order of any kind gives man a sense of security: its the changeful, the unexpected, the capricious, in other words, the unpredictable and uncontrollable, that fill him with anxiety and dread."

Art and Technics, p. 44

"Each phase of growth is complete and beautiful in itself, nothing seems to be missing. The eternal architectural paradox, that of giving an impression of completeness within incompleteness, is solved."

"The structure visible in the plans is not only adaptable to change, but it is even secretly stimulating growth and life. Though so formally perfect, it turns out to be the opposite of formal perfection which would mean death."

Ma; A Sense of Place, p.133



Dürer. Nemesis

successive historical situations." (page 180)

"But, if order is concerned with both general principles and cellular elements of creation, it may mean the liberation from continuous entanglement with basic concepts and the free usage of well-tested elements. Moreover, order in this meaning can make the highest cultural achievement accessible even to those who, either because of continuous struggle for bare existence or because of utter disconcert for matters of life and culture, do not directly engage themselves in improving life and society as a whole."

The Japanese House, pgs. 263-264

From Genius Loci, the following quotes inform the design I have made.

Moreover an interpretation is always open to individual variations. In general, settlements are therefore characterized by basic motifs which are varied according to the circumstances. Theme and variation is in fact a basic means of artistic concretization... In general 'theme and variation' allows for the expression of individual identity within a system of manifest common meanings. Thus it conserves the 'spirit' of the place without making it become a life-less straightjacket.
Page 180

We dwell poetically when we are able to 'read' the revealing of the things which make up our environment.
Page 169

NOT 'Freedom' as an arbitrary play, but as creative participation. Page 182

As I have said, the Japanese house is flexible enough to allow for growth or change without disrupting the organic whole. Though some pieces adapt to the weather, certain pieces are fixed and give a sense of stability. In the design for the waterfront, some of the walls, columns, and parts of the floors are fixed as primary members, while others are more easily altered. The apartment can grow vertically or laterally as needed. The house can be its own "How To" manual through its use of coordinated and explicit dimensions. If the dimensions are obvious, even

to the layman or the child, as they are in the traditional Japanese house, the house will allow the dwellers to change or repair their place however and whenever they wish.

The house dimensions may be the same within a large number of different houses. If this is the case, pieces of the house may be prefabricated and available. The assemblage or configuration of these parts may be distinctly different in each house, but by keeping parts and procedures of construction simple, the constructors -- professional or otherwise -- in time can refine the techniques and have mastery over them.

Of course innovation within a system is not determined solely by having parts available on the market, and order itself will not bring beauty and harmony to architecture. It involves a change of attitude towards our living places. In Cherry Hill, New Jersey, where I spent my high school years, there are housing developments made of pieces which are available on the market. In this case it did not make for greater architecture or even a greater participation of the inhabitants. The style of that social class seems to inhibit people from becoming involved.

I have found some aspects of design which have bi-cultural (Japanese and American) limbs. I have also been able to

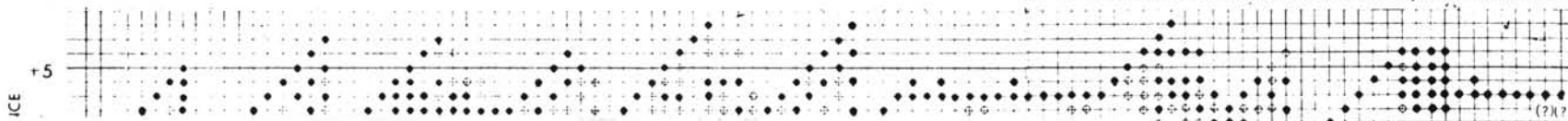
"Change as rearrangement of atoms that remain themselves unchanged." said Zeno as interpreted by Russell in The Wisdom of the West, p. 44

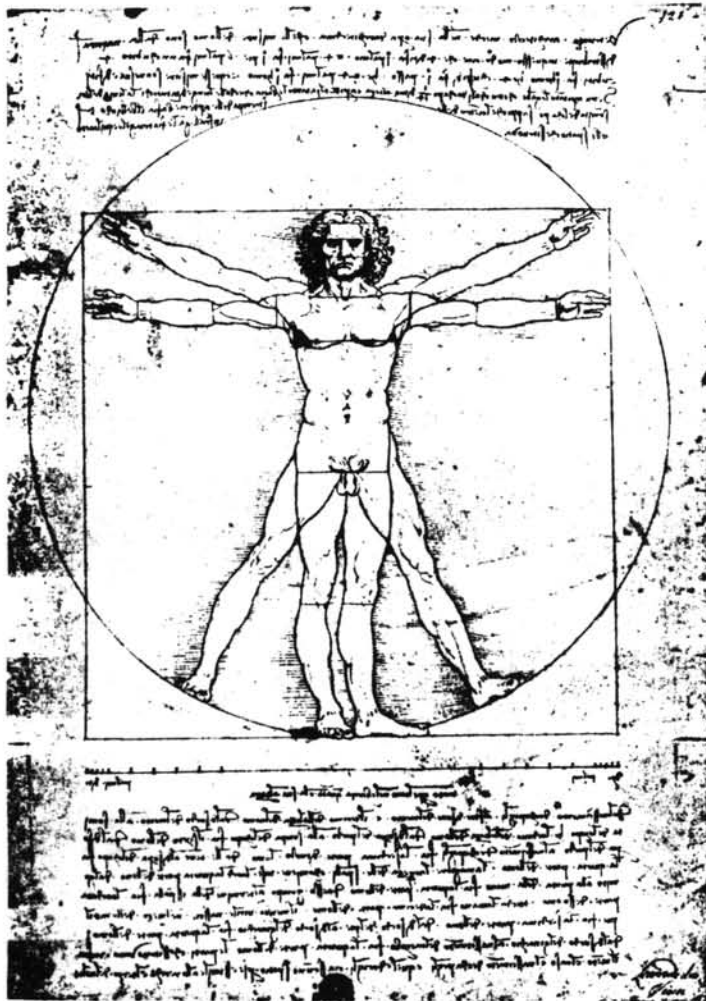
"The regulating lines do not bring in any poetic or lyrical ideas; they do not inspire the theme of the work; they are not creative; they merely establish a balance."
Le Modulor, p. 34, 35

"Presidents of corporations, generals and six year olds all have one thing in common; they want what they want and they want it NOW."
Andy Lippman, giving a lecture on the video disk, M.I.T., November 16, 1981

	2 8 3	13 Al 26.981	2 8 4	14 Si 28.086	2 8 5	15 P 30.974	2 8 6	16 S 32.064	2 8 7	17 Cl 35.453	2 8 8	18 Ar 39.948
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8 n z	2 8 18 3	49 In 114.82	2 8 18 4	50 Sn 118.69	2 8 18 5	51 Sb 121.75	2 8 18 6	52 Te 127.60	2 8 18 7	53 I 126.9044	2 8 18 8	54 Xe 131.30
0 n z	2 8 18 3	81 Tl 204.37	2 8 18 4	82 Pb 207.19	2 8 18 5	83 Bi 208.9804	2 8 18 6	84 Po (210)	2 8 18 7	85 At (210)	2 8 18 8	86 Rn (222)
	2 8 25 2	64 Gd 157.25	2 8 25 2	65 Tb 158.924	2 8 25 2	66 Dy 162.50	2 8 25 2	67 Ho 164.930	2 8 25 2	68 Er 167.26	2 8 25 2	69 Tm 168.934
	2 8 32 2	96 Cm (247)	2 8 32 2	97 Bk (247)	2 8 32 2	98 Cf (251)	2 8 32 2	99 Es (254)	2 8 32 2	100 Fm (253)	2 8 32 2	101 Md (256)

or transuranian elements, all valences reported are listed.





9. Leonardo da Vinci. Vitruvian man

distinguish some features of architecture which are clearly culture bound and do not translate. "They are right in their setting, organically, and to abstract them is to deprive them of that rhythmic vitality on which their beauty depends." (The Nude, page 34) In the middle there are still some blurred edges and I have many questions.

I believe that in the East and the West, architects have been seeking The Perfect Ordering System pertaining to measure and proportions. This was true for the ancient Greeks, in the Renaissance, during the Neo-Classic Period, and so on. In his book on Palladio, Ackerman says, "...the twentieth century and our enlarged knowledge of distant and primitive cultures have challenged any claim to natural pre-eminence of certain consonances or organizations of form." (Page 185) What is universal is our need to seek harmonic proportions. Perhaps it is only within a framework -- the boundaries we define -- where one proportioning system is more appropriate than another. I propose that it adds to the quality of certain environments for the designer or designers to work within strict limitations of measure, but it is equally desirable, when appropriate, to sensitively break the pattern. Order grants unity to diversity.

I have been experimenting with systems of measure but I have yet to find one with which I am satisfied, and I doubt that

I will find one until I am designing and building so that my theories can be tested and I can receive feedback on them. It makes sense to incorporate the benefits of both the foot-inch and the metric system. The foot-inch is related to human scale but difficult to use. The metric scale is easily used because it is decimal rather than fractional, but it is indifferent to the stature of the human being.

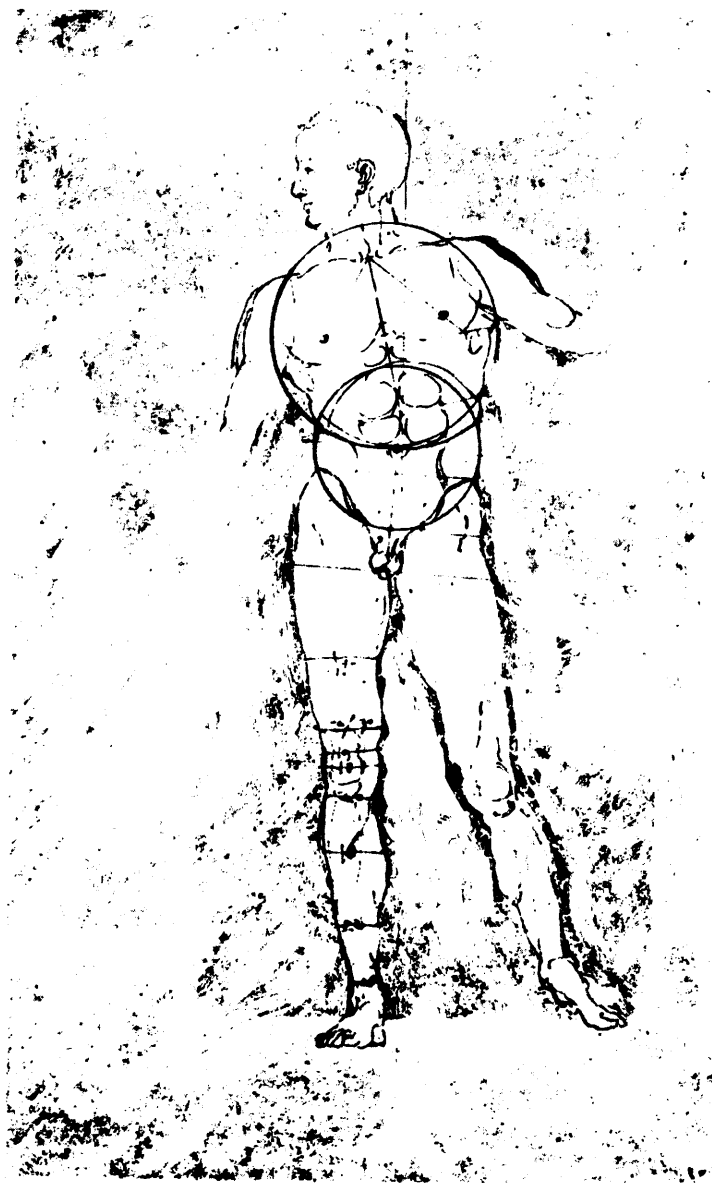
Le Corbusier in Le Modulor points out problems with either foot-inch or metric, or the use of both. Engel thinks that the Japanese system of measurement is the answer, and there is a 1966 "United Nations Report on Modular Coordination in Buildings" which agrees. It states: "We believe that Japan's building modules are the very best both theoretically as well as in economy in practice. We wish to verify this fact in practical application."
(Page 51)

No one seems to have the answer. After all, what is the "stature of man"? (Le Modulor, page 20) It might seem that a "human scale" is universal to humans, but even that range is too varied. What adjusts to a six-foot man may not be the rule for a Westerner, much less a Japanese. Human scale, human reach for instance, can be a clue for the designer as can the Golden Mean which shows up all

*"Indeed, the Japanese house, more than any other architecture, past and present, provides a unique example of comprehensive and thorough standardization which surpasses the most progressive ideas of contemporary modular coordination."
The Japanese House, p. 49*

*"The modern meaning of module, however, has an outstanding precedence in Japan, where for the last two to three hundred years the ordinary houses of the entire nation have been built on the basis of a modular order which is unique in the history of world architecture."
Ibid, p. 54*

*"What contemporary architecture hitherto has striven for so unsuccessfully emerged in Japan logically: a unit universally applied in living as in building, a standard distance for construction and economy, a module for aesthetic order, a six-fractioned measurement in decimal system, a length related to human proportions, even a link between city and domestic planning."
Ibid, pgs. 54-55*



86

Dürer. Measured nude

over in natural forms. But none of these are the ultimate answer. Is there one Ultimate Scale?

If order is achieved by means of geometry, the specific geometry used brings with it a particular character just as the size of *tatami* lends a character to the house I lived in. Anything breaking that geometrical pattern will feel out of place (there may be exceptions to this). The decision should be carefully considered beforehand. The organization of a geometry may only be comfortable within a given boundary, just as the scale of the mountains in Japan lends itself to a different architectural scale than does the wide-open plains of the American midwest. If a renovator or designer building an addition to an existing structure is given an organizing theme of scale and proportions, the style may change but the addition will be in harmony with the whole and a "...certain 'democratic' freedom is thereby expressed." (Genius Loci, pages 73-74)

For the design of the waterfront, I have chosen to work with a measuring system based on multiples of three feet for the open spaces. A six inch width is left for the walls and doors. Most of the doors will be sliding doors rather than swinging because the former save space. I have chosen a three foot basis because it is space enough for one to sit or to stretch one's arms. Also, two people can stand

side by side and comfortably look out of a three foot wide window. I have chosen a measure based on an intimate scale because I want to be the character of my design.



*Retinal assymetry and nonattachment in
Van Der Weyden's "The Descent from the Cross"*

88

Contrast, Rhythm, and
Repetition



90

We perceive when we perceive change. Contrast is a form of change. Contrast depicts the boundary, or moment of change.

My contention is that we perceive things at their edge, that is when one thing changes and becomes another, or that we perceive an object against a background or a field of like images dissimilar to the object itself. Further -- at the risk of sounding redundant -- we feel the greatest sense of well-being when we have a realization, and that "realization" is when we perceive a change ... any change ... from a stable perspective.

Without a background, objects could not be seen. A background can be a unified field or a repetition of constants. If there is a red object and it is placed into a red background (the same color red), it will disappear. It is only when it is placed in a background of another color -- that is, in contrast to it -- that the object stands out. Without keeping all of the variables constant in a scientific experiment, the one variable in question could not be accurately tested.

If we are living in a world of green, perhaps we cannot perceive green until we see another color. If we hear the air conditioner, after a while we will no longer hear

"But note: we may easily underrate the amount of dull and repetitive work even the freest of craftsmen is compelled to do, though he works under ideal conditions. Indeed, the overemphasis of the creative moments in art, the tendency to picture esthetic creation as one long, fervent, spontaneous activity, without severe toil and painful effort, without a constant mastery of technics, is one of the sure indications of the amateur and the outsider. Looking at a cathedral like Chartres or Rouen or Bamberg, for example, the modern eye is so impressed by the wealth of the sculpture that the whole fabric seems like the work of a guild of imaginative artists, who turn every chore into a play of happy fantasy. That is a very partial reading of such a structure. As the medieval historian G.C. Coulton has well reminded us, the greater part of the stones that make up a cathedral are four square blocks, one shaped as much like the other as possible, to facilitate their laying and bonding; in other words, the hewing of these stones to their geometrical shape involved repetition, standardization, and careful measurement, with a maximum amount of systematic labor and a minimum amount of spontaneity. He is right in so reminding us; and what he says applies to practically every form of art. Each art has its technical side - and technics involve calculation, repetition, laborious effort, in short, what would often be, were it not for the ultimate end of the process, sheer monotony and drudgery..."

Art and Technics, p.48-49

"I wanted to create a static image of movement..."
Duchamp about "Nude Descending a Staircase"
from Dialogues with Marcel Duchamp,
p. 30

"Let us ask what precisely about this whole phenomenon of the saint has seemed so enormously interesting to men of all types and ages, even to philosophers. Beyond any doubt, it was the air of the miraculous that goes with it - namely, the immediate succession of opposites, of states of the soul that are judged morally in opposite ways."
Nietzsche, Beyond Good and Evil,
p. 62

Oxymoron - a figure of speech in which contradictory terms are brought together for emphasis
Funk and Wagnalls, Standard College Dictionary

"Through repetition and contrast the composer achieves both unity and variety. This combination of traits is basic to musical architecture, for without unity there is chaos, without variety - boredom."
The Enjoyment of Music, p. 13

"What is most difficult to render from one language into another is the tempo of its style, which has its basis in the character of the race, or to speak more philosophically, in the average tempo of its metabolism."
Nietzsche, Beyond Good and Evil,
p. 40

it ... until it is shut off. In the story of Flatland, only the character who left the two-dimensional world of Flatland could tell that it was a two-dimensional world after all. And, of course no one would believe him.

A sense of movement is heightened by contrast when an immobile means is used to express it. Compare stop-motion photography to film as a way to express movement. It can be much more obvious that a horse is moving in Muybridge's images than in a film, because the static medium (i.e. Muybridge's) allows the movement to become the object. I am contending that there is a holding-back-while-going-forward-at-the-same-time existence which gives a sense of dynamism, of movement, etc ... which reflects the nature of our lives as human beings, and, when put in design, hits a resonant chord within each of us.

Rhythm is a form of constancy or of permanence, and when rhythm is broken there is change. When the break in the rhythm becomes repetitive, it too becomes a kind of rhythm.

92



Jules Etienne Marey: Chronophotograph, c. 1890

In Genius Loci, Christian Norberg-Schultz praises the Roman landscape and attributes much of its impressiveness to the feeling that there is "...a certain majestic and controlled rhythm in the articulation of the masses..." (pages 142-143) Within the larger framework of rhythms, there are also smaller ones. "Within the great unifying movements of the Roman landscape we may, however, discern several types which have their distinct and profoundly meaningful character." (pages 142-143)

Further, in a discussion about rhythms, Norberg-Schultz mentions the role of light. Light is closely related to the temporal rhythms of nature. This is obvious when we think of the different, alternating, warmer or cooler colors which characterize the seasons. In a design context, Vermeer (whom I like to call the "painter's painter"), uses a rhythm of light and dark, warm and cool to keep our eyes moving across the surface of his paintings (e.g. "Girl in a Red Hat").

Repetitious renewal is a form of both stability and change. The fact of activity (i.e. renewal) being repeated over and over is a form of constancy. The fact of that activity being a change from what is to something else, is a form of change. Renewability has to do with repetition and with participation.

From Russell's The Wisdom of the West, pgs. 37, 31, 29 respectively

Anaxagoras - "Concerning perception, he advanced the ingenious biological principle that sensation depends on contrasts. Thus, vision is a breaking in of light on the opposite dark. Very intense sensations cause pain and discomfort. They are views that are still current in physiology."

Empedocles (1st half of the 5th C.) - "Health is a proper balance between the opposite components."

Heraclitus - "The real world consists in a balanced adjustment of opposite tendencies."

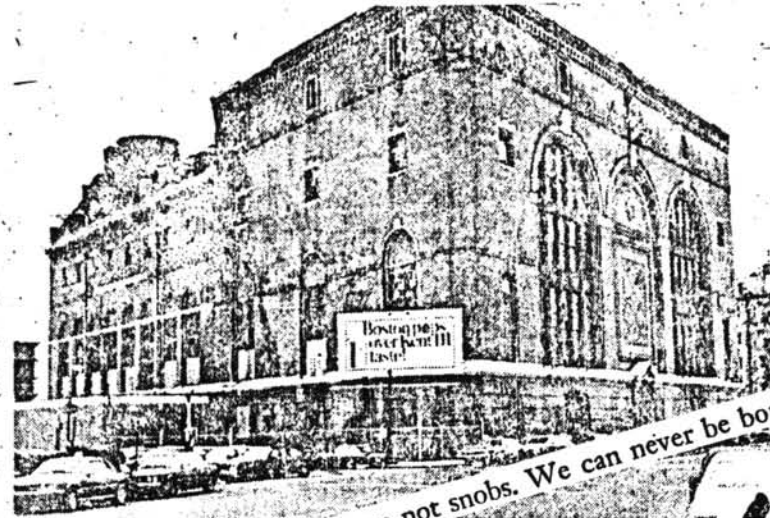
On KIYOMIZU - a feeling of continuous movement and enticement leading one ever onwards and even back to one's point of departure without any particular climax. "The precinct is not made up as is usual, from a sequence of linked spaces, but rather from interpenetrating spaces, so that there is always a feeling of movement and modulation; the effects being created by contrast and alternation, light and dark, soft and hard, open and closed, formal and informal. The experience of the precinct is in the eye of the moving beholder, the sense of place is in the understanding of the whole and not any particular detail." Ma; A Sense of Place, p.139

Everyday we wake up and we have to reorient ourselves to ourselves. There is something in common with the day before but this day has never been. Gide wrote, "I am never anything but what I think myself - and this varies so incessantly, that often, if I were not there to make them acquainted, my morning's self would not recognize my evening's." (The Counterfeiters, page 64)

Human beings have a great many rituals, explicit or implicit, which recognize certain recurring events and bring the continuity of our lives to our consciousness. They are either a happening to be reenacted, or they celebrate the anniversary of its original occurrence. In this way we tie the present to the past and link it to the future. Sometimes these moments of memory are built, but sometimes it is not a planned event that reminds us of the past.

Proust wrote in Swann's Way, page 34: "I feel there is much to be said for the Celtic belief that the souls of those whom we have lost are held captive in some inferior being, in an animal, in a plant, in some inanimate object, and so effectively lost to us until the day (which to many never comes) when we happen to pass by the tree or to obtain possession of the object which forms their prison. Then they start to tremble, they call us by name, and as soon as we have recognized their voice the spell is broken. We have delivered them: they have overcome death and return to share our life.

And so it is with our own past. It is a labour in vain to attempt to recapture it: all the effort of our intellect must prove futile. The past is hidden somewhere outside



Controversy surrounding the sale of the MBTA's Lincoln Power Station.

you and I are not snobs. We can never be born enough. We are

[Photo by BILL BERRY]

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intellect, in some material object it depends on chance whether we come upon it or not..."

Renewability

"Settlement in a new, unknown, uncultivated country is equivalent to an act of Creation. When the Scandinavian colonists took possession of Iceland, Landnama, and began to cultivate it, they regarded this act neither as an original undertaking nor as human and profane work. Their enterprise was for them only the repetition of a primordial act: the transformation of chaos into cosmos by the divine act of Creation. By cultivating the desert soil, they in fact repeated the act of the gods, who organized chaos by giving it forms and norms. Better still, a territorial conquest does not become real until after --more precisely, through-- the ritual of taking possession, which is only a copy of the primordial act of the Creation of the World."

The Myth of the Eternal Return, p. 10

"For instance, when a wave appears and remains stationary behind a stone in a stream, a form is all the time being created simply out of movement, with new substance constantly flowing through it. This is an archtypal principle of all living creation -- an organic form, in spite of continuous chemical change, remains intact."

Sensitive Chaos, p. 33

Miracles are to come. With you I leave a remembrance of miracles: they are by somebody who can love and who shall be continuous. The act is a human being: somebody who said to those near him,

the
CONSTITUTION
of the
UNITED STATES

(Parts of the Constitution no longer in effect are printed in italics.)

AMENDMENTS
TO THE
CONSTITUTION

95

No matter how immutable we like to think something is, it should be subject to renewal. First of all, it is essential to recognize that objects age. In architecture, it is important to consider what kind, and how much maintenance is needed for different materials. The Zen practice is to respect the aging and the aged. The highly considered Zen garden, called *karesansui*, illustrates how the refined order is most precious and desirable when it has to do with age. The traditional Japanese attitude towards material items was that the longer something lasted, the greater its experience, the more it embodied worth. Historically in the West, it was not so easy to tear down structures because it took too long to rebuild. Today, again it should not be so easy to tear down structures because we need to be more conservative with our material resources and energy. Unfortunately the construction industry, which is slower to change than others due to the expense that goes into it, has at last embraced the contemporary concept of built-in obsolescence.

The traditional Japanese house was interlinked with its time. Nowadays, the cost of building such a house in Japan is prohibitive. Still, there are lessons we can learn from the house. It seems to me that the house can be interpreted in the following way from one perspective. In the traditional house, the structural members are

"Naturalness is a quality describing the way in which all of the other characteristics are present in the work of art. For example, withered-ness may be present either naturally ('to be weathered is good') or unnaturally ('to make it weathered is bad'). 'True sabi as Zen beauty is the quality of being naturally weathered, and in it there is neither compulsion nor intention.' Such a quality may be seen in the naturally weathered boards of the Japanese teahouse. By comparison, the unnatural quality of boards made to look weathered maybe seen in the rough-sawn, low-grade stained siding being used nowadays on many American homes. What this shows is that Americans have begun to appreciate the appearance of rusticity but not the intangible wabi-zumai ('life or the wabi or poverty) which must lie behind it if it is to be truly natural or unintentional."
Slawson's Seminar Paper, p. 27-28

"I am convinced that creativity is a priori to the integrity of the universe and that life is regenerative and conformity meaningless."
I Seem to Be a Verb, p. 6

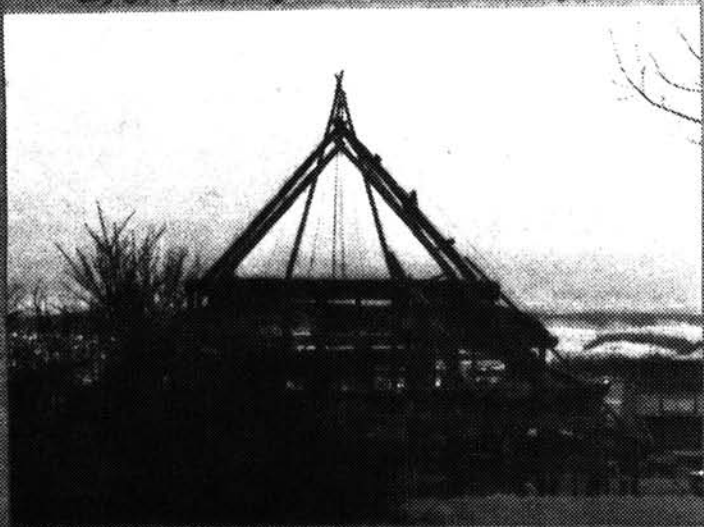
In Tallahassee, Florida, there is a group of architects and students working at the Florida A. & M. University, trying to develop and study ways to make use of surplus materials from industry in the construction of self-help housing in Leon and Gadsden counties, which are amongst the poorest in America.

the Protestant theologian, Rabbi Emmanuel Rackman of the Fifth Avenue Synagogue and Prof. Leon Feldman of Rutgers University. At the end of the meeting.

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大工長谷川 進
建築家 木下 龍一

は、面名の家族と共に
貴方を大枝花
オープンニングパーティーに御招待申しあげ
ます。
百歳の家が
未完の装りで、酒を
酌みかわす。いらっしやいませんか



日時：1978年4月16日 15時頃
住所：京都市西京区大枝面長町1-371
TEL：075-331-9637
交通：京都駅一尚尾社駅よりバスにて
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山へ山道を上ル10分

simple posts and beams. Further, the floor (not the tatami mats but the support under them), and the roof (not the ceiling but the roof), are fixed. Also, the northern wall is fixed and it is in this area that the pieces such as closets and shelving are arranged. These are pieces that need to be sheltered from the sun. The northern wall is where the *tokonoma* is placed in which there is a painting or scroll which must be protected from the sun's direct rays for preservation reasons. Also, these pieces do not need to change from season to season.

If this were to be translated into modern terms, we could still reasonably construct a house where the structural members are simply posts and beams. The house could have a fixed floor, roof and northern wall. Against the fixed walls, the storage areas can be arranged.

In both constructions, the kitchens and baths can receive northern light and be arranged in close proximity to each other. In both, there can be removable pieces which are those pieces which need the most frequent repair. We can still reasonably construct a house with the idea that, with renewability, it could be built to last.

In Japan today, often the old is being discarded and the new -- anything having to do with Modernity, and particularly with America -- is being placed on a pedestal. Old items are trashed even if they are only in need of minor repair, the children of master craftspeople are working for corporations - possibly scared away by the thought of a long and arduous craftperson's apprenticeship, and grandparents give their grandchildren a seat on the bus while they stand precariously in the aisles. For whatever justification, the Japanese believe that the hope for Japan is in the future.

Luckily, there is an elite group who are desperately trying to preserve the past, even to put it into cold storage until its worth is recognized again. In this way, it is similar to the American conservation efforts which took so long to recognize. Only when people realized it was profitable, did they begin to preserve buildings, as, for example, with the Boston waterfront or with Katsura Palace in Kyoto.

"How does a place preserve its identity under the pressure of historical forces? How can a place adapt to the changing needs of public and private life? The common *laissez faire* attitude of today implies a rejection of the first question and a blind acceptance of adaptation to change. We have

By Mindy Lehrman
The Massachusetts Historical Commission has found St. Mark's Church on Park and Vernon streets in Brookline to be a "valuable architectural and historical resource", and has nominated the structure to the National Register of Historic Places. The May 11 vote of the state agency came one week after the Brookline Historical Commission had unanimously voted to endorse the nomination of St. Mark's.

Three local neighborhood groups, the Griggs Park Neighborhood Association, the Harvard-Marion Neighborhood Association, and the 70-80 Park St. Condominium Association had prepared and submitted the nomination papers to the state commission in April of this year.

The National Register is a list of American architectural resources which are significant to the nation's heritage.

The register is officially compiled by the Secretary of the U.S. Department of the Interior, but the National Park Service carries out the Secretary's preservation functions.

The benefits for properties listed on the register include eligibility for special matching grants for preservation and renovation from the National Park Service. Also, federal funds may not be used to aid in the demolition or alteration of any property that is either on or nominated to the National Register without a hearing before the National Advisory Council on Historic Preservation. It is unlikely that the council would approve the demolition of a register property.

Now that the Massachusetts Historical Commission has nominated St. Mark's to the register, they will forward the decision to the National Park Service in Washington, D.C. Sources at the commission said that, in the past, negotiations have

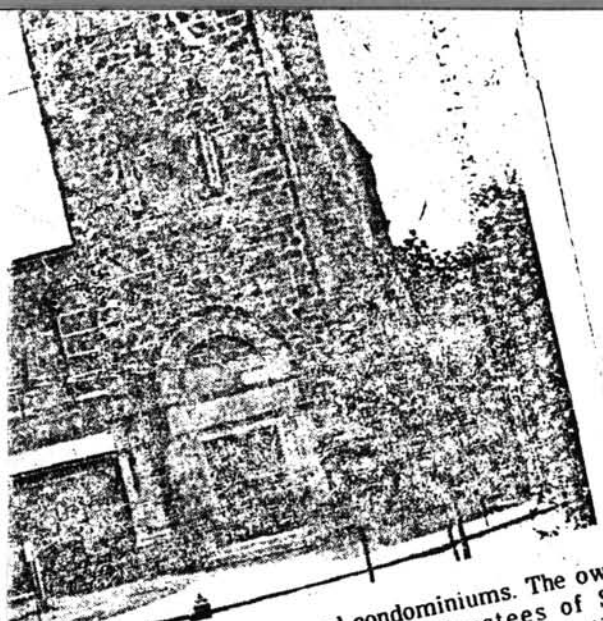
been approved Service.

Peter Freeman, spokesperson for the neighborhood groups that sponsored the nomination, says that the decision by the Massachusetts Historical Commission is a significant step towards the preservation and re-use of St. Mark's. "It is our hope that the church can be used by various groups, such as day-care centers, art and dance schools, and community groups, so that the building will continue to contribute not

just to the physical beauty of the town, but to its educational and civic needs, as well."

The papers nominating St. Mark's to the Register state that the church has been an integral part of the neighborhood, a visual focus of approaches to the area, and a townwide landmark. It is an elaborate example of Renaissance revival taste, with an impressive rose window on the northern facade from St. Mark's Parish, the 1896 church was designed by Boston's first city architect, George A. Clough, whose works include English High School (both now demolished) and the old Suffolk Courthouse in Square. Clough's design of the Old St. Mark's as a museum space in 1896





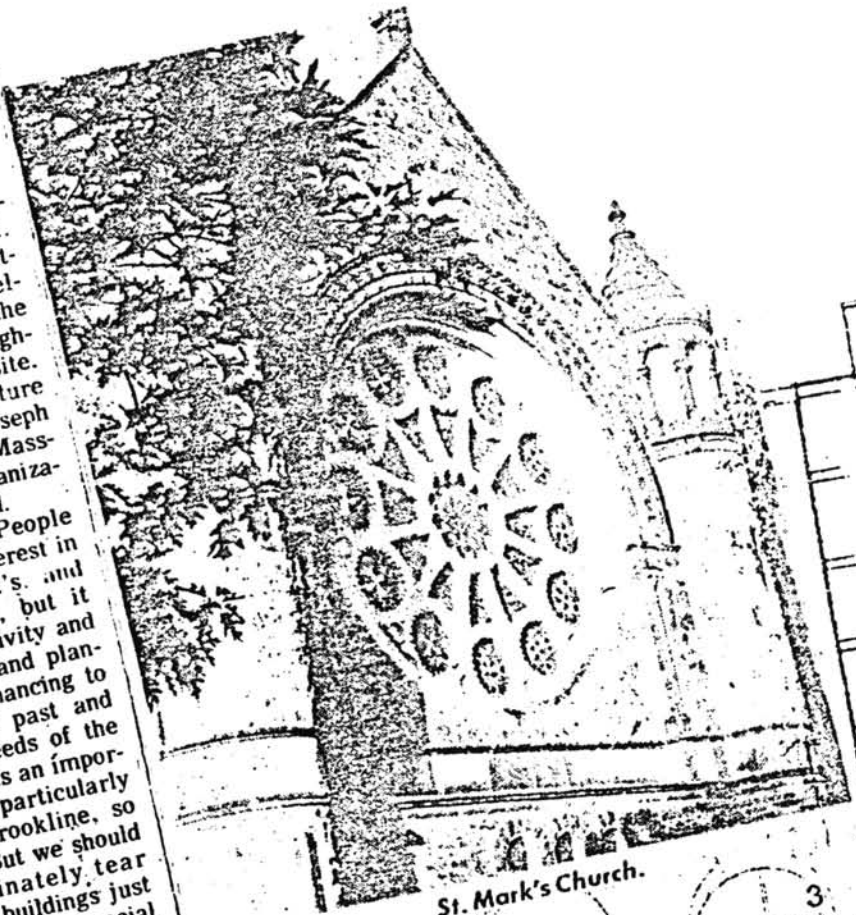
tried to show, however, that human identity presupposes the identity of place, and that *stabilitas loci* therefore is a basic human need."
Genius Loci, page 180

earliest adaptive re-use efforts in the country. In 1968, the original Methodist congregation vacated St. Mark's and merged with the Baptist Church and the Congregational Church of Brookline. All three now use the United Parish on Harvard Street. For the next several years the town of Brookline used St. Mark's for an elementary school while awaiting completion of their new Pierce building. The church is currently used for religious services by St. George's Russian Orthodox congregation and as a daycare facility by the Children's Center of Brookline. It is located in a quiet neighborhood between Berton two parks.

The residential setting in which St. Mark's is located is now a multi-family zoned district spotted with apartments

and condominiums. The owners --the Trustees of St. Mark's --have been negotiating with real estate developers who plan to demolish the edifice and to construct high-rise apartments on the site. This would be a joint venture between Tambone Co., Joseph E. Bennett Co., and the Massachusetts Council of Organizations of the Handicapped.

Freeman notes, "People have expressed an interest in preserving St. Mark's, and this is encouraging, but it takes a lot of sensitivity and imagination, work and planning, as well as financing to both preserve our past and adapt it to the needs of the present. Housing is an important concern now, particularly in areas like Brookline, so close to cities. But we should not indiscriminately tear down beautiful buildings just because they require special care. It would be a shame to realize afterwards that we have cleared the distinctive character of our neighborhoods and communities off the map."



St. Mark's Church.



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proposed structure to replace St. Mark's

out drop-off

Garden



from man's passion for a 'dead perfection, sought the structural order of their own land so that they might create in harmony with it. They also tried to interpret nature's rhythmical change in their building operations ... by setting building on very difficult sites. Under such challenging conditions we can see how man's work enhances nature's work and visa versa."

Ma; A Sense of Place, p. 132

"Roofs in Japan have a particular significance, they are not merely a protection from the elements, but a bridge between man and the sun, the wind, the snow and the rain; they link heaven and earth."

Ibid, p. 149

ON INDOOR-OUTDOOR RELATIONSHIPS

Though we may live in dense, urban settings, it is possible to live in harmony with organic nature. It is desirable for our physical and emotional well being that we stay in touch with the temporal rhythms of nature. Because a human being is a "'thing' among 'things'" (Genius Loci, p. 168), our homes extend to the out-of-doors, and even in a dense situation, a housing unit may have a private outdoor place. Perhaps decentralized farming (i.e. for each house or small scale community), may help to put each of us back in touch with the earth and, hopefully, reinforce in us the desire to conserve and preserve this planet.

When the design breaks the strictness of its organizational system, it could be in reaction to strong pressures of the landscape, reflecting modulation of topography, for instance. It is "...an extension to nature's system of order and beauty, and the human being in contemplation there becomes an inseparable part of it." (Ma; A Sense of Place)

In the Japanese garden, there is no mistaking that there has been human intervention. The layout may even reflect the modular order of the interior of the enclosed structure. The intervention is truly a collaboration of human and otherwise natural efforts with one enhancing the other.

"There is no sense of a western formal hierarchy of space leading to a climax but rather a subtle movement from dark to light, from higher to lower, from manmade textures to natural textures...a 'working outward from precision toward the vague undefined void.'"

Form and Space of Japanese Architecture, p. 178

"As one moves from interior to exterior, there is a sense of extension of architectural patterns into the landscape giving a space that is not merely formless and undifferentiated but is sharply defined, precise in its implied outlines, unique and yet at the same time 'capable of unlimited extension - of being a part of the whole.'"

Ibid, p. 173

"Eastern sumie (black and white ink paintings) or Eastern calligraphy show relatively large unpainted areas compared with Western painting. The skill lies not only in the mastery of the painted forms but also in their relationship to the surrounding space - that is, in the harmony of the Ma. If the relationship is bad, the most essential thing, the Ma, is said to be missing. The final value-judgment is based upon the unity of form and non-form."
Ma; A Sense of Place, p. 153

"Japan being so small in scale, any large human concept of order must, on account of its size and hardness, constitute an interruption of the flow of nature. The Japanese, sensitive to the rape of nature resulting

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DESIGN

"To compare, as western interpreters do, the 'form' of Japanese architecture with the forms of, for example, Greek or Gothic architecture is actually a misleading practice, because the 'form' in the ordinary Japanese residence was hardly consciously conceived along visual principles, as were the forms of these examples of western architecture, but was the simple substantiation of the various form-giving factors."
The Japanese House, p. 372

"The more men learned to know the physical nature of water and to use it technically, the more his knowledge of the soul and spirit of this element faded. This was a basic attitude, for man now looked no longer at the being of water but merely at its physical value."
Sensitive Chaos, p. 10

"I shall repeat a hundred times," writes Nietzsche, "we really ought to free ourselves from the seduction of words!"
Beyond Good and Evil, p. 23

"Where conscious speech shows itself to be quite impotent..."
Jung, The Secret of the Golden Flower, p. 105

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"Truth is neither words nor color and form. Although words may be used in transmitting truth, people can be made to feel truth only by means of forms and colors."
Art in Esoteric Buddhism: Painting in the Heian Period, p. 86

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Kireji

...DESIGN IMPLICATIONS

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*KIREJI -- PIVOT PART OF A HAIKU POEM
WHICH FORMS A BRIDGE BETWEEN TWO IDEAS*

I have been deeply moved by my experience in Japan; living in a traditional house, working as a carpenter, and studying traditional design. In this section I would like to summarize what I have gleaned from my explorations that has directly influenced my formal designs. I have avoided imitation or importation. Still, some of what I have designed is nearly a direct translation from Japanese design to American. Here, I want to clarify certain aspects of the Japanese traditional house that I saw by living in one and studying it.

A list of what I consider universal principles transformed into physical elements in my design includes:

- the use of contrasts to produce a sense of dynamics (non-attachment, asymmetry)
- flexibility for growth and change, including a clear system of dimensions and proportions, and a clear distinction between primary, secondary, and tertiary members
- simplicity; limit material and formal elements
- pushing to limits of sensory fatigue

-respect for inherent qualities of materials and for the aging process (housing always in a state of becoming , rather than "complete")

-a particular indoor-outdoor relationship where every house has a private outdoor space which is dimensionally similar to the indoors

-obscured views

-mnemonics for spatio-temporal orientation and identification

A house should be a background for living; a place where people may express themselves through their environment, and it should readily respond to changes the inhabitants want or need to make. The design should have a clear and simple organization which responds with sensitivity to the ever-changing demands on the environment. It should have a clear system of dimensions and proportions; the primary structure should be obvious and distinct from the secondary and tertiary, and the design should make explicit what goes on inside the walls, floors, or ceilings in terms of wiring and pipes. In these ways the inhabitants can see the difficulty involved in any proposed change. When the inhabitants clean, repair, or alter their place, it gives them a feeling of renewed life, a fresh start, and self confidence. This is cross-cultural.

Traditional Japanese design did not rely upon the architect, but the carpenter and the traditions acted as the organizational aspects, and the materials or economy decided the rest. Only the carpenter, the builder, was the overseer for the work.

In the case of this design, there is no real client nor budget, and design decisions which the carpenter would normally make during construction of a traditional house will not be made. After all, as Jean Rouché said about

films: "they are not done on paper but with film;" likewise, architecture is not done on paper but by building.

I chose a site on the Boston waterfront for this design because I am familiar with Boston after having lived here, and having studied the historical and architectural aspects of the city for eight years. For the past two years, I have lived near the site which I have chosen. Designing for the waterfront posed problems. Since many of them are tangential to the work, I have abstracted the site whenever appropriate.

Site Description

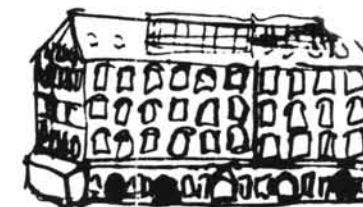


EAST

Boston Inner Harbour

SOUTH

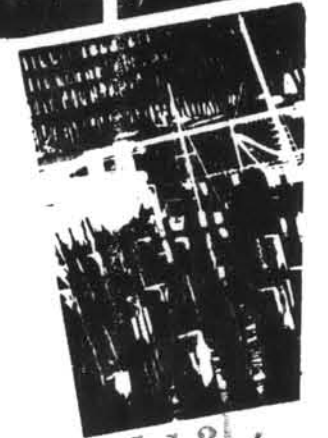
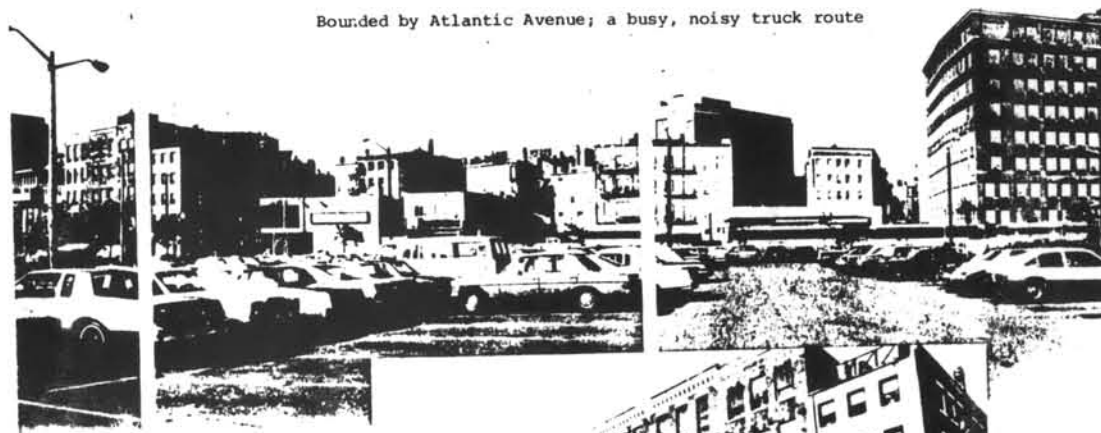
The "Pilot House" or "Winery" restaurant, parking lot, in the distance is Lewis Wharf



113_a

WEST

Bounded by Atlantic Avenue; a busy, noisy truck route



1136

NORTH

A canal, across from which there is a low-rise condominium project

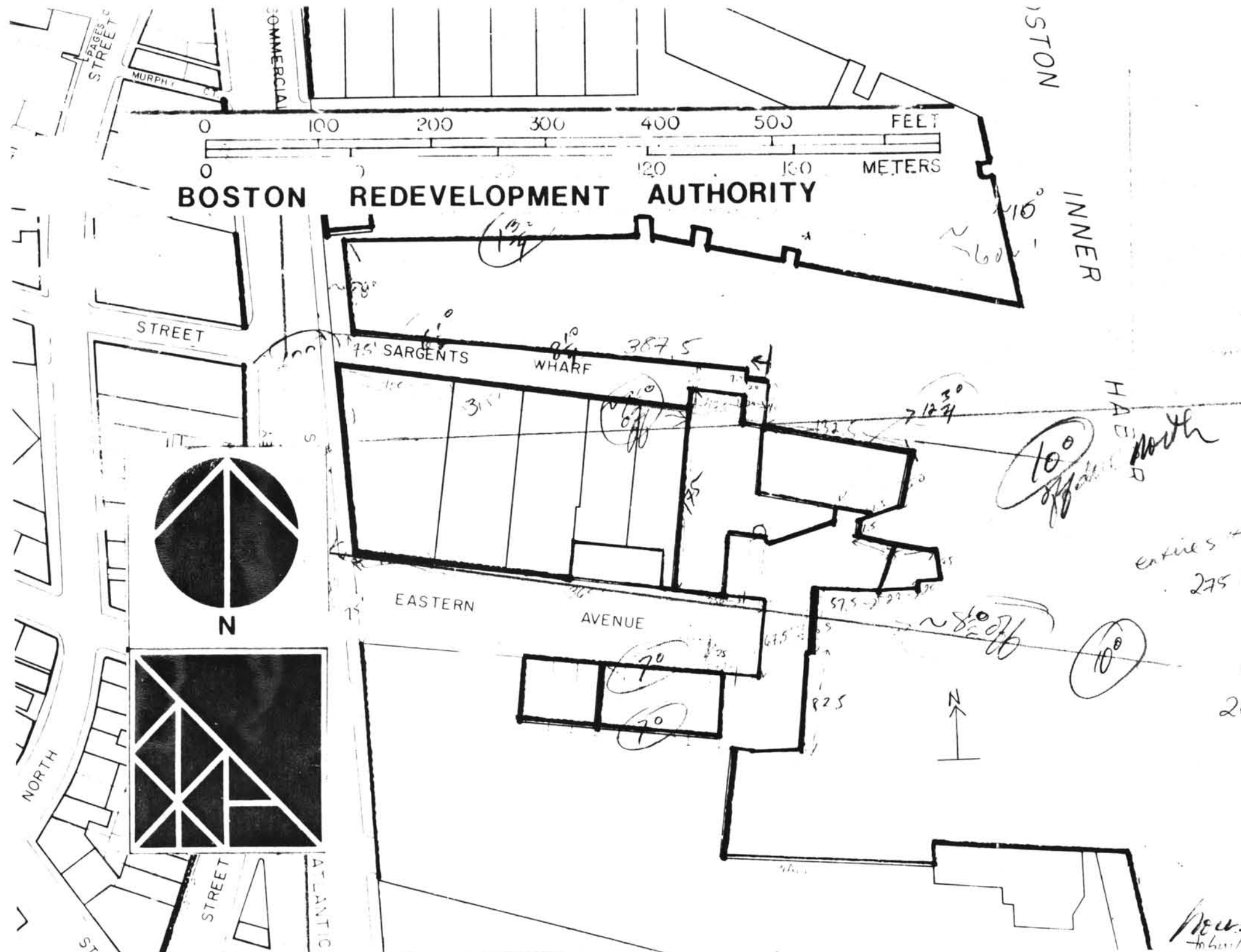


The site is on the Boston waterfront. It is now a parking lot. The site was chosen because of its proximity to water and sun, and because of its desirable urban placement which implies a density with which I want to work.

In general, the site is near to Faneuil Hall and Quincy Market, and might form the turning of a loop which would connect these places to the shops on Hanover Street in the North End (as suggested by Mike of Mike's Pastry Shop).

NORTH END

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BOSTON REDEVELOPMENT AUTHORITY

BOSTON
INNER

SARGENTS WHARF

EASTERN AVENUE

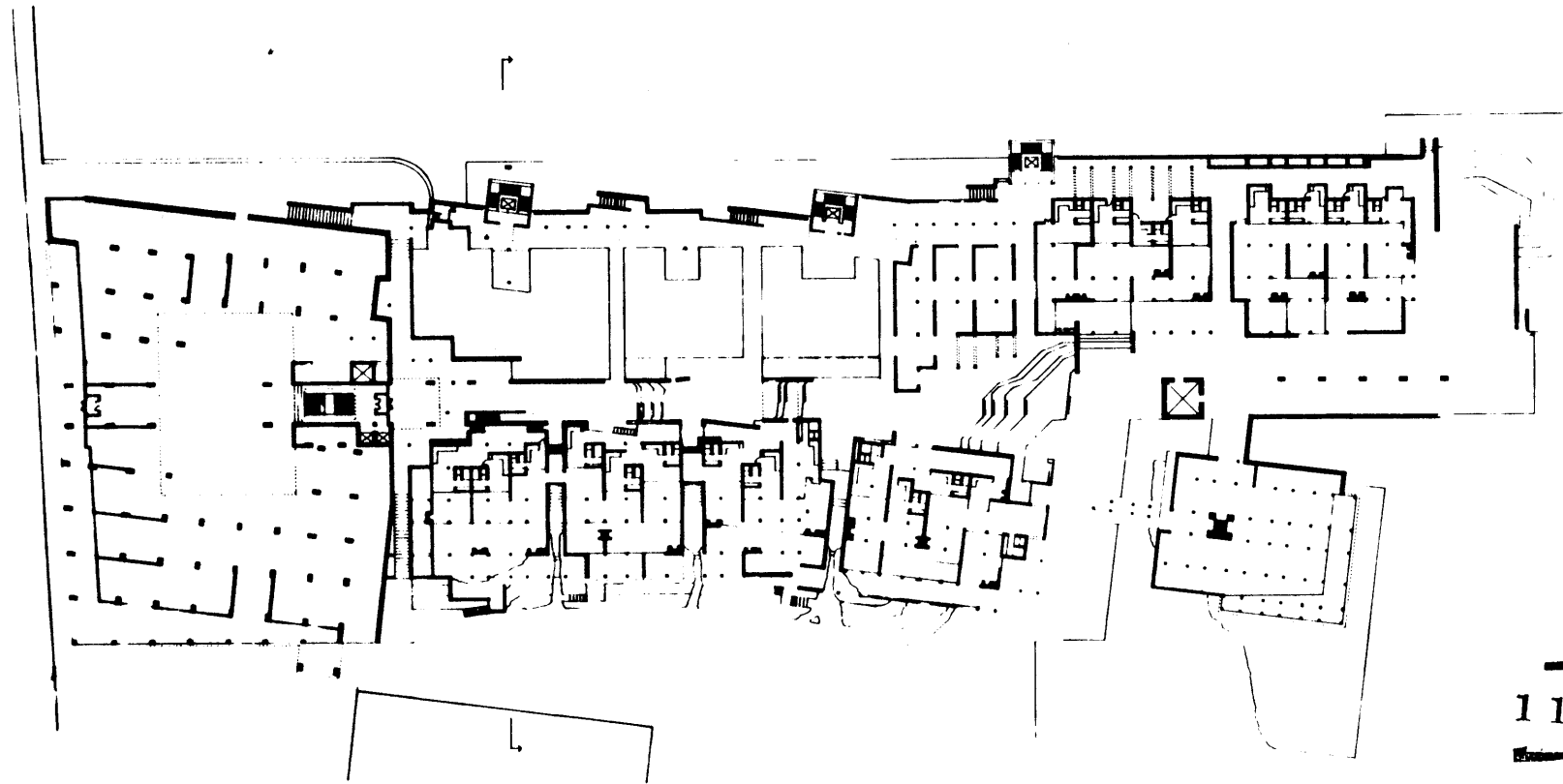


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113d

new
to build

Program Description



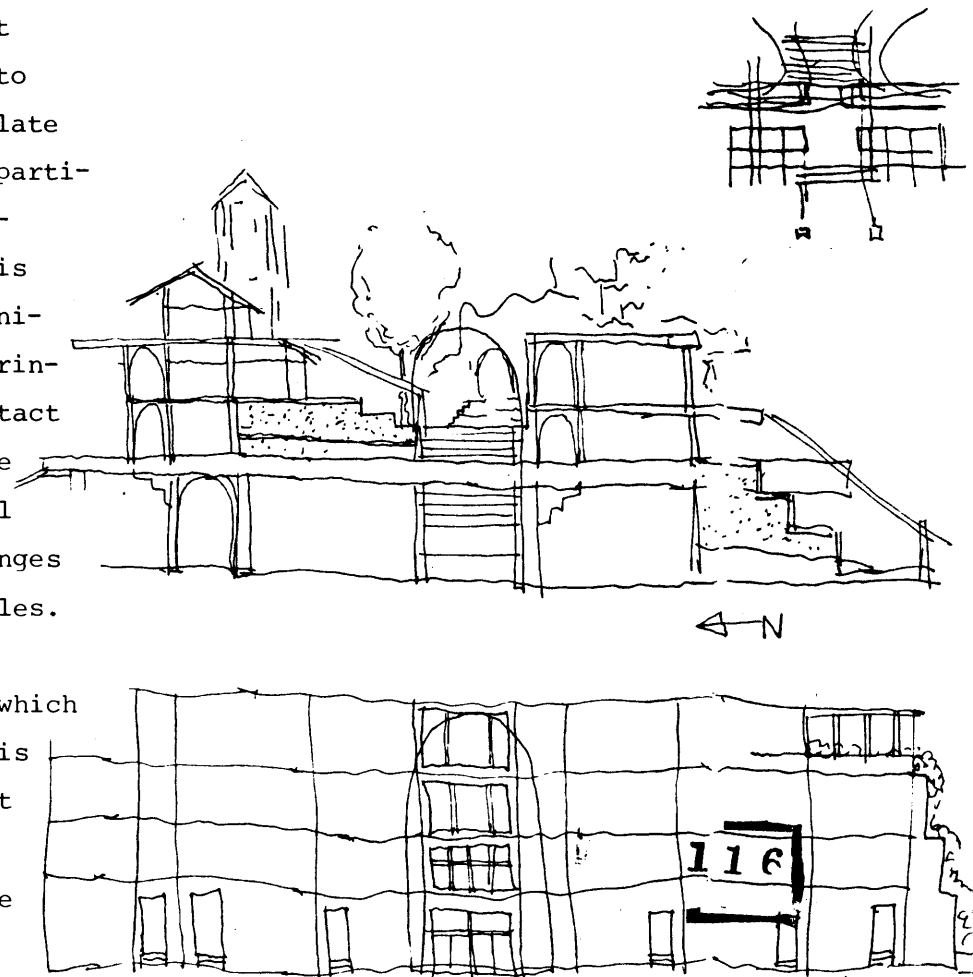
I have chosen to focus on housing, but for the organizational site plan at an urban level, I have included other functions. There is a commercial area, with office space, and an interior plaza on the Atlantic Avenue side which acts as a buffer to the housing behind. There is also a community center which is mostly for the immediate neighborhood. Near the community center, there is a tower, and adjacent to both is an exterior plaza. Under the northwest housing units there is parking, and under the stairs and entry joint which connects the housing to the interior plaza and to the parking, there is also a boiler room which functions mainly for the offices and commercial, but also as an auxiliary system for the housing. Nothing is below grade level.

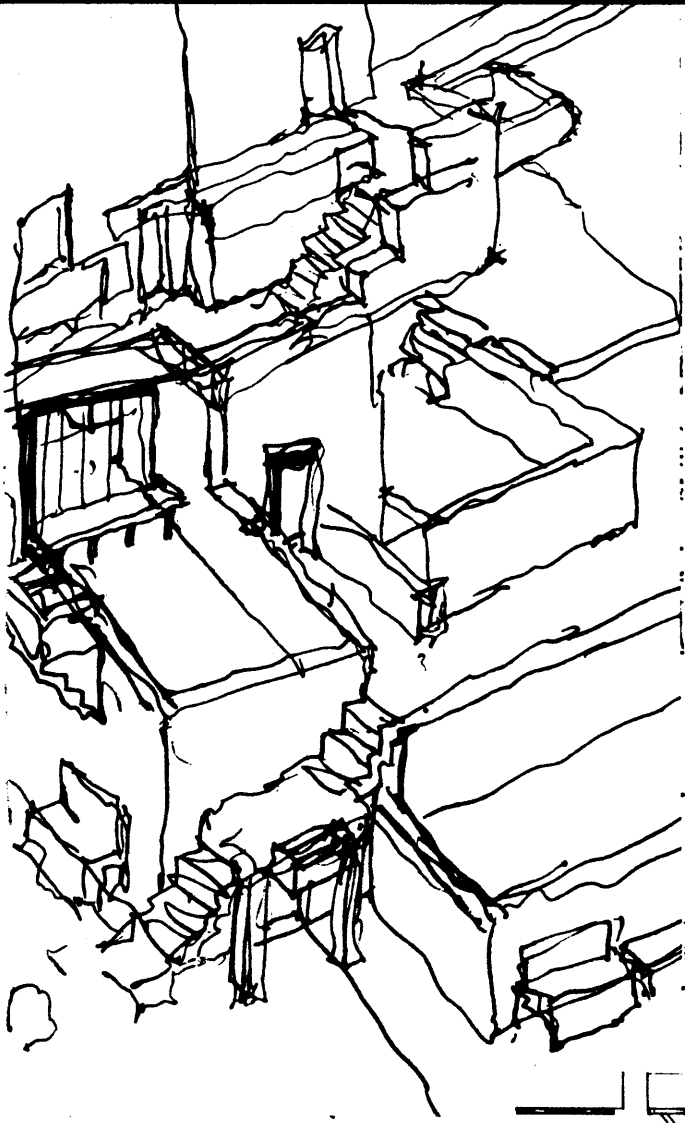
All of this can be seen in the drawings. I have not included any elevations because to focus on them in the housing areas is antithetical to this work.

Many of the images in this section are pages from a notebook that were drawn at different stages of the design process.

Designs may be culturally bound or they may have associations which span many cultures. Sometimes the same words have entirely different meanings from one place or period to another, and sometimes their meanings are translated as well as their form. At times, a common language may be expressed by the most specific and culturally-related design. The photographer Diane Arbus said that she found the most unique face to be universal in that everyone can sympathize with it, though if she tried to find the timeless and universal face, no one could relate to it at all. A general understanding, outside of a particular context, may require that the design (i.e. form-related) application be unique and local. Still, it is the essential principle behind the form which has a universal span. It is to our advantage to share those principles in our contact with foreign cultures. Our contact is deeper than ever before and we should look to share the positive, translatable aspects rather than to deal simply with the economic exchange of goods. What changes are the applications. What is stable are the principles.

Some of the design decisions are simply logical ones which are valid for many cultures in similar climates. It is climate-related -- not culture-bound -- condition that dictates the south walls being open to the sun with a transitional element which gives an equilibrium to the

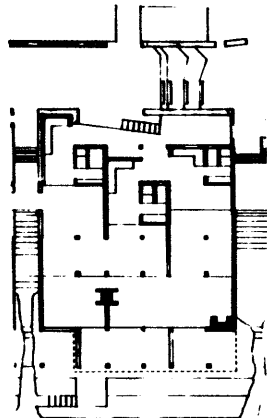




temperature in the house. It is also due to climate -- not culture -- that there are deep shading devices which diffuse the light and give protection from the rain and snow. I want to maximize heat gain and storage during winter, and minimize heat in summer. It simply makes sense to keep the wet walls of kitchen and bath adjacent to each other and in close proximity between units. These functions which require plumbing are kept on the north side -- the cold side -- because they tend to generate heat. These decisions did not evolve from some mystical geomantic implications. Rather, they are unavoidably practical and they help to assure the health and well-being of the inhabitants.

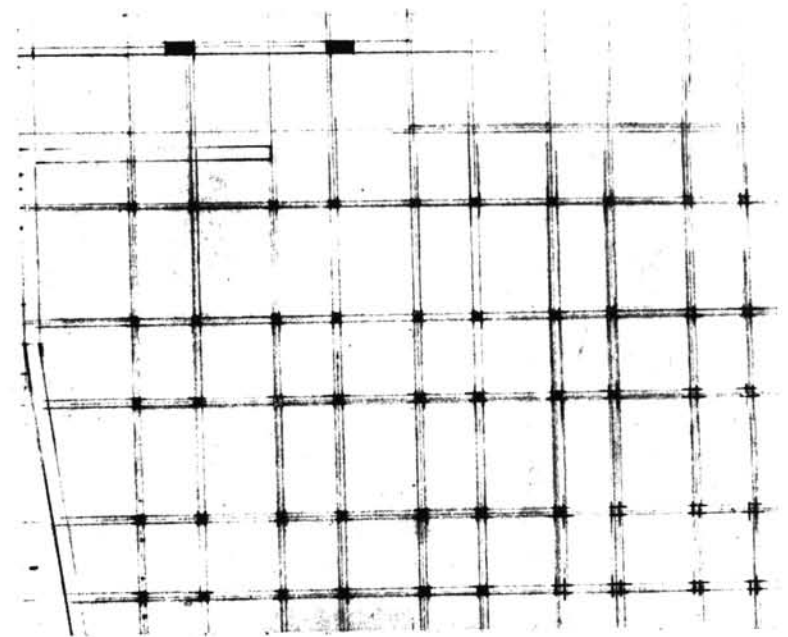
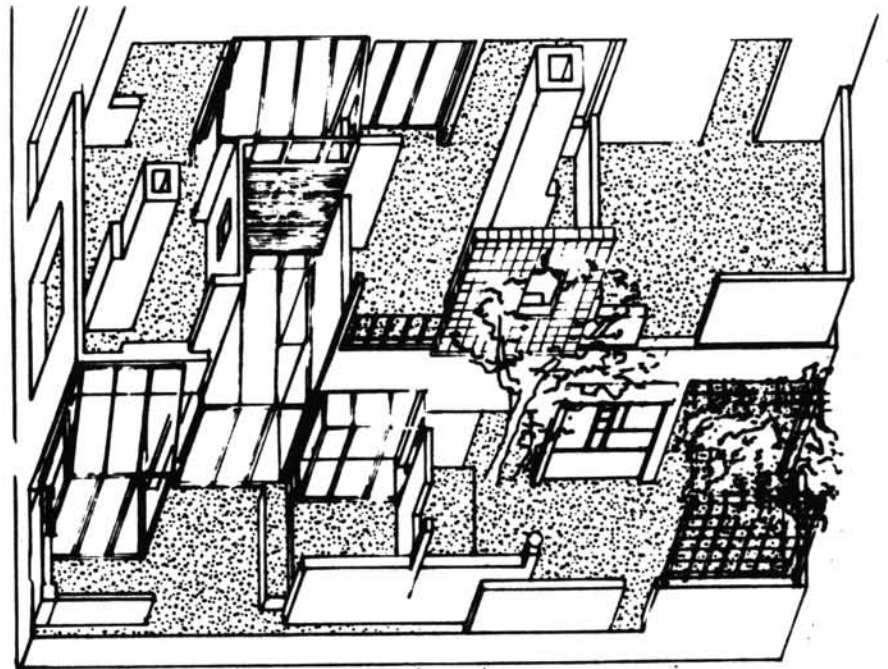
I have set up regulating systems to structure the overall design. At times, I have broken out of my own rules where it is appropriate in the design due to a unique condition. Here are some of the rules.

Each housing unit is considered to be 21.5 feet wide at maximum density, though they can be wider. The units can grow laterally or vertically. In the center sections of each unit, there are parts of the floor which can be taken away (i.e. they are not part of the primary structure), and stairs may be put in. Each 21.5 feet width contains a fireplace associated with thermal mass, a kitchen, and bathing unit. Each unit also has a private outdoor space. This



space is considered an outdoor "room" and the interior can be extended or penetrated. As designer of the overall organization, I try to give clues to the proportioning of these elements. In the design, I give clues that the greenhouses, trellises, and other constructions take place on 3 foot increments.

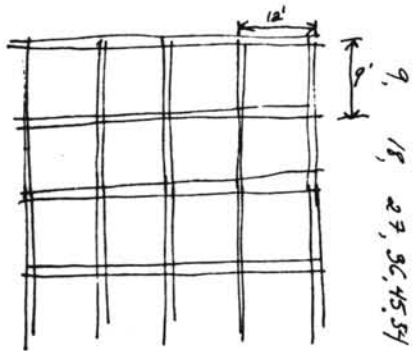
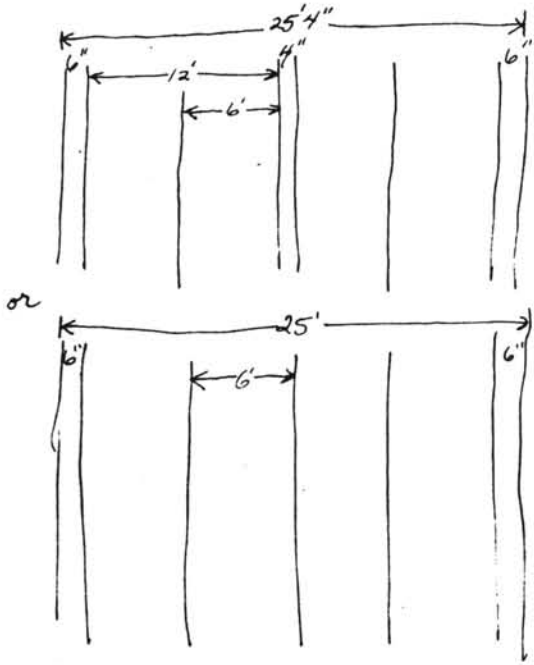
All of the proportions between the primary structural supports are multiples of 3. In the east-west direction, the proportions are 9, 12, 9, 12... In the north-south direction, they are 12, 18, 12, 18... The floor to floor heights are alternating intervals of 15 feet and then 9 feet. The 15 foot heights can hold mezzanines with floor heights of 7' 3". The units are clustered, mostly in 66.5 foot widths (or three units wide) or 87.5 foot widths (four units wide). The units in the middle of these clusters are shortest in order to get enough light. The middle apartments are either studios, one bedroom units, or duplexes. The uppermost units are either duplex additions, or artist's studios. The width of the interior columns allows walls and doors to be erected without disturbing the 3 foot multiples, and therefore, without abandoning a potential for prefabrication of the infill panels. The bathroom units can easily be prefabricated and fit within a 9 x 12 foot area. In them the toilet is kept in a separate compart-



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The column spacing has a rhythm which is broken at times for accent.

KIWARI



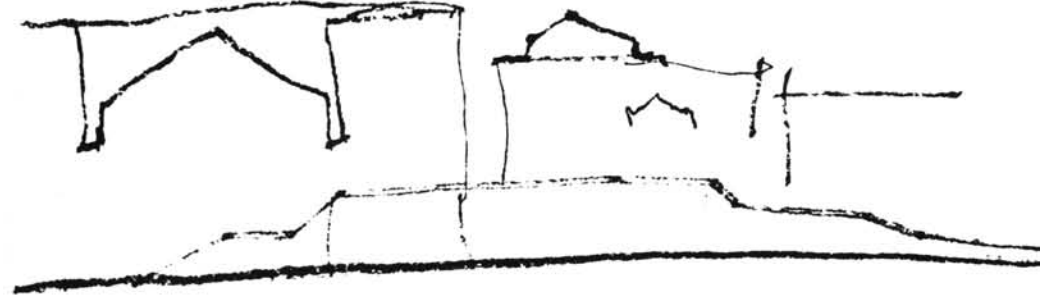
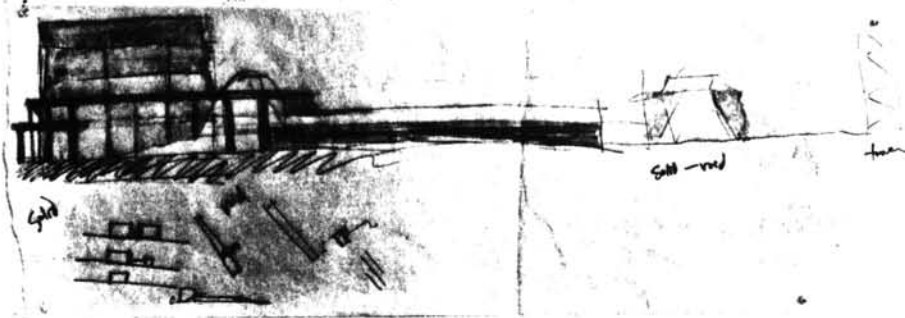
ment from the completely splashable bathing compartment.

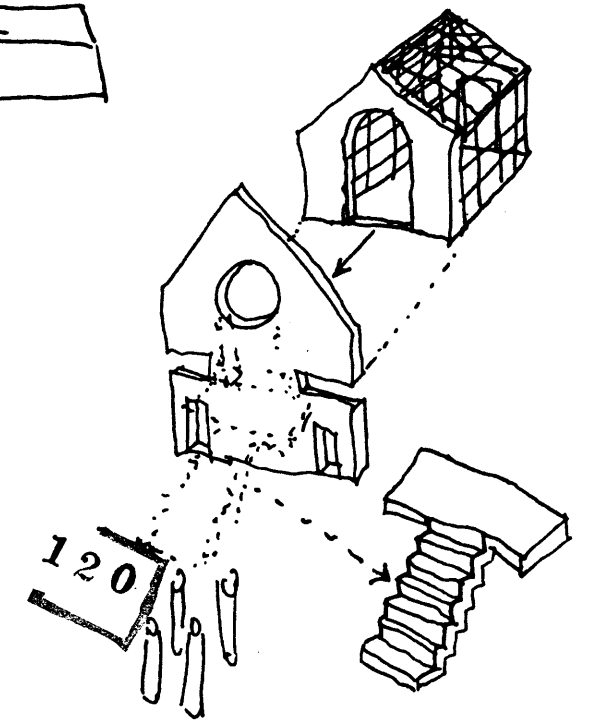
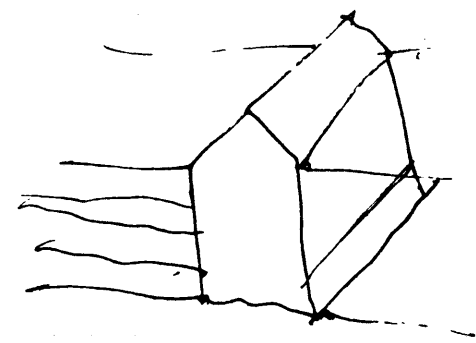
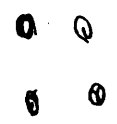
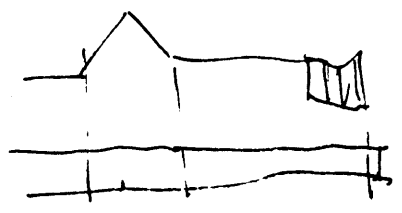
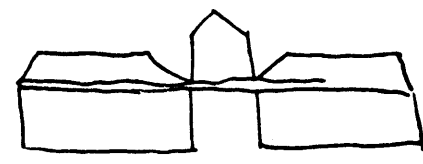
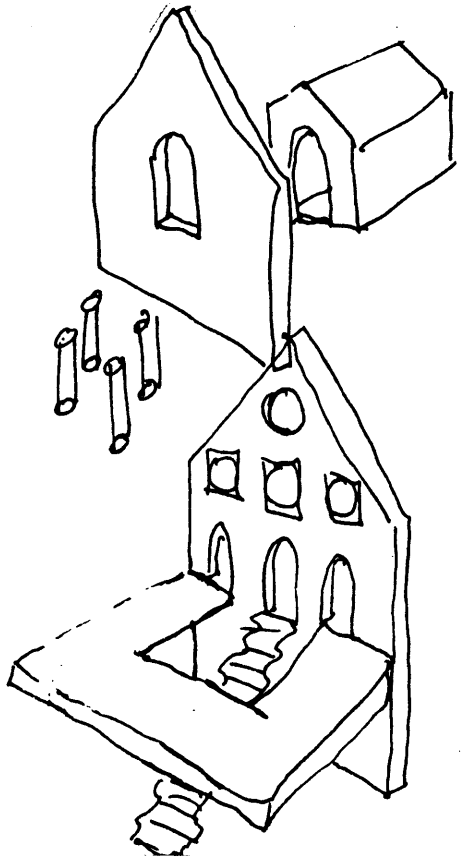
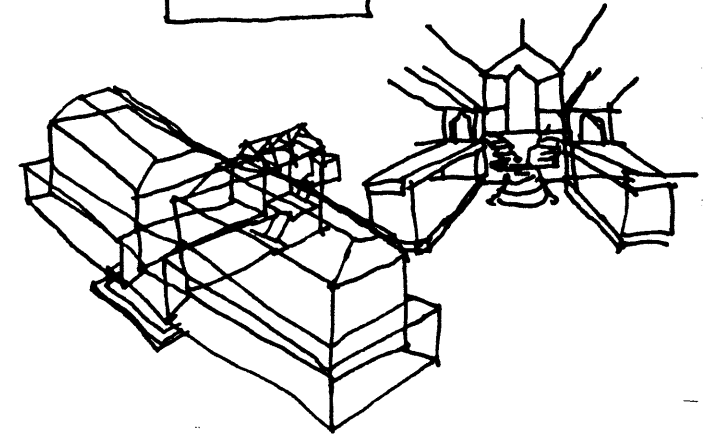
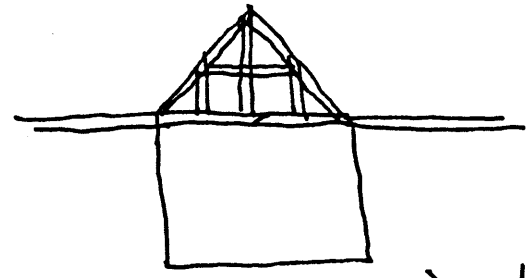
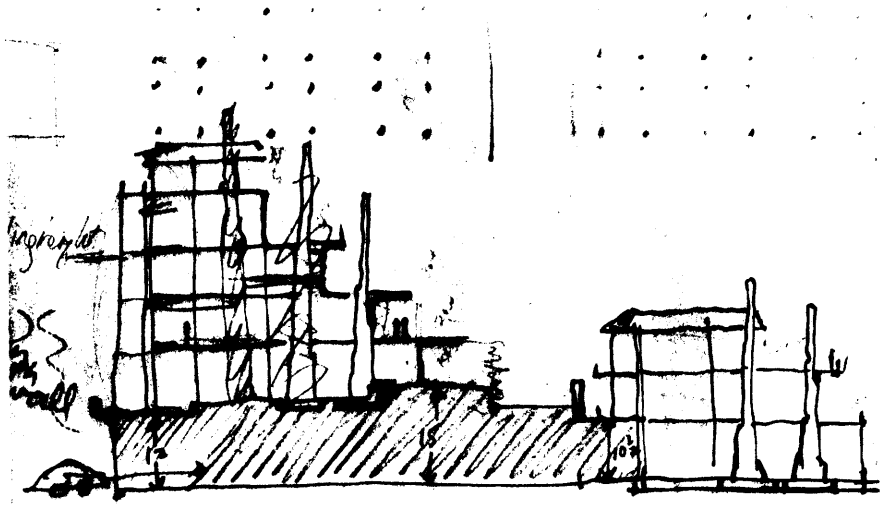
Wherever possible, the units have changes of level so that the wet areas are lowest and the private areas are highest.

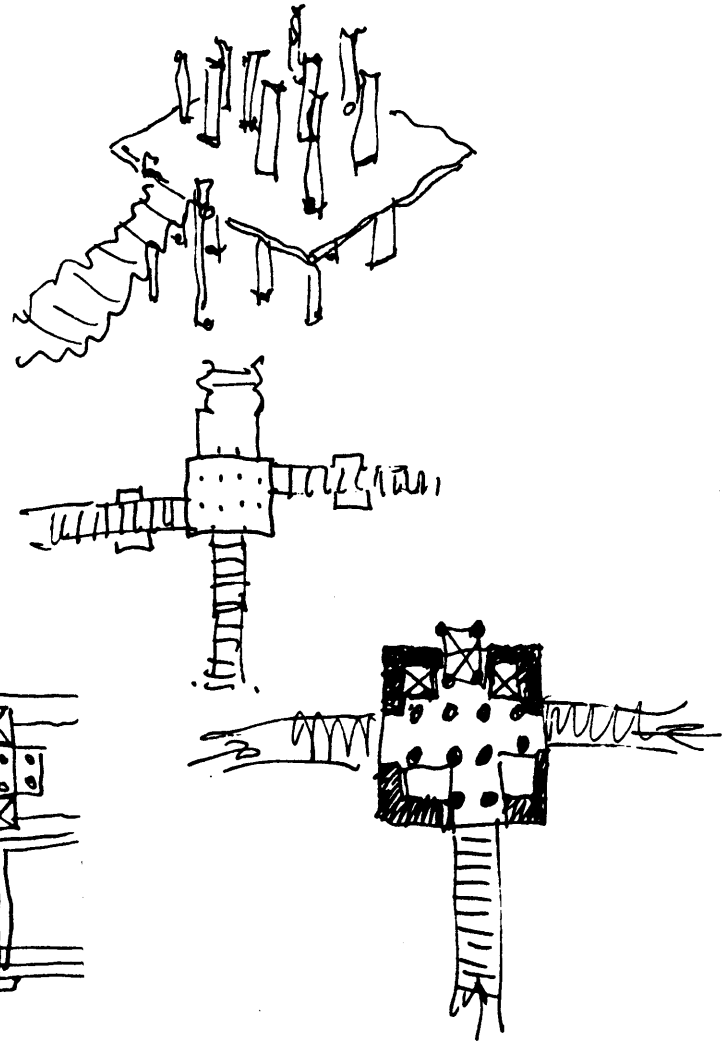
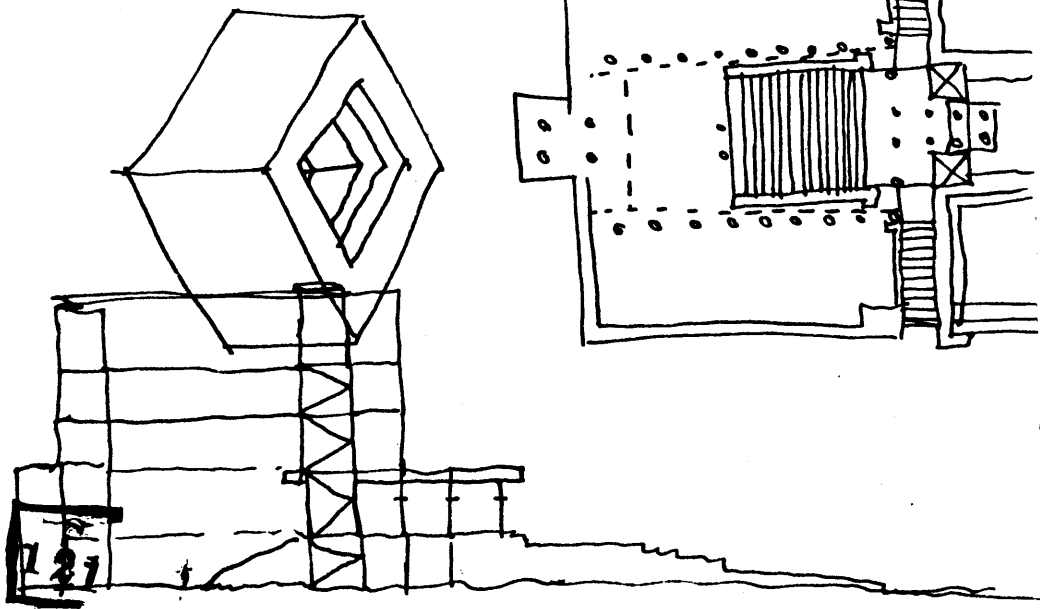
The overall organization of the urban form is not entirely developed. Still, some of the principles from Japanese design have become incorporated even at this stage. The movement from the front door of the commercial to the door which is the joint between the commercial and the semi-private pedestrian street goes in a progression like this:

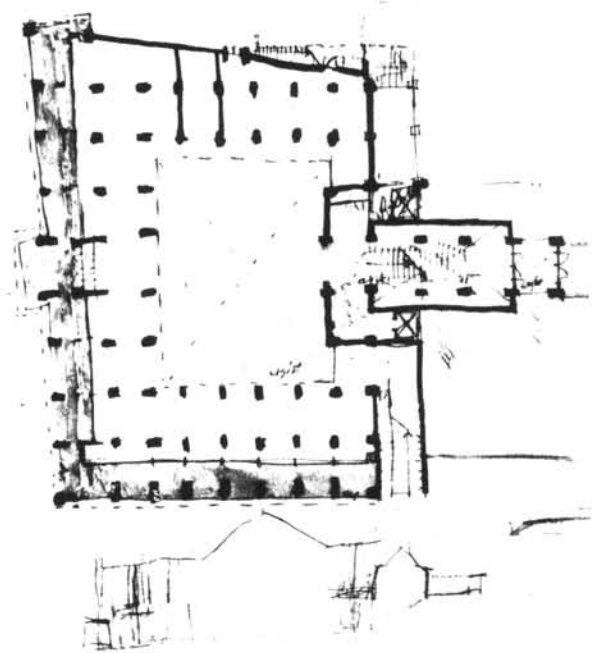
dark	-	light	-	screen	-	light	-	dark	-	open
narrow		open		(virtually		open to		narrow		(to the sky
		(virtually		open to		the sky)				but enclosed
		open to the		sky						within parti-
		sky								al walls)

119

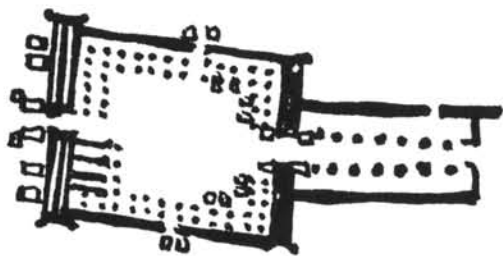








Plan of the Temple of AMEN-MUT-KHONSU at LUXOR

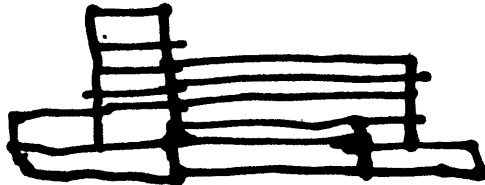
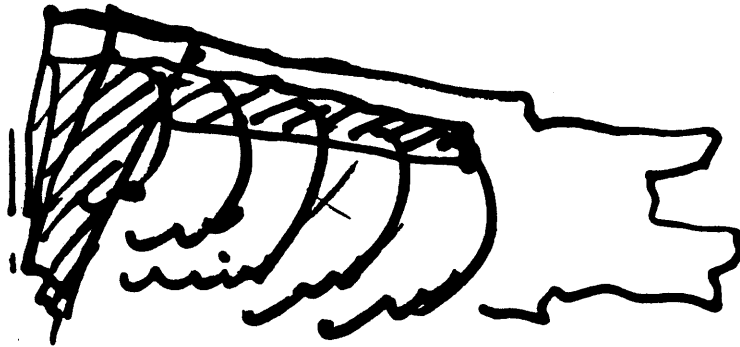
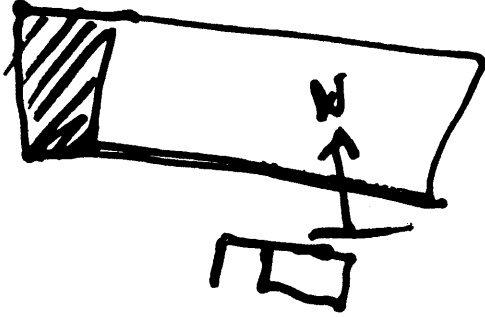


122

Contrasts are used throughout.
Rectilinear and curvilinear,
geometric and natural forms,
human and infinite scale...

Asymmetry allows room for the imagination, whereas symmetry
seems perfect and complete. I have used asymmetry wherever
possible.

280 x 135

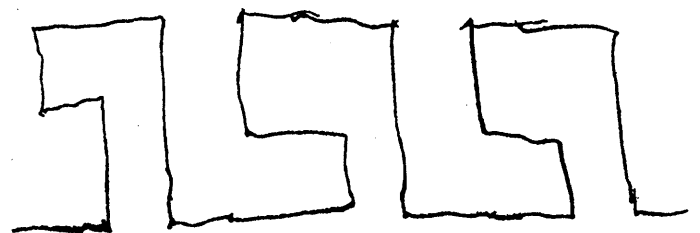


123



125

Houses



"emāki-mono, a picture scroll which underlines the fact that the experience reproduced took place over a period of time. Scenes are not recorded as a continuous panorama, but as a succession of significant events. Each is independent, is discontinuous and the viewpoint is always different, but the whole constitutes one experience."
Ma; A Sense of Place, pgs. 153-54

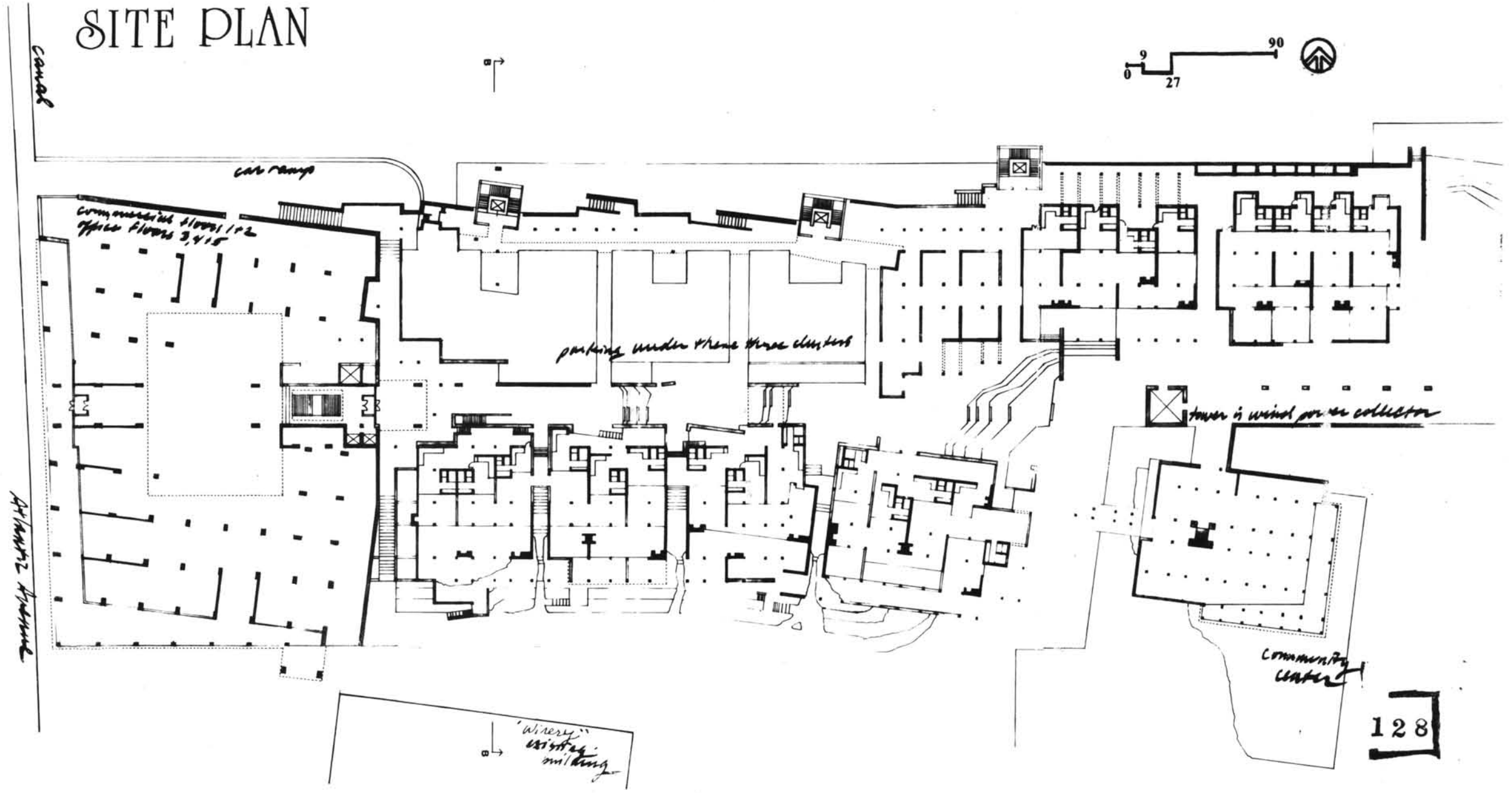
LET ME INVITE YOU TO VISIT THE SITE IN BOSTON, MASSACHUSETTS

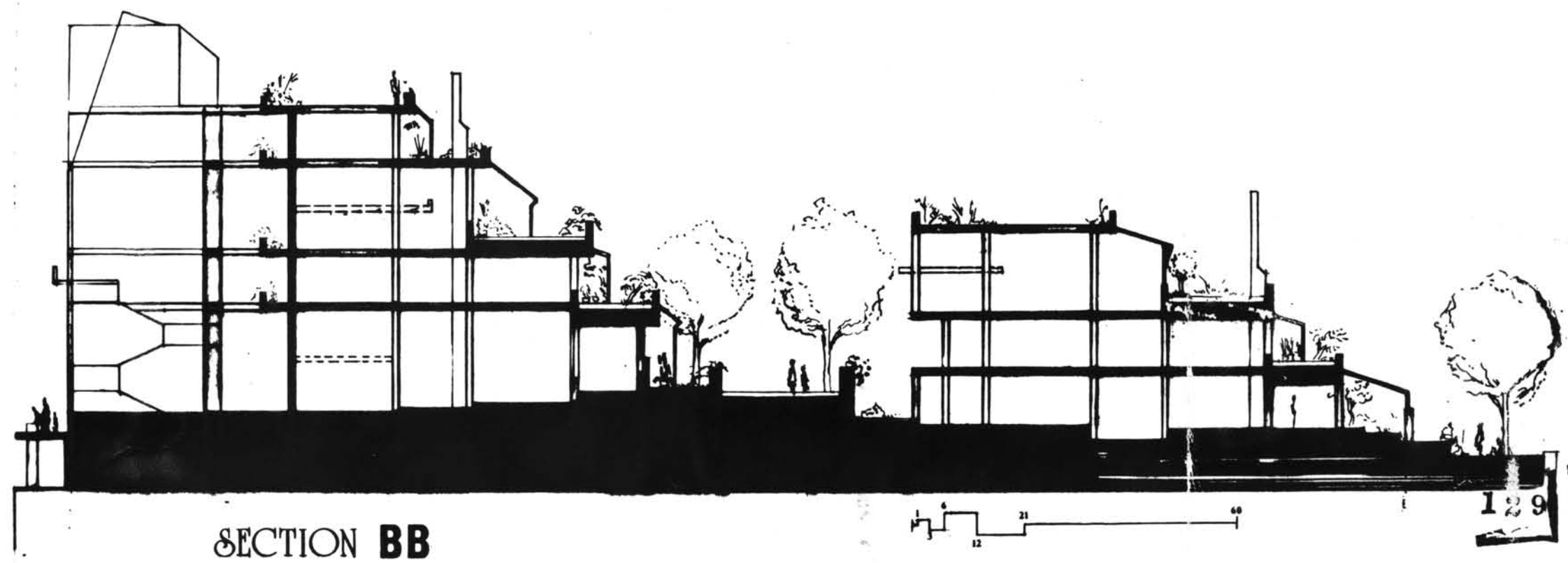
I have adopted a sequential organization for describing my house in Kyoto and for presenting the design exploration, hoping to involve the reader in a discovery process as well as to give a sense of the whole place through a series of images. There is no way to give a full impression through a single photograph or point of view. In the "Traditional House" section there is no photograph of a house facade, nor have I included any complete version of an elevation of any part of the design in the "DESIGN" sections. Both the house in Kyoto and the houses I have designed are meant to be moved through and lived in (i.e. changed daily) by the inhabitants.

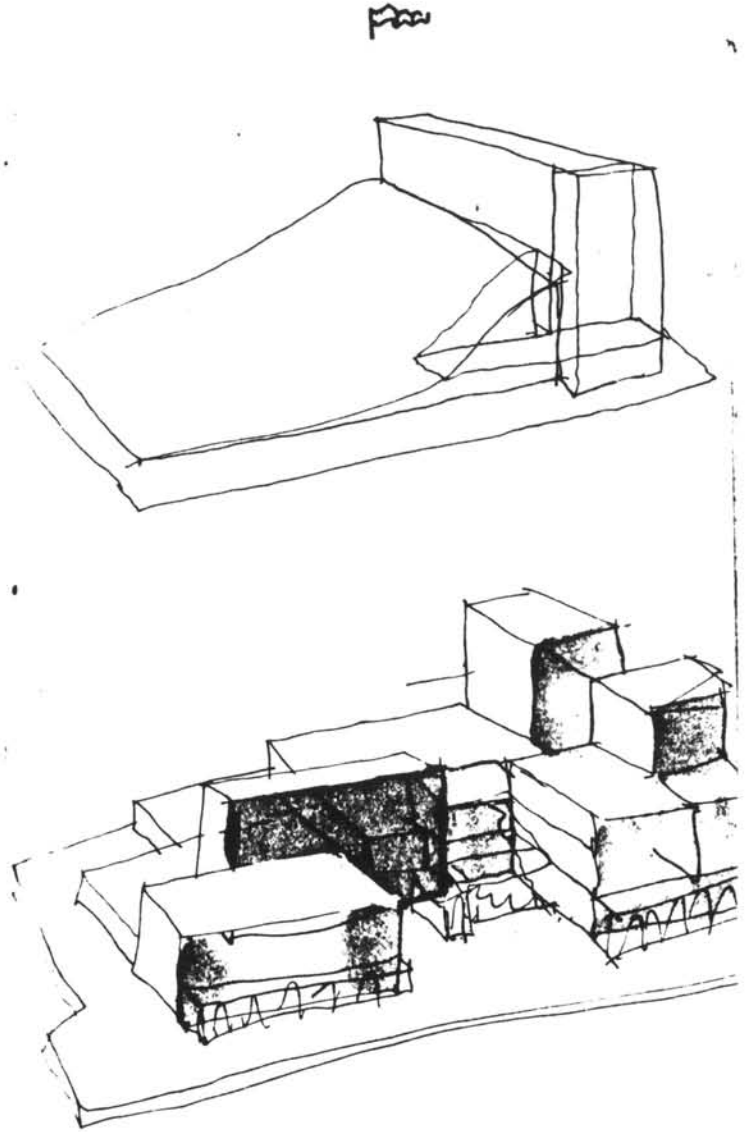
"Place is defined at Toshugu as elsewhere in Japan -- by the use of small images and signs that are recorded by the memory, to be recalled at some later date to serve as an image of a place seen and experienced before. The whole character of a sequence of spaces can be revived by a recollection, unconscious almost or but dimly recalled, of a series of the small images glimpsed along the way. ...In Japan MA (a sense of place) is thus carefully created in the mind."

*from Ma; A Sense of Place,
p. 146*

SITE PLAN





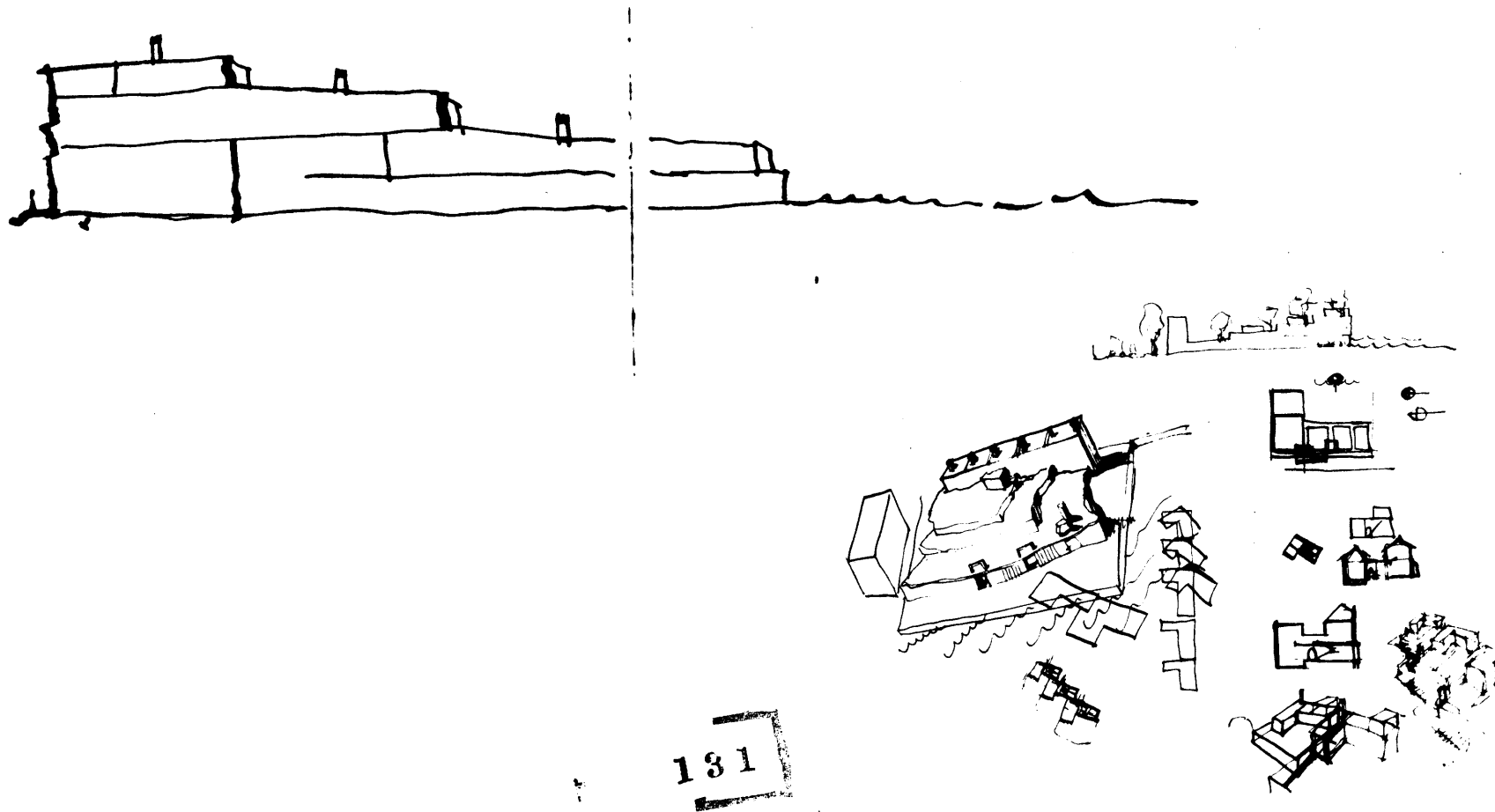


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OCT 15

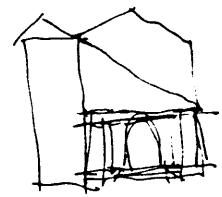
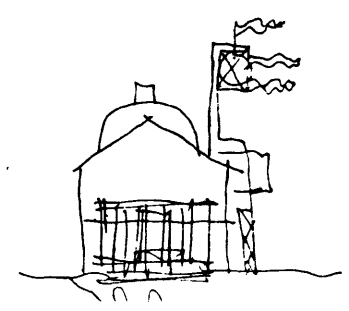
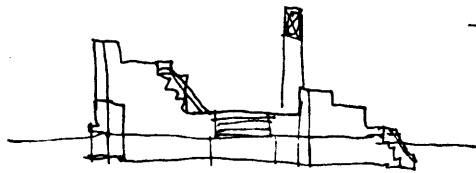
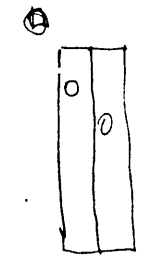
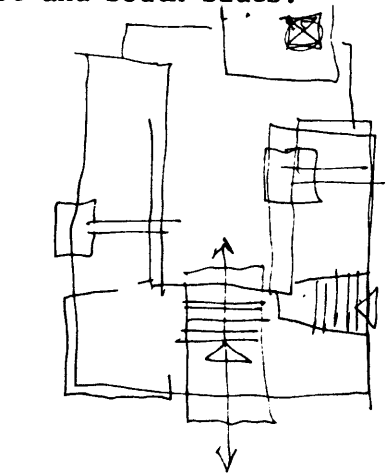
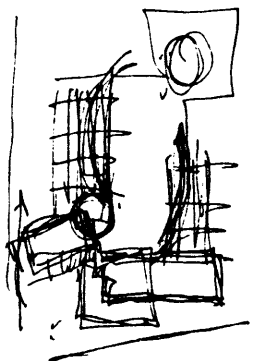
BEGINNING THE WALK

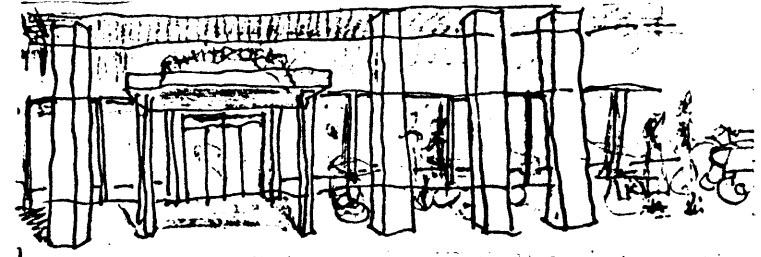
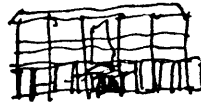
We will move quickly through the shopping area on the Atlantic Avenue side to the housing behind, closer to the water. Atlantic Avenue is a busy and noisy truck route and the design has a greater height on that side to act as a buffer.



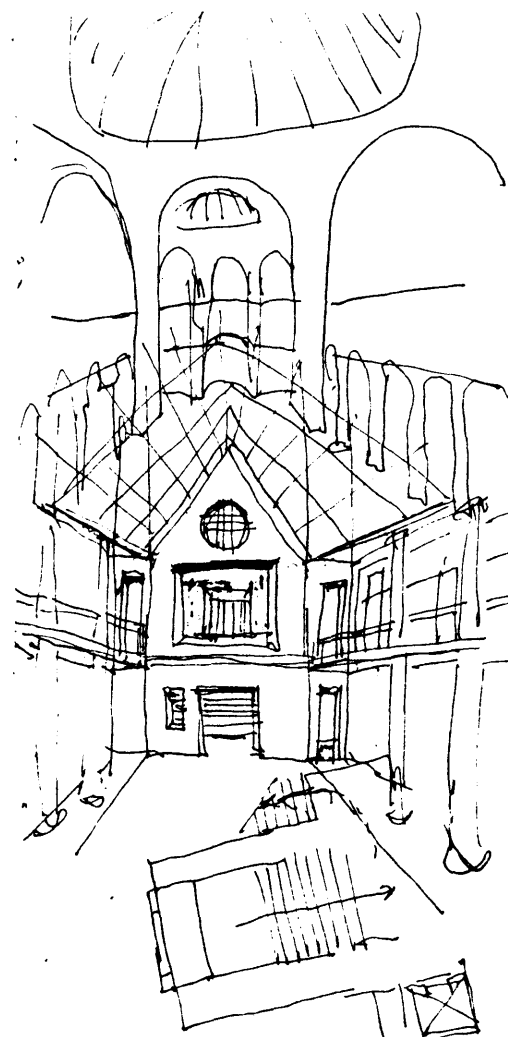
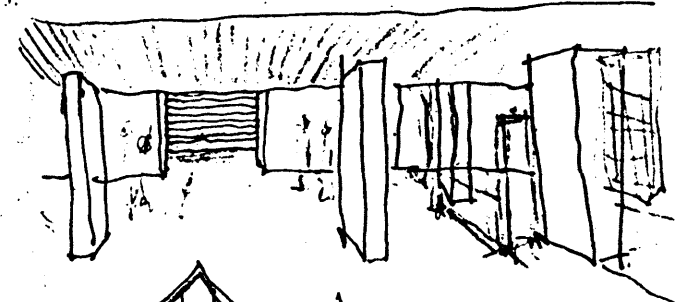


The typology of the Atlantic Avenue building is a combination of the brick, row-type with its small, repetitive windows, and a wharf-type (like Quincy Market), with a central entry and use of granite. The skin of the building is set back from the columns so that the pushcarts can be moved in under the eaves. The building order breaks down on the sunny side. There is a horizontal band of deep eaves over the second floor all around the west and south sides.



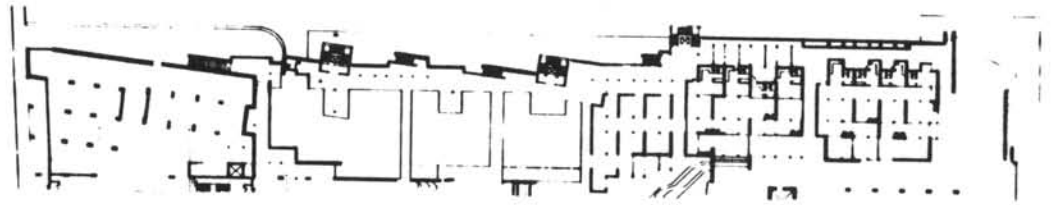
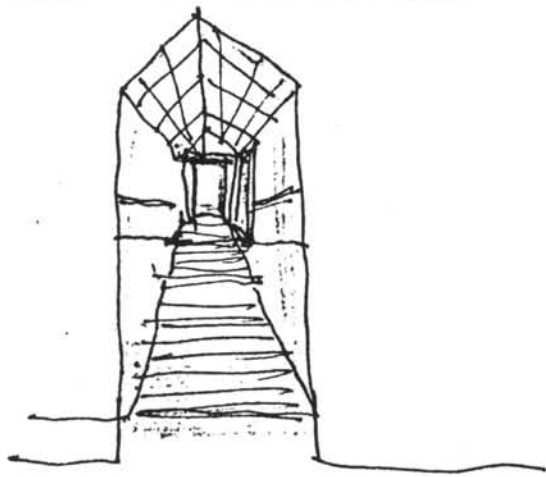


We enter on a nearly central position, into the public building. After being squeezed through a relatively small entry vestibule, we enter the interior plaza which has a skylight two stories above; a feeling of light and openness. There might be the sound of music coming from behind a screen in the east side and there are cafe tables around. There are shops on all sides too, and in inclement weather, the push-carts from the veranda outside may move inside as well.

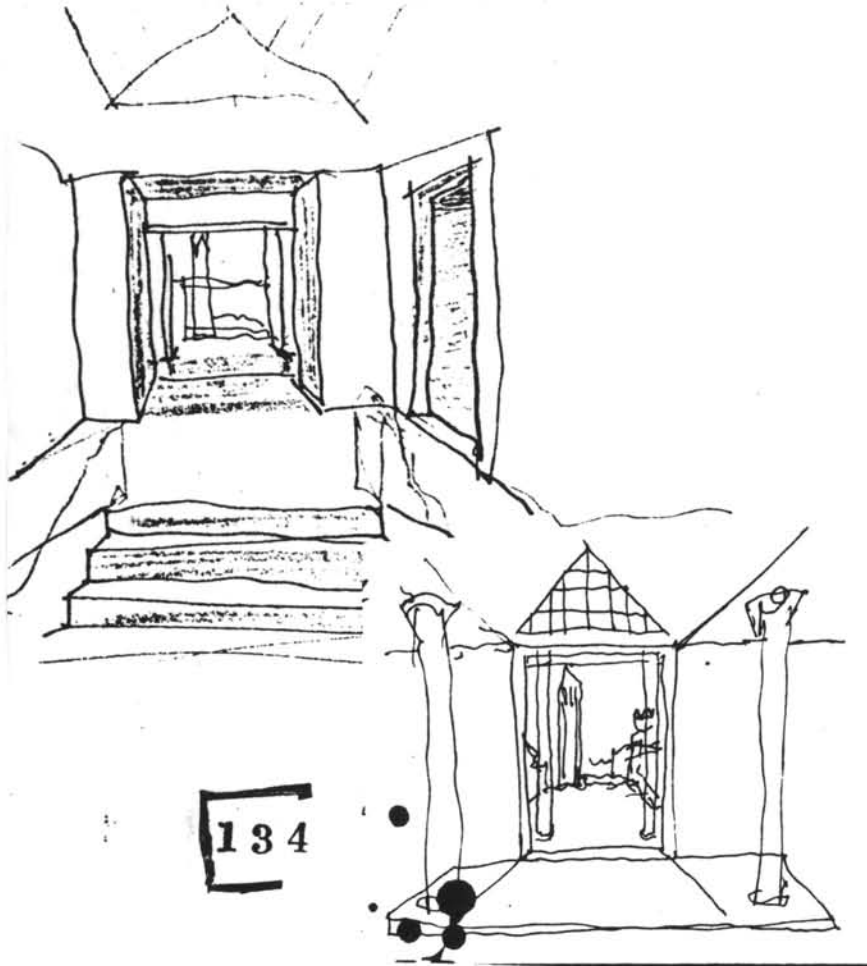


transitional distance
distance
between
street and
building
edge

26' distance
for
pushcarts
between
granite
and wood
facade

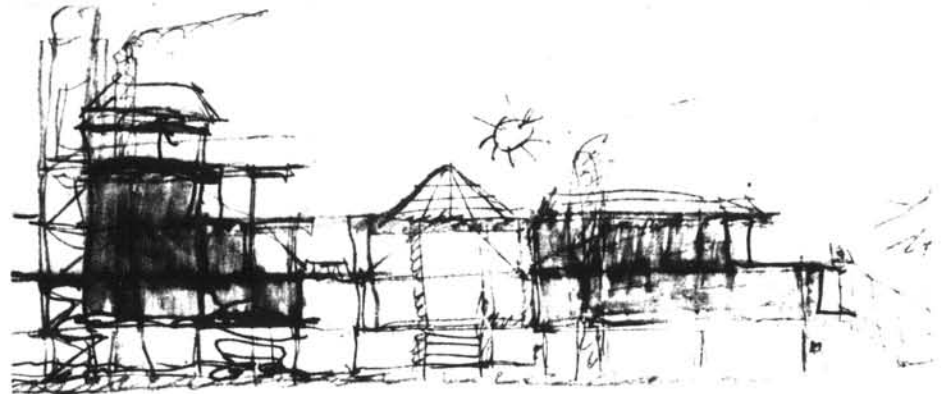


If we drove here we would have come in through the parking in the north side and may have by-passed the shopping area altogether. We may have parked in a private space for the tenants or in the visitors' section.



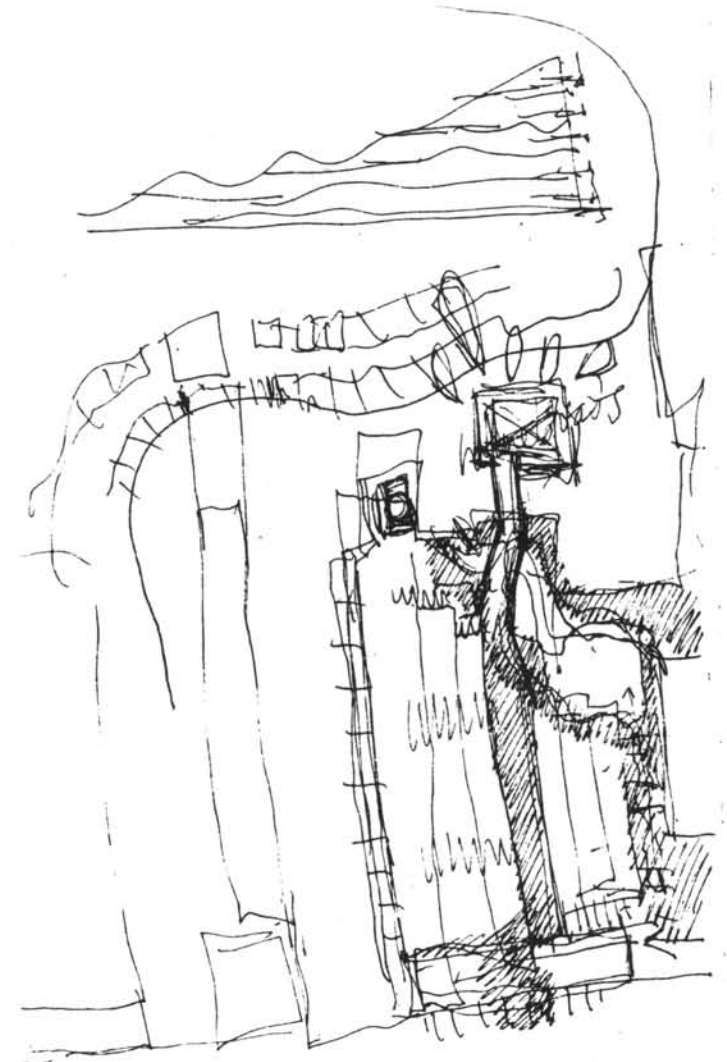
We proceed beyond the screen in the east side where we see stairs, a darkening, but we move upwards, towards the light which comes from a skylight at the top of the stairs. As we move up the stairs to the level of a pedestrian street, we begin to notice a tower in the distance, which we can only partially see. Before we get to the pedestrian street, we pass through a small vestibule again. The columns and light fixtures are familiar along our path.

The pedestrian street has a feeling of protection but not enclosure, as it is open to the sky.



The cultural center sits out in the water and may be surrounded by boats. It houses a swimming pool and meeting rooms, among other functions. Possibly the functions include a convenience store.

The view of the tower is partially obscured until one gets beyond the bridge over the pedestrian street. We may notice that the community center is the same scale as the interior plaza but it is a solid form of the plaza's void.



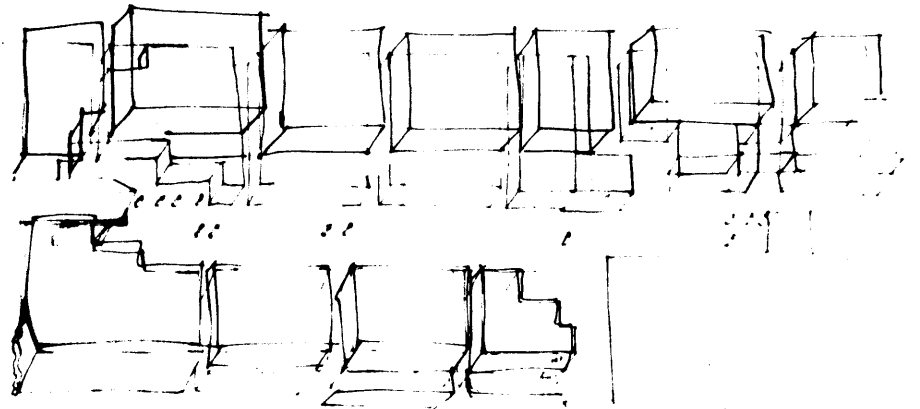
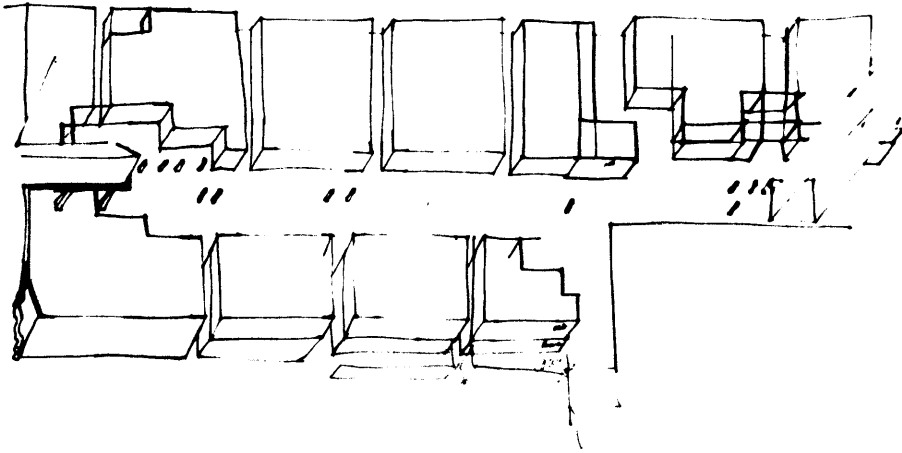




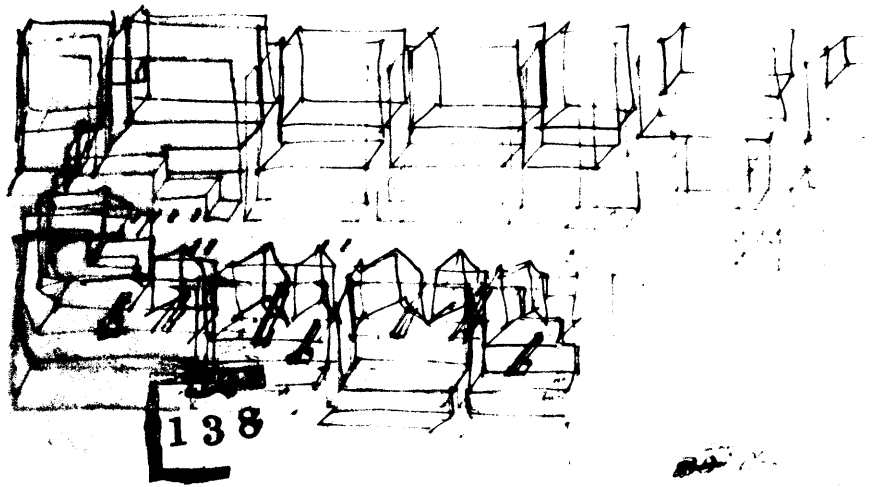
If we are to go to the tower, there will be a point at which it is no longer obscured from our view, and from that place (i.e. just beyond an overhead passage), we can partially make out the community center to the right. At the tower, we find an exterior plaza which opens up near the water.

MOY. 2/2/68

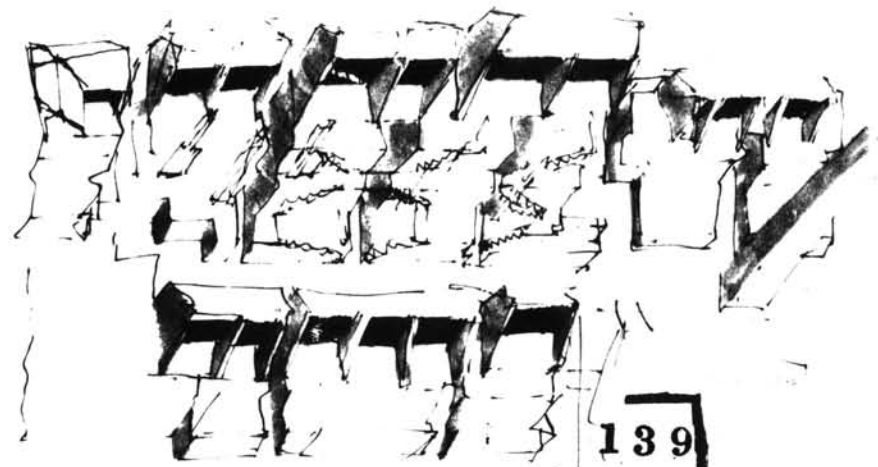
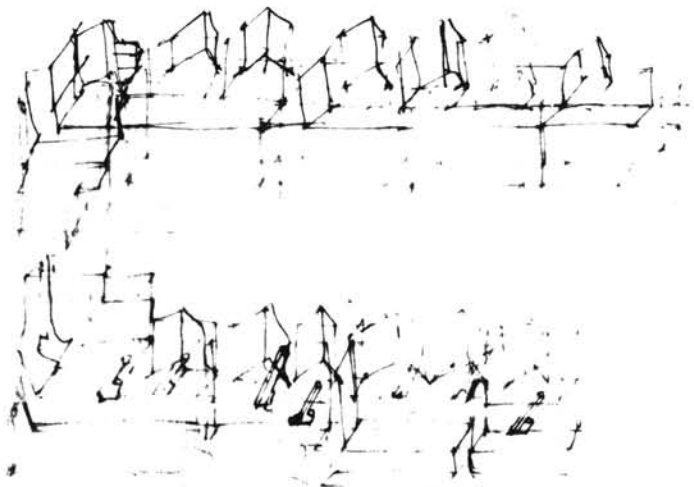
137



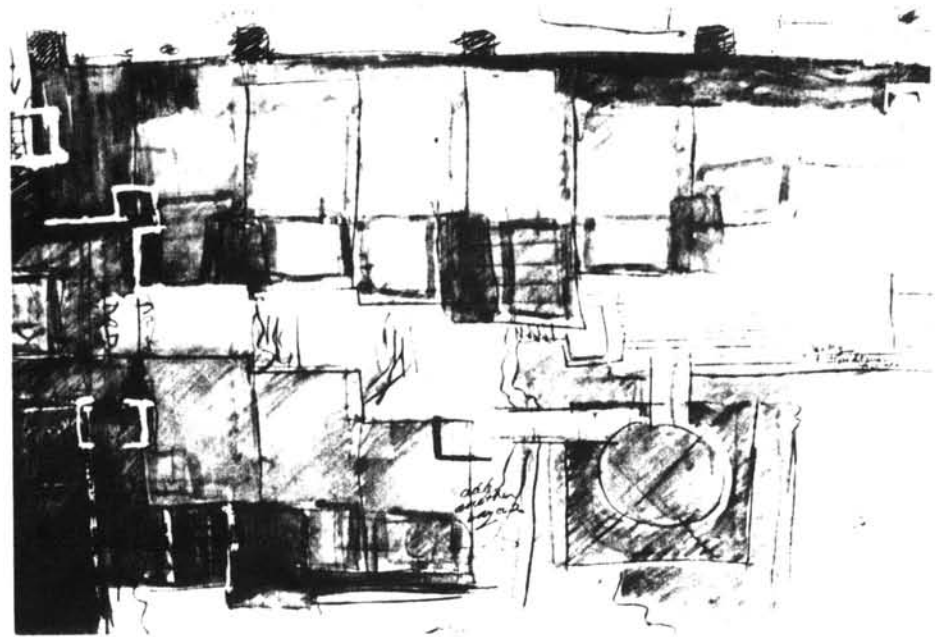
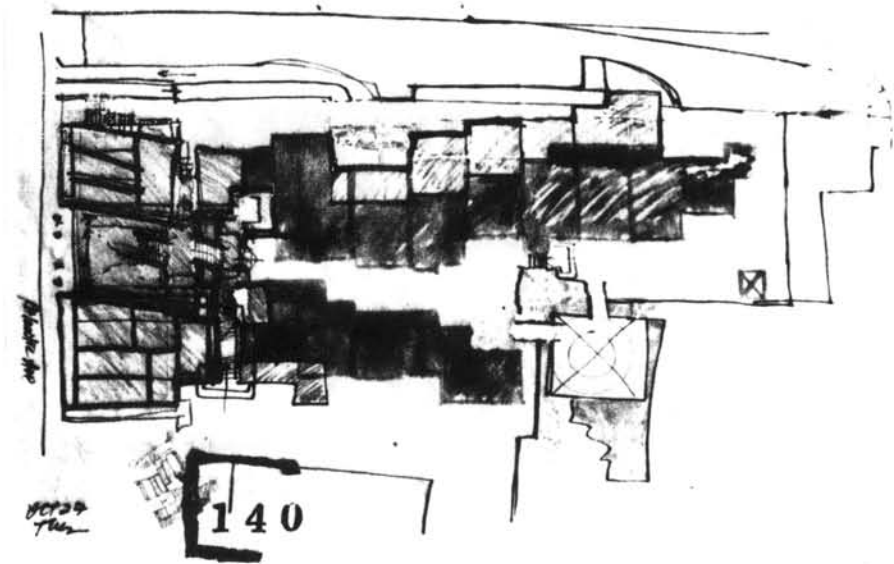
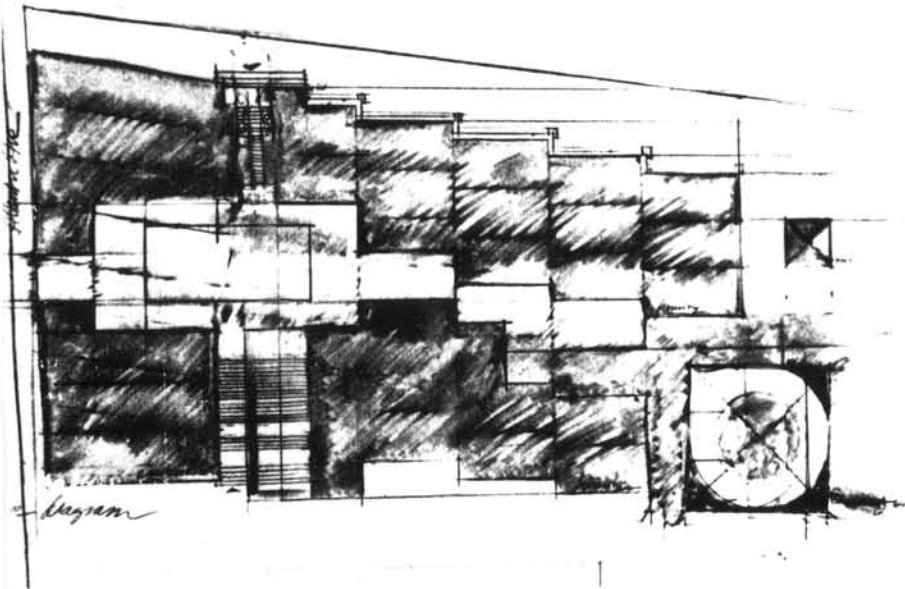
7-10-1900



138



139



Ke, earth
 - Conservation
 - a respect for materials

Chen ≡≡≡

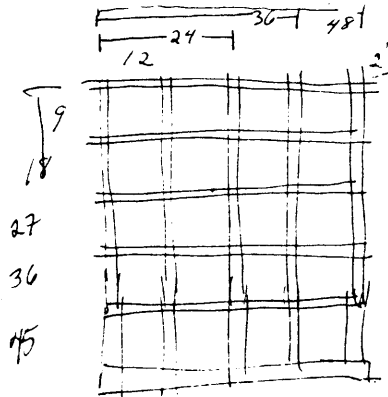
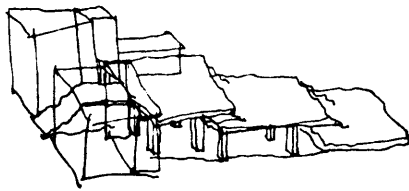
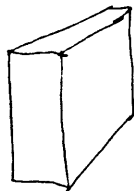
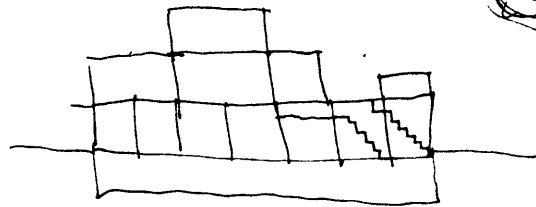
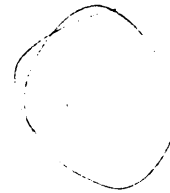
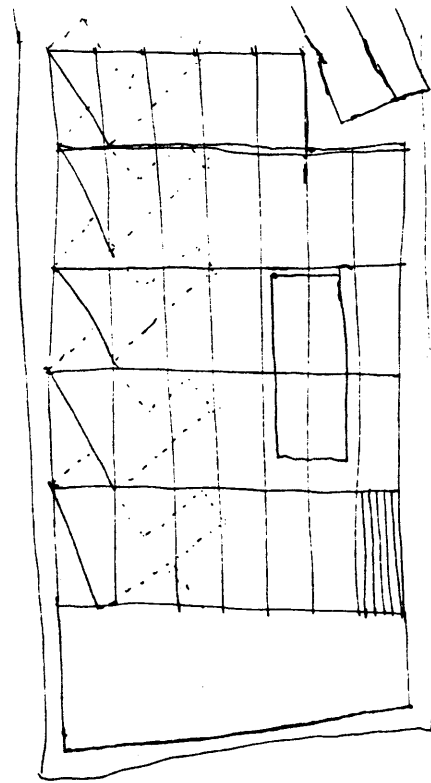
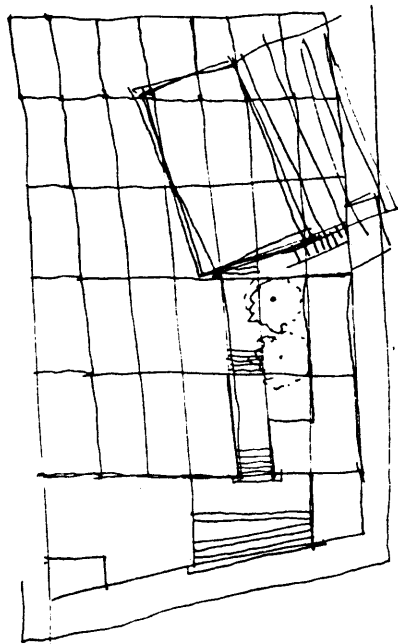
thunder, the arouser, is life which breaks out of the depths of Earth; it is the beginning of all movement.

P18
 secret of the Golden Flower

Sun ≡≡≡

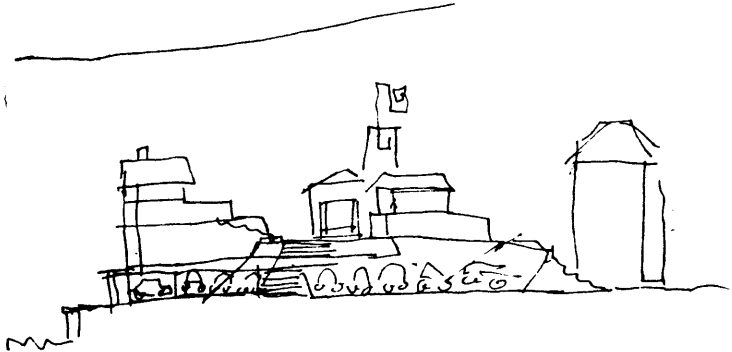
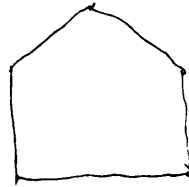
wind, wood, gentleness, characterizes the streaming of the reality - forces into the form of the idea. It is as wind pervades all places, so the principle for which SUN stands is all-penetrating, and breathes "realization".

Tui ≡≡≡ lake, mist, serenity - belongs to autumn

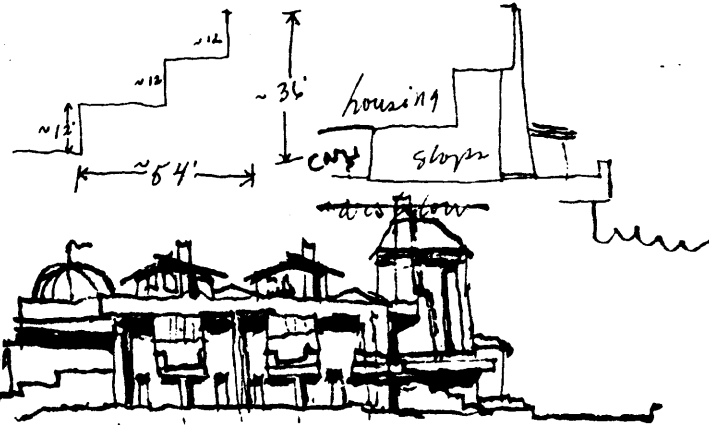
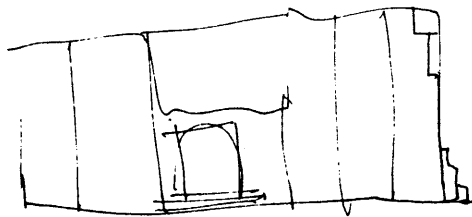




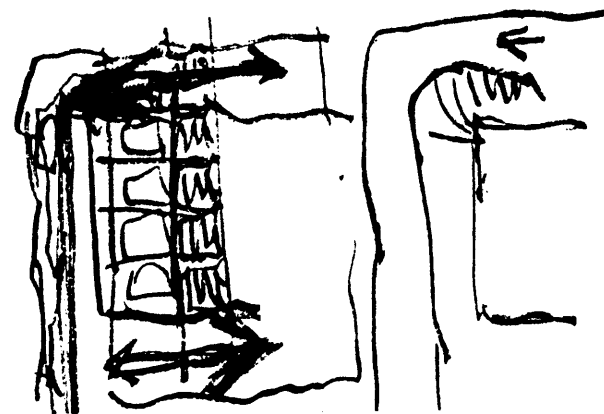
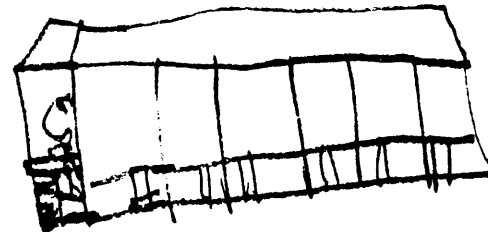
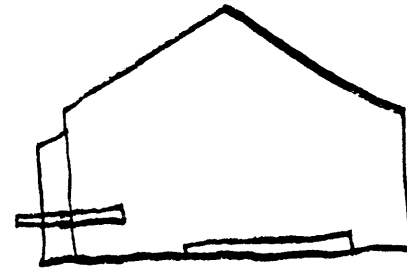
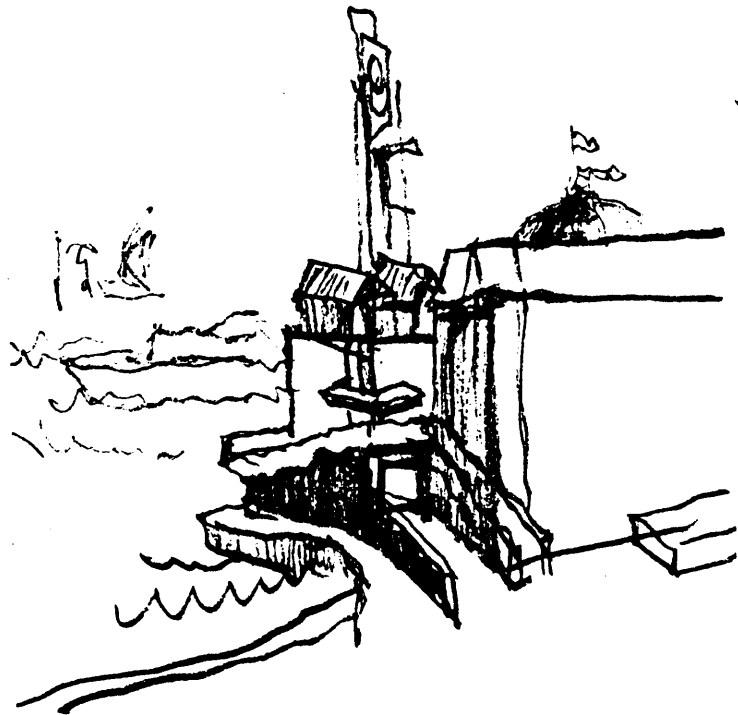
OCT 23 44

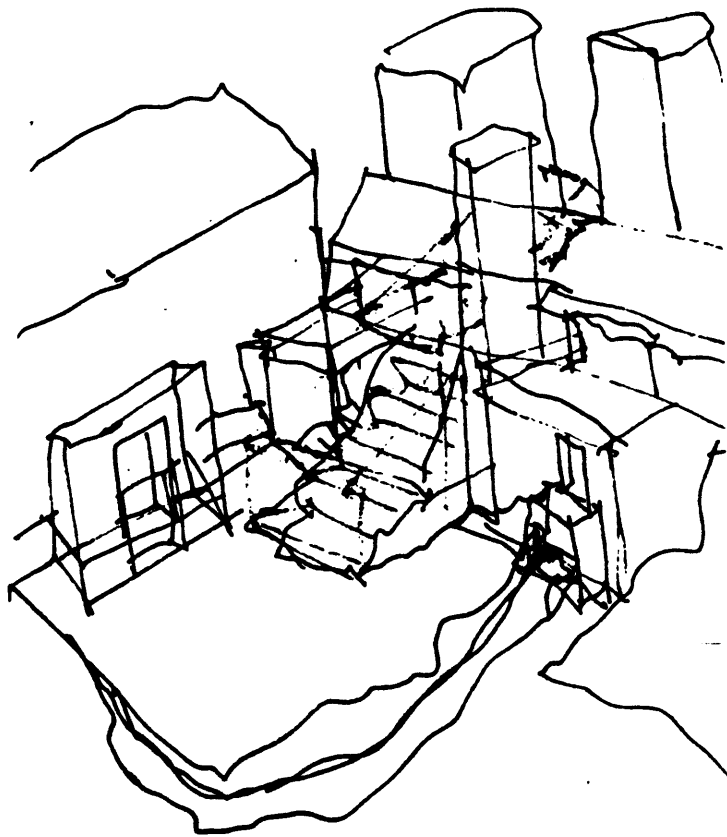


ANKA - speaking of her museum design:
wants the ART-RELATED place, to
have much more emphasis than
places such as Restaurants, shops
etc...



Early images of the north side.





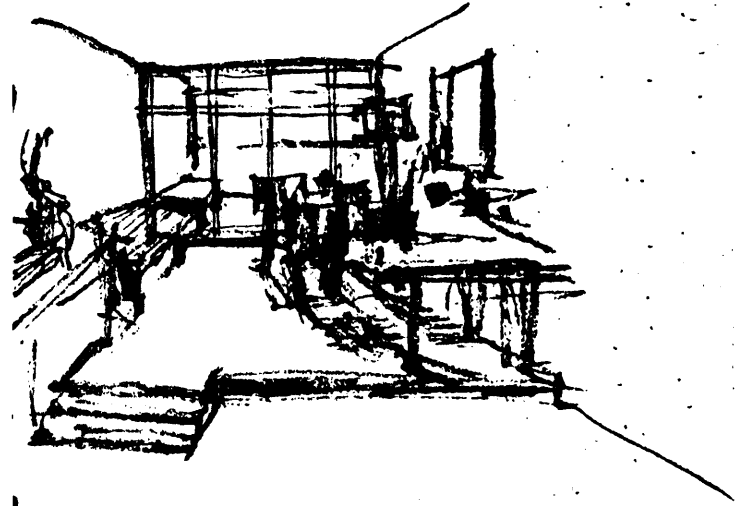
early sketch of east door, top of pedestrian street



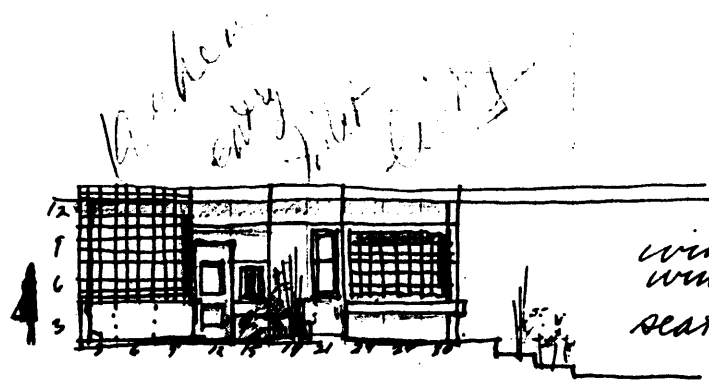
Here's the general plan of the houses. All the bathing rooms and toilets are kept adjacent to a wet wall which is also adjacent to the kitchens. These rooms tend to generate heat and so they are kept on the northern, colder side of the structures. There is an informal entry on that side.

There is at least one fireplace in every home, and it is combined with a masonry wall and tiles on the floors to collect the sun's heat and radiate it at night.

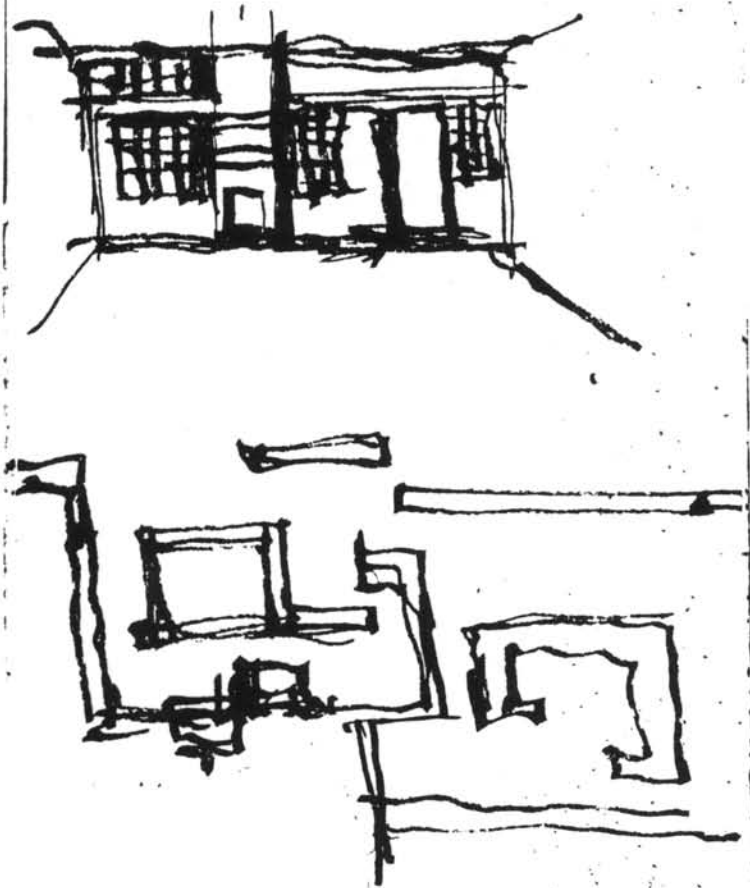
There are changes of level in each house from the bathing-kitchen area to the "living" rooms, which are closer to the light, and another change of level between these and a room-space near the veranda. There is a veranda in every house -- with thermal shutters which are easily adjustable.



Dec. 19 Interior 9'



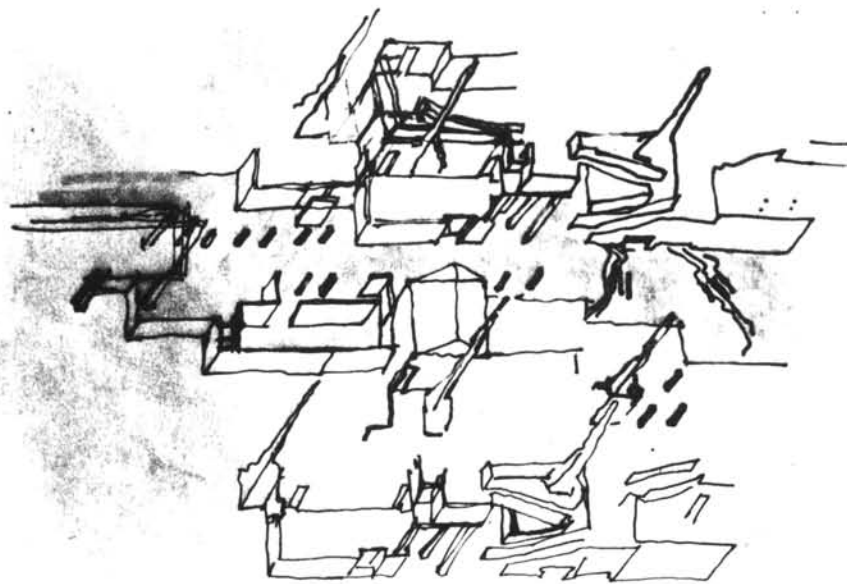
overhang at 9' or 12'
window (open)
window (close)
door
seating, steps,



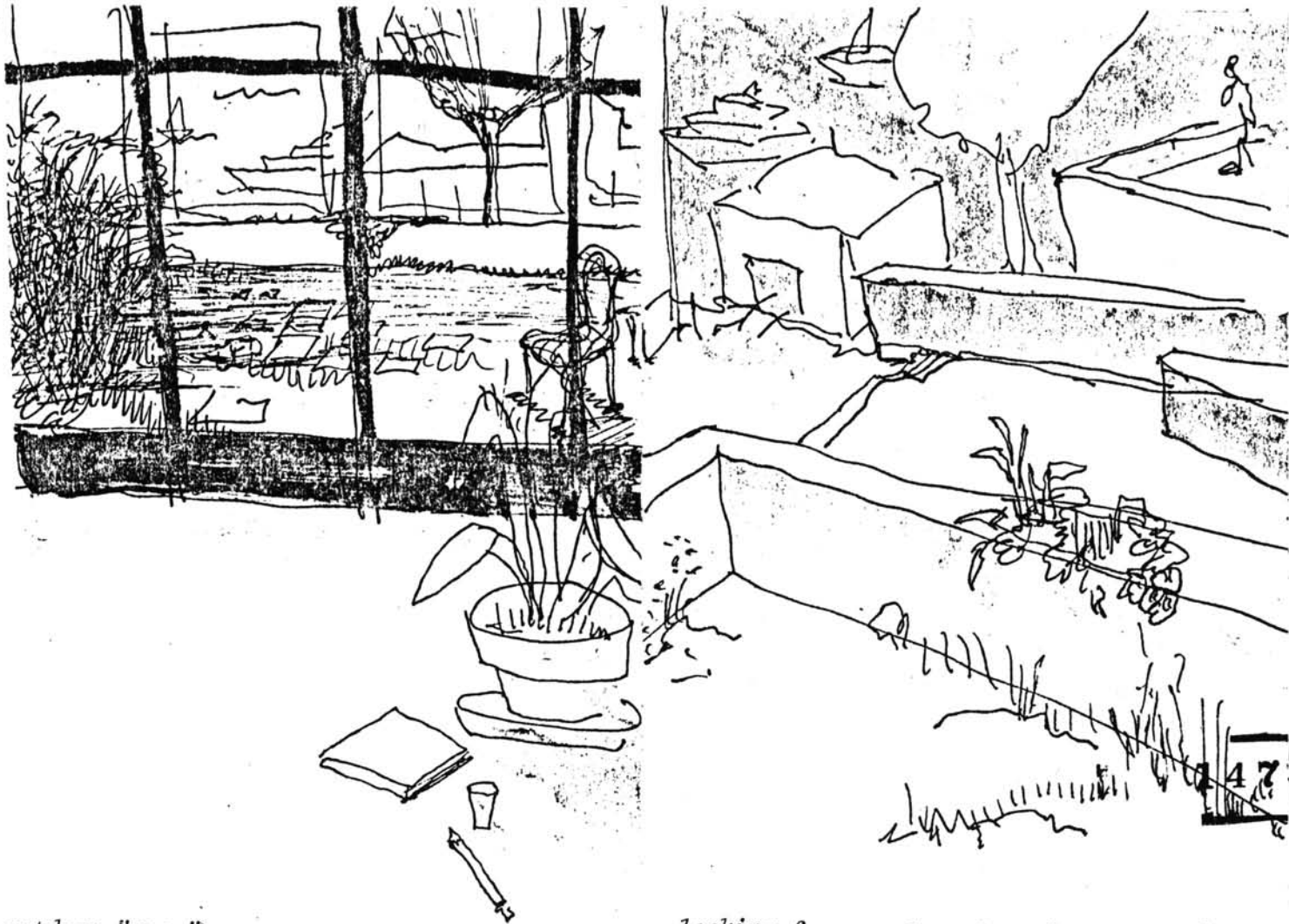
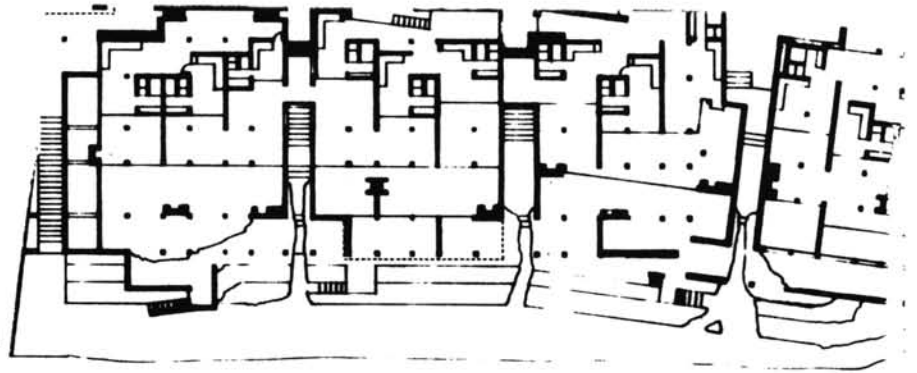
It may be possible for the beds to be placed so that a person may wake up and see the water view from their bed.

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The garden wall screens the home so that the distant view becomes a "living picture wall". (The Japanese House, page 258) Though the garden is part of the house, the interior space is clearly separated from the exterior by the roof and floor (Ibid, page 262). The veranda acts as a mediating agent. The garden beyond the veranda seems like a kind of exterior "room", and to get to it there is another change of level.

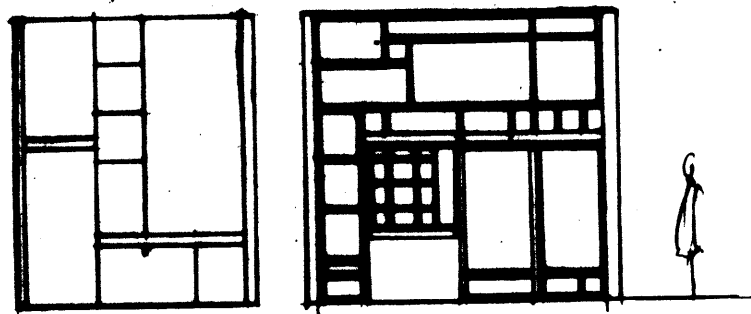


As a designer, I have offered formal hints as to how the exterior rooms may be arranged, but it is up to each household to choose to enclose the garden, totally, partially, or not at all. Some of the gardens are lower than the houses and this is especially good for heating the houses by erecting a greenhouse over them so that the heat rises into the houses. This is apparent on the south side of the south buildings for instance.

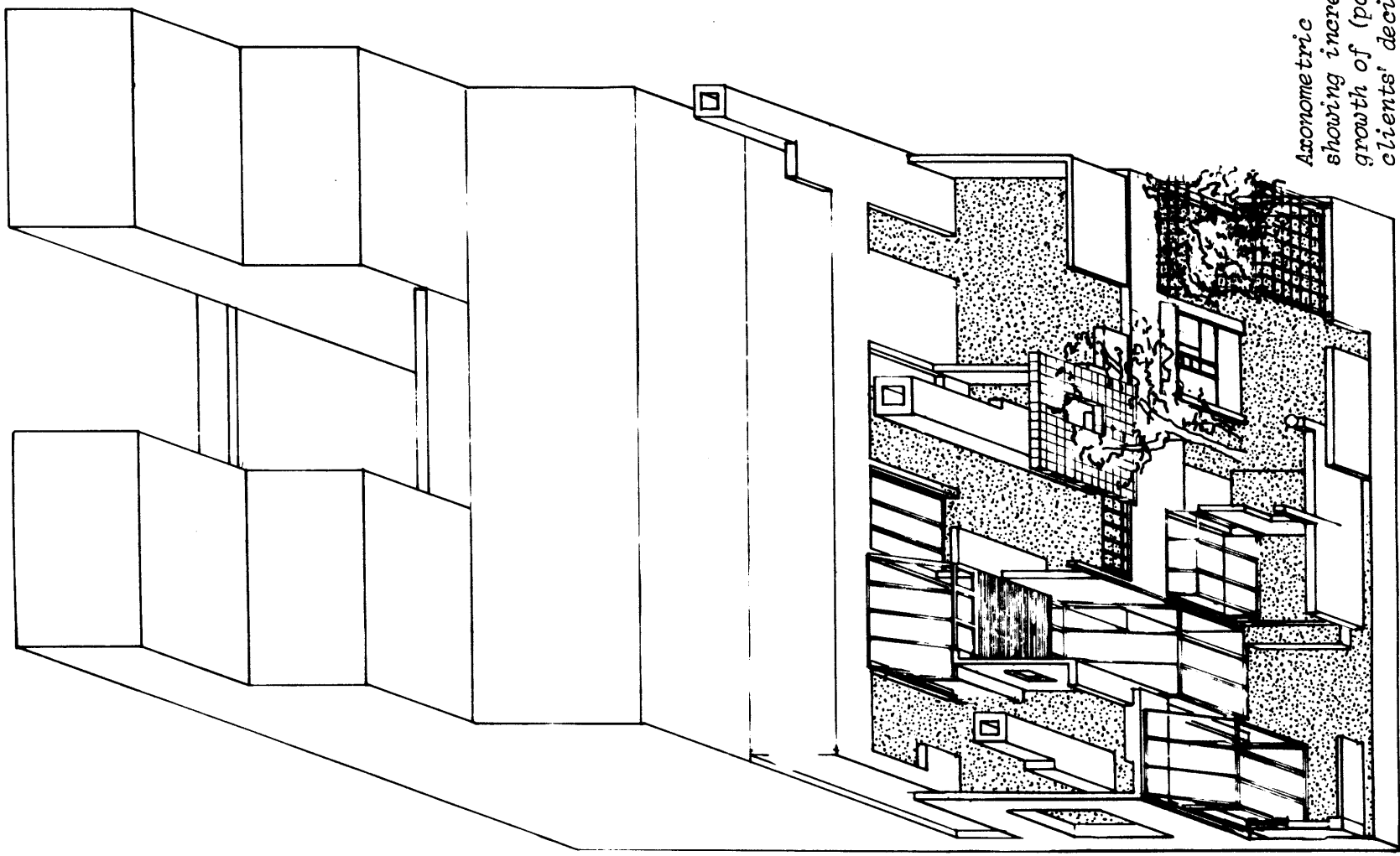


looking into outdoor "room"

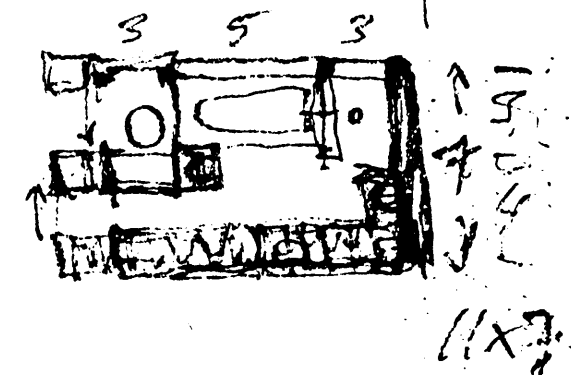
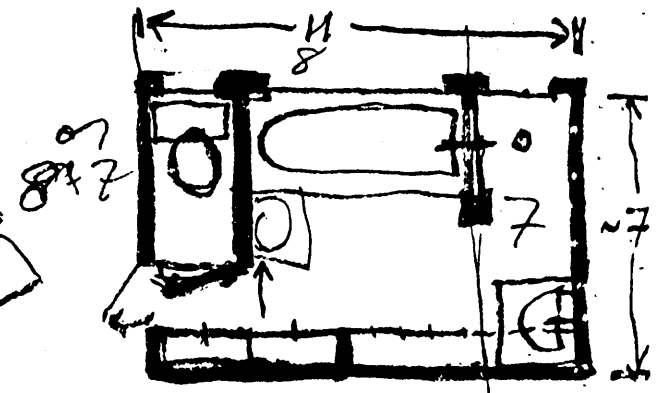
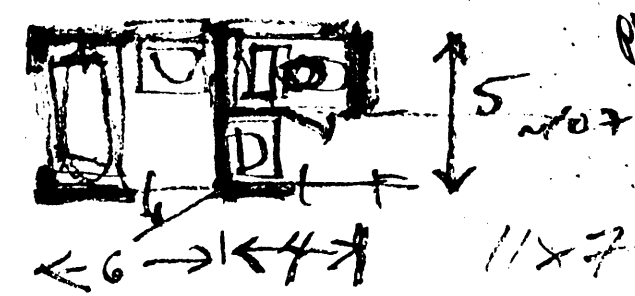
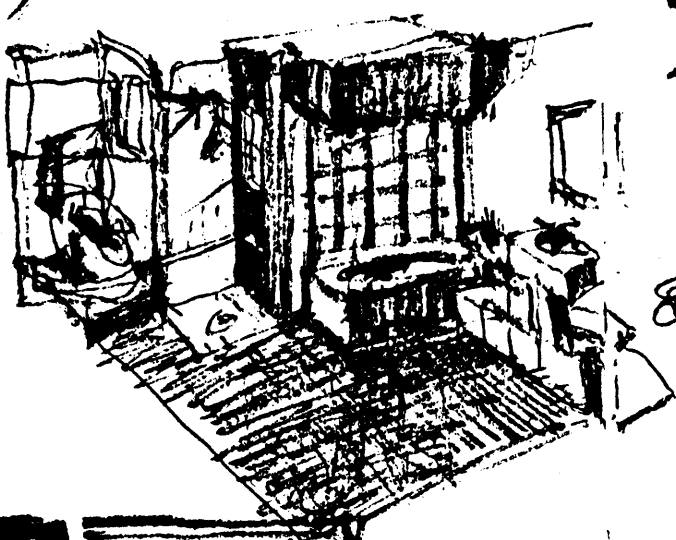
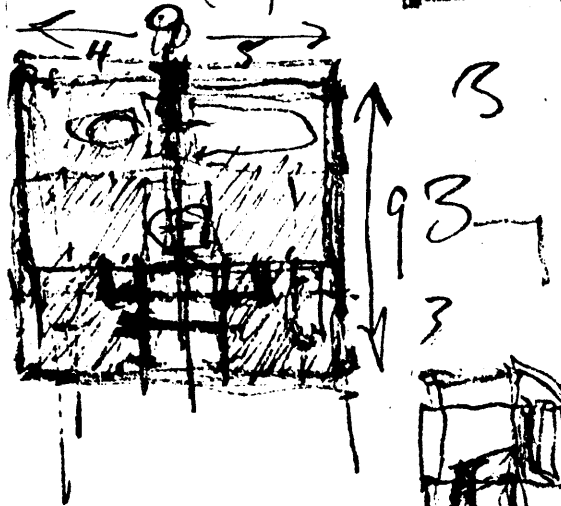
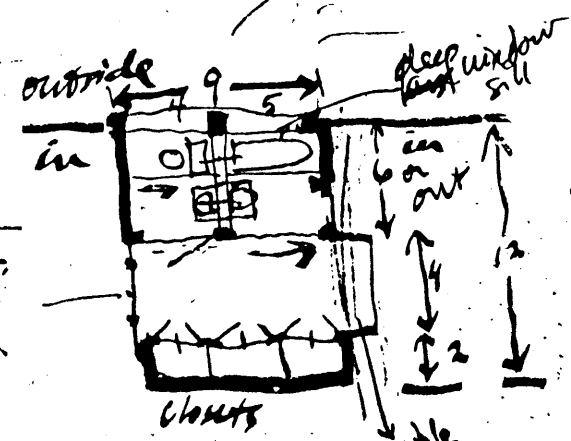
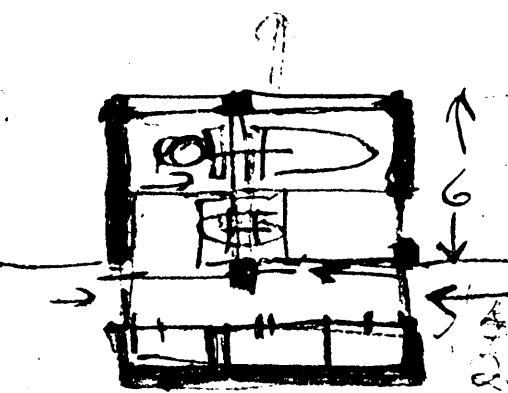
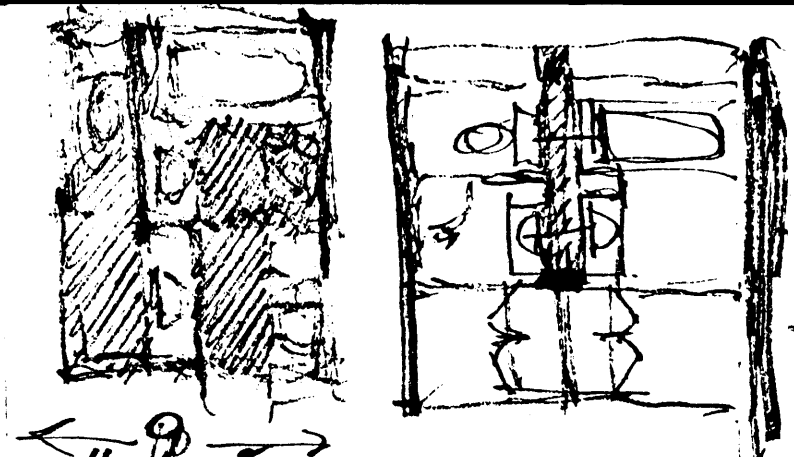
looking from outdoor "room" to community center



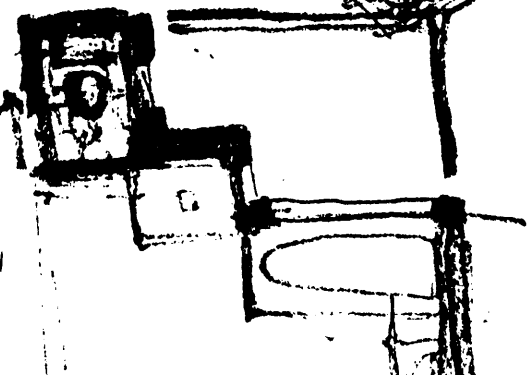
148



*Axonometric
showing incremental
growth of (potential)
clients' decisions*

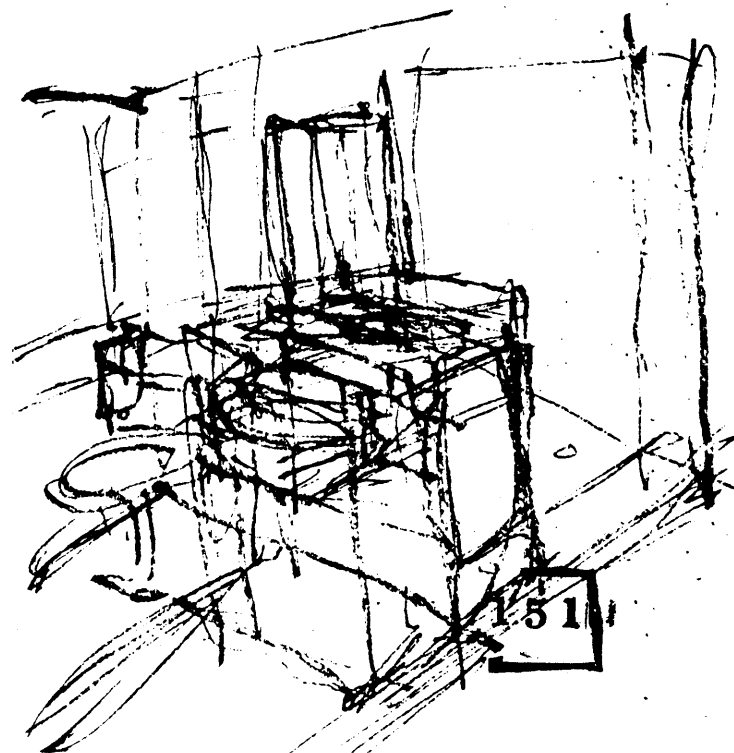
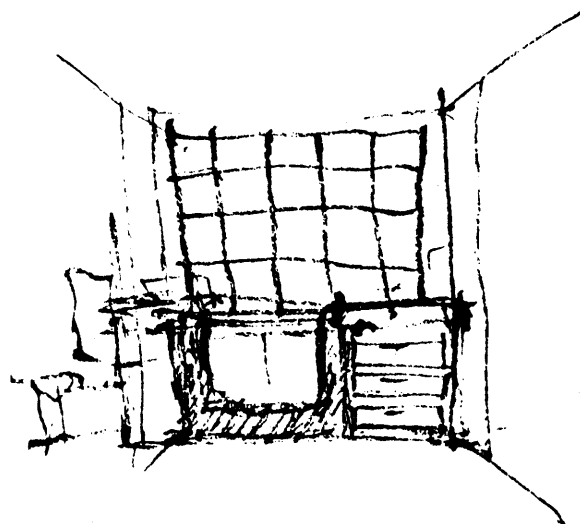
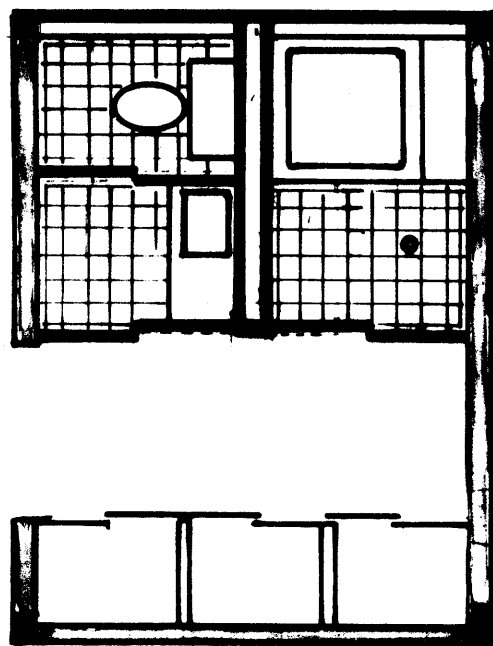


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THE BATH

Each bathroom unit has a number of different compartments, separated by sliding doors. There is a dressing area with closets, an entirely water-proof area with tub and shower, a sink area, and just beyond, a toilet place near the window. The windows have deep sills. All very simple.



NEW HOUSING PRODUCTION IN BOSTON
JANUARY 1976
RESEARCH DEPARTMENT

BOSTON REDEVELOPMENT AUTHORITY
by
Christopher Carlaw, Elisabeth Comer, and Lowell Richards

RESIDENTIAL DEVELOPMENT PROJECT
PLANNING DISTRICT - WATERFRONT
NO. D.U.S. 203 NO. BHA
PROJECT NAME: SERGENT'S WAREHOUSE
ADDRESS: QUINCY CULD STORAGE WAREHOUSE
DEV: EAST
AGRES: ONE BEDRMS-
EFFCY: TWO BEDRMS-
COMMENTS: 251 MODERATE INCOME, 36,000 SQ.FT. COMMERCIAL, WITH 201 PARKING SPACES
FINANCING: \$0.00
PROPOSED: 75/09
TENTATIVE: 74/01
INFO SOURCE: MHFA
BRA
FOUR BEDRMS-
DEVELOPER: NORTH END BLS-DEV-AS
SOURCE CODE: JOHN SAMERS
FIVE OR MORE BEDRMS-
CONSTRUCTION START: /
PLANNED: /
04-5 LISTING
INITIAL OCCUPANCY: /
ESTIMATED CONSTR START: 76/05

Kevin H. White, Mayor
City of Boston
Robert T. Kenney, Director
Boston Redevelopment Authority
Alexander Ganz
Research Director

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Just a note. Here's what happened this morning. October
15, 1981

In the North End, at the Caffè dello Sport, the proprietor named Mimo told me that he and some friends have invested a half a million dollars in a development scheme for the very site on which I am proposing my thesis. From what I gather, they have already been working with an architect. The scheme includes shops, restaurants (2), and condominiums. Also, there will be parking for 250 cars underground.

Every time they took their scheme to the mayor, they dealt with Ryan who really is in charge of the North End, and every time the government people had another excuse, such as, 'You already have 250 cars underground so why do you need more cars on the site?', or 'two restaurants?', or 'You are putting condos there (that's right, condos), but the Italians in Boston can't afford condos.' Mike, from Mike's pastry, assured them that he could find any number of Italian people who could put five million dollars "in his face anytime". But somehow the mayor, Ryan or whomever, want something else to happen there. 'That's probably the most desirable land in all of Massachusetts,' said Mike. They want to put a piazza there, and to make it a center of activity for the Italian people of Boston, with the Italian consulate there amongst the shops...

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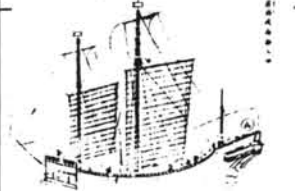


APPENDIXES

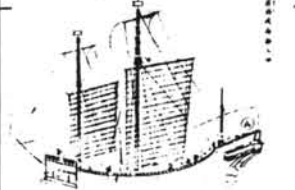
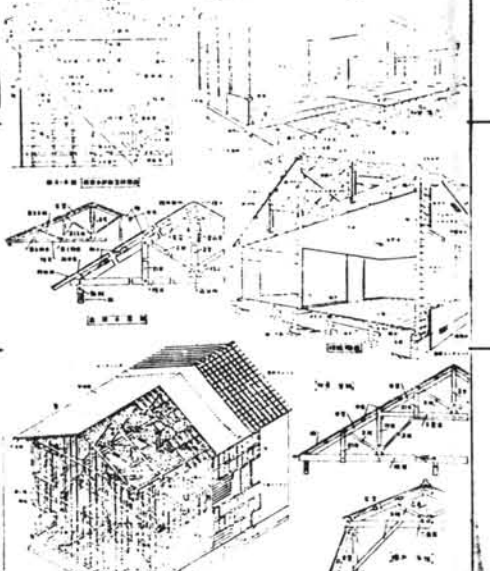
JAPANESE INDUSTRIALIZED HOUSING:

Wendy Lehman

INTERACTION TO SYSTEM BUILDING
PROF. S. BLANCH

TIME - EVENT CHART

	1750-1800					1800-1900							
	1750	1760	1770	1780	1790	1800	1810	1820	1830	1840	1850		
Events	<p>BY 1700 CENTURY - POPULATION IS 4 TIMES THE MEDIEVAL LIMIT</p> <p>JAPAN ALMOST URBANIZED AROUND 1700 - 1800 (POPULATION IS 1 MILLION (MORE LARGEST ASIAN POPULATION IN THE WORLD))</p> <p>AROUND 1800 - STANDARDIZATION FORMALIZED FORMS</p>					<p>LATE 18th - OUTBURST OF ANTHROPOLOGICAL ACTIVITIES</p> <p>EMPEROR CLASS BEGINS LITERATE STANDBY POPULATION</p> <p>STANDARDS OF LIVING HIGH AND RISING</p> <p>18th CENTURY - INTRODUCTION OF NATIONAL LEARNING</p> <p>ARCHITECTURAL OUTBURST OF LAYERED DECORATED BUILDINGS</p> <p>WESTERN OIL PAINTING</p> <p>POPCULINE</p> <p>RISE OF URBAN MERCHANT CLASS AND CULTURE (GENTE DISTINCTION FOLLOWS MERCHANT CLASS)</p> <p>ENTERTAINMENT CENTERS BEGINS</p>							<p>1840 - 1850 - JAPAN WAS ALREADY SOCIALLY ISOLATED... UNLIKE AT A TIME OF SUCCESSFUL INTERNATIONAL AND INTERCROSSCULTURAL RELATION- SHIPING IN THE WORLD</p> <p>ISOLATION ENHANCED BY POLARIC FOR 1800 YEARS INFORMATION FROM THE WEST WAS LIMITED</p> <p>U.S. DISPATCHES JOURNALIST JOHN R. BROWN UNDER (OFFICER) TO VISIT THE JAPANESE BY THE AMERICAN GIFT EXCHANGE TO THE PORT</p> <p>1854 - TREATY SIGNING BETWEEN U.S. - JAPAN (MUTUAL ACCESS)</p> <p>1854 - JAPANESE IMPERIAL AMERICAN COMMERCE TREATY BY JOHN CALDWELL HENRY (BRITISH AMERICAN TRADE IN THE EAST)</p> <p>IN EACH CASE, PRINCIPAL EUROPEAN POWERS FOLLOWED WITH SIMILAR TREATIES</p> <p>ANNUAL TREATIES</p> <p>FOURTEEN YEARS OBSTACLES TO TRADE WHICH DEVELOPED SLIMLY</p> <p>1854 BRIGHT IN EUROPE HELPS JAPAN PRESERVE A TRADE BALANCE</p> <p>EVENTS BEHIND THE SCENES UNABLE TO PROTECT TO HER HOLD WAS IN WESTERN</p> <p>1854 - BRIGHT (1854) IS A COMERCIAL TREATY WITH THE U.S. AND SIMILAR TREATIES FOLLOWED WITH EUROPEAN COUNTRIES</p> <p>RESULT OF WEST WHEN FOUND THAT THE TREATIES WERE MET BETWEEN SIGNALS AS UNDERSTOOD IN THE WEST</p> <p>BY 1854 - A STRONG ACT - ONE WAY REACTION</p> <p>1854 - FIRST STEAMSHIP PURCHAS- AND FROM THE WEST</p> <p>1854 - U.S. - JAPAN IT'S FIRST FOREIGN LAW</p> <p>1854 - 1854 - JAPAN OPEN TO WORLD TRADE</p> <p>CENTRALIZED GOVERNMENT</p> <p>PLAN OF JAPAN'S POLITICAL MODERNIZATION AND INDUSTRIAL- IZATION FINANCED BY AGRICUL- TURAL SURPLUSES</p> <p>CHEAP TRANSPORT</p> <p>HEAVY TRANSPORT BY STEAMSHIP TOWN BY RAIL ROUNDS MAKES POSSIBLE GREATER SPECIALIZATION OF CROPS</p>
Ideas	<p>18th CENTURY FARMERS WRITE THEIR "SCIENTIFIC" METHODS FOR THE FIRST TIME</p> <p>17th - 18th CENTURIES - JAPAN ORDERLY, UNIFORM, AND EFFICIENTLY RULD</p> <p>CLASHING HOMOGENEITY AND STRONG SENSE OF NATIONAL CHARACTER</p> <p>UNQUESTIONED LOYALTY</p> <p>RESPECT FOR HIERARCHY LEADERSHIP</p> <p>OPINION ON GROUP ORGANIZATION</p>					<p>ESPECIALLY IN OMAHA AND KOTO</p> <p>18th - 19th CENTURIES ("PICTURES OF THE FLEETING WORLD")</p> <p>MERCHANT CULTURE ART</p> <p>SHOULD BE PRESENT - FIRST WEST-CULTURE ART</p>							
Institutions													
Illustration											  		



Business Day

The New York Times

FRIDAY, OCTOBER 14, 1982

Japan's Big Energy Setback



Coal Mine Blast Trims Output Goals

By The Associated Press

Japan's coal output will be cut by 10 percent in 1982 because of a major blast in a coal mine, the government said today.

Japan's Big Energy Setback

By The Associated Press

Japan's energy policy is being tested by a major setback in coal production, the government said today. The blast in the Tsurumi coal mine, which killed 10 workers and injured 15 others, has cut output by 10 percent in 1982.

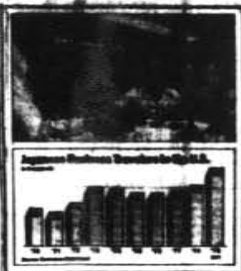
The government said today that the coal output in 1982 will be 10 percent less than in 1981 because of a major blast in a coal mine. The blast in the Tsurumi coal mine, which killed 10 workers and injured 15 others, has cut output by 10 percent in 1982.

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U.S. Tightens Japanese Visas



\$979,000F

1982	1,000,000
1981	950,000
1980	900,000
1979	850,000
1978	800,000
1977	750,000
1976	700,000
1975	650,000
1974	600,000
1973	550,000
1972	500,000
1971	450,000
1970	400,000

\$288,000F

1982	300,000
1981	280,000
1980	260,000
1979	240,000
1978	220,000
1977	200,000
1976	180,000
1975	160,000
1974	140,000
1973	120,000
1972	100,000
1971	80,000
1970	60,000

\$985,000F

1982	1,000,000
1981	950,000
1980	900,000
1979	850,000
1978	800,000
1977	750,000
1976	700,000
1975	650,000
1974	600,000
1973	550,000
1972	500,000
1971	450,000
1970	400,000

BUSINESS

US, Japan reported at critical point

The United States and Japan are at a critical point in their economic relationship, according to a report by the U.S. Trade Representative today. The report says that the U.S. trade deficit with Japan has reached a record \$28.8 billion in 1981, and that the U.S. trade deficit with Japan is expected to reach \$30 billion in 1982.

Japan lowers its interest rates

Japan lowered its interest rates today, the government said. The government lowered the discount rate from 12 percent to 11 percent, and the call rate from 12 percent to 11 percent. The government also lowered the rate on government bonds from 12 percent to 11 percent.

U.S. and Japan at critical point

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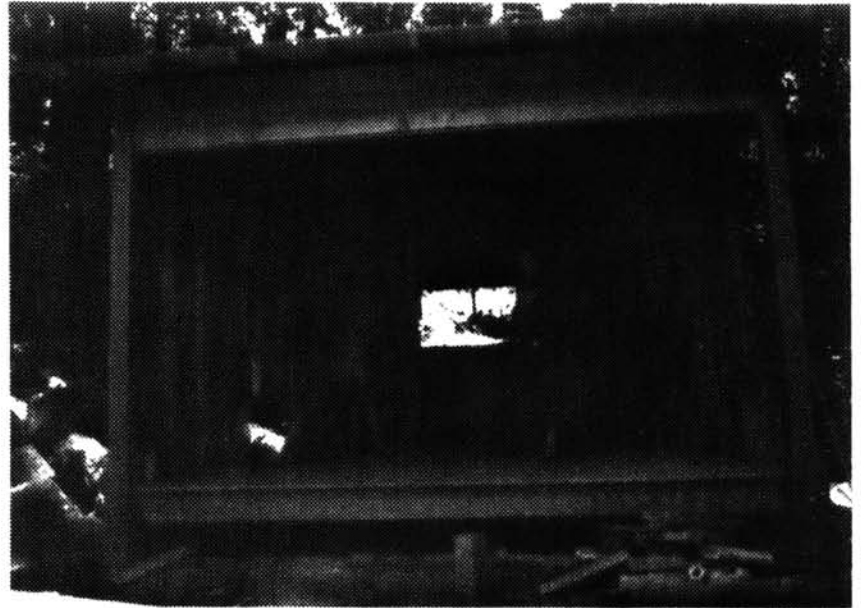
Since this thesis is devoted to the study of how traditional Japanese design elements may be transformed into an American context, it seems pertinent to offer some examples of places where there has been some success in this. Not all of the following examples are conscious attempts to deal with Japanese design, but the sensitivity brought to each of them reflects such an effort. In all cases, I have tried to focus on some aspect of design which is a further exploration of a specific issue or to offer a design solution other than my own. These do not necessarily represent the best possible collaborations of East and West, and probably they are not what I would have designed, given those sites and problems. I am simply offering them as alternative designs in the nature of this thesis.

CASE STUDY #1

SANTA CRUZ TEA HOUSE: DETAILS AND CONSTRUCTION TRADITIONAL JAPAN MEETS AMERICAN INGENUITY AND THE PIONEERING SPIRIT

This case study deals with a teahouse being built in Santa Cruz, California by a person who worked as an apprentice carpenter in Japan for five years. This person is Karl Bareis. Karl is working with those aspects of Japanese carpentry he feels will add the most to his practice in America. At the time of this writing, he is in the process of building a small, detached "teahouse" for an American acupuncturist. This is not a discussion about the transformation of the building type; the teahouse, but rather, it is an illustration of an approach.

Among the advantages to be gained by using Japanese construction, methods, and measures for this type of structure, Karl named the following: he believes that he will be able to complete this building for the lowest possible cost, with high quality material and meticulous craftsmanship. Although the quantity of lumber is minimized, he believes the structure will last longer than comparable American structures because the wood has been selected, cut, milled and graded for the various functions of specific structural members, and the joints are strong. Furthermore, he can build the major framework with less time and labor than



conventional American construction practice. In short, the work is market-competitive and of a better quality handicraft.

The teahouse is 369 square feet of a one-room shelter facing southwest in a magnificently wooded site. Until the first stage of the photographs, the entire construction time was forty three hours, and there were two people working. The foundation work was another five hours. So the total time for two people to lay the foundation and frame the building, including the roof, took only 48 hours. This is a small custom-built job and the time includes the selection and placing of foundation stones. One time-saver is that the foundation did not have to be flat in order for the house to be level. Still, setting and leveling the floor, which is about 18" above grade took twenty three of the hours. There were one and a half hours in the workshop and the rest was done on site. Shopwork involved milling 6" x 6" wood to 4 1/2" x 4 1/2" sections. The foundation stones were set in 18" concrete as a concession to local building codes. In other structures, Karl intends to minimize materials even more than he has in this work, because, he says this is entirely overbuilt.

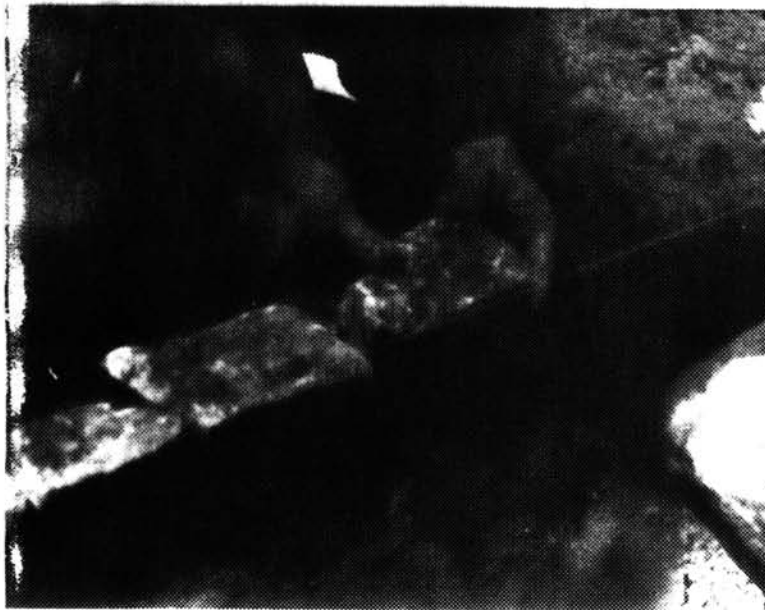
For this house, the roof is supported by six 4 1/2" posts, irregularly spaced. It is interesting to note that the American lumber industry is now talking about using 2" x 3"s

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at 24" spacing. Karl says, a 4 5/8" post would be better than the 4 1/2" he used because it would project beyond the plaster surface of the finished wall, and the plasterer would not have to be so careful, but Karl wanted to try to build in exactly Japanese dimensions for these elements. The posts are redwood, and though they help to make up the difference in strength between a 2" x 4" (standard American stud size) and a 2" x 3", they are structurally redundant. The posts are green, but the back of them were routed which allows the wood to dry without splitting. Regular fiberglass insulation is being used, and in fact, it is for the insulation that stud walls were fused with post and beam in the fireplace. Plywood in 4' x 8' sheets are used for the exterior walls, and they will be plastered. The exterior walls of a traditional Japanese house are also not load-bearing. In Japan, plaster was applied to bamboo lath, woven between the posts. Though good plaster work would eliminate drafts, they have no insulation space. In other words, this teahouse uses an infill wall which is a stud-wall structure, and the building structure may be classified as a composite post and stud wall. The eventual effect will seem like a post and beam construction, however, because the posts will stick out beyond the finished plaster wall in the interior. Karl is using indigenous California trees such as redwood and douglas fir for the construction of the teahouse.





Karl has not only worked with lumber for many years, but he has carefully studied the growth and behavior of many varieties of wood. He gave some sound suggestions for improving forestry and milling practices. One piece of advice has to do with the use of bark. In America, after trees are cut, the bark is left on. The bark dries faster than the tree core and so the wood shrinks and cracks. Karl advocates removing the bark immediately after cutting down the tree in summer, as is done in Japan. A live tree has water between the bark and the wood, he explains, and the bark is easily peeled from a freshly cut tree. In America, the bark is thrown away. The Japanese have shown us, that the bark can be flattened and used as a rain ledge which, over plaster, will last for twenty years. Since the bark has no insulation value, it is not good for siding. In Japan, it is used under roof tiles as a protective layer between the tiles and the wooden roof.

As I see it, there are three major problems, when translating a traditional Japanese house into an American context. One problem is thermal, another is security from burglary, and another is acoustical privacy. I asked Karl if he has found any solution to the problem of acoustical leakage when using lightweight, movable *fusuma* instead of fixed, plaster walls. He suggested that a product called "therma-lite" be used. It is a 90% acoustical foam with an R22

fire rating (says Karl). It is brittle but extremely lightweight. Through it there would be very little sound transmission or heat loss. A suspended ceiling used in conjunction would inhibit heat loss. I suggested that the *fusuma* might be closed with a rubber seal to make them even more leak proof.

Karl and I discussed the formal aspect of design and two ideas emerged. One is that we do not always need the standard, American ceiling height of around 8', especially in a room where there are no standard 19" chairs. A Japanese ceiling is about 7'4" high (says Karl, though this is a liberal generalization), and when we are sitting on the floor, it feels even higher than the American dimensions.

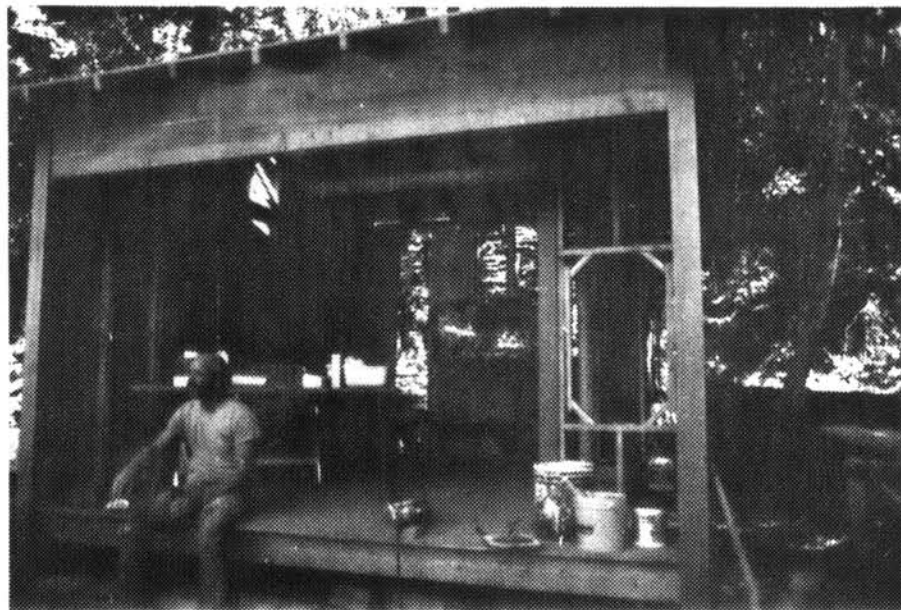
The other suggestion dealing with form, is to use the *yengawa* whenever possible. This is the transitional zone in a Japanese house between the interior and exterior. A close approximation is the American porch or veranda. Carefully designed, it is a "perfect pocket for heat in winter, and even better in summer for cooling", said Karl. It works on a principle similar to the revolving door which balances the temperatures between inside and out. Perhaps the *yengawa* can be altered to improve it by using a "heat mirror" and an aluminum frame filled with foam for more

Teahouse -- Partial Cost Sheet

Plaster	-	\$ 160
Concrete	-	\$2,000
6 Redwood Posts	-	\$ 95



protection against the weather. This is also discussed in the section on THERMAL ASPECTS OF A TRADITIONAL JAPANESE HOUSE AND HOME.



CASE STUDY #2

JANE'S HOUSE IN SAN FRANCISCO EXAMPLE OF A CLOSE, INDOOR-OUTDOOR RELATIONSHIP IN A DENSE, URBAN SETTING

This is another example of how one person's ingenuity and patience has been joined to a sensitive and meticulous design sense. This person is Jane Kastner. Jane is inclined to be receptive to Japanese design, in particular the gardens, but she has only known them indirectly, having never travelled to Japan. Her house reflects some of the principles of traditional Japanese design which are explained in other sections of this thesis. All opportunities have been taken to interrelate the garden and the house, and the effect is that the house seems larger. This is the point I wish to make using Jane's house: the correspondence between the garden and the house, and the resulting end of solitude and quiet contemplation, despite the fact that the house is in the path of a busy traffic area in the city.

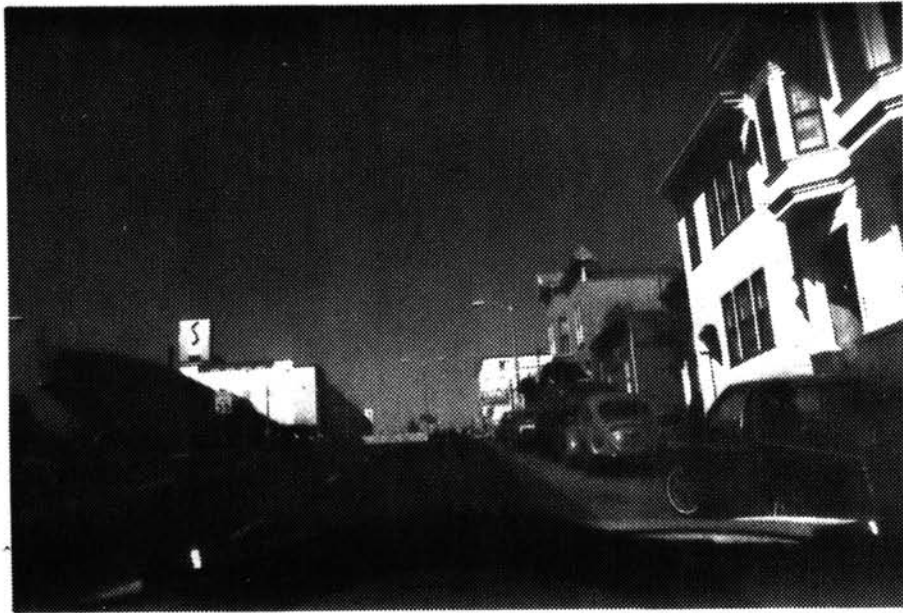
For this case study, I rely on photographs to illustrate my point.



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Jane has been living in the same house in San Francisco for the past thirty five years. When she moved in, it was 1946 and the house was the cheapest in a row of cottages in the outskirts of the city. The house cost \$5,500. Since then, Jane has been fixing-up her house in increments and she supposes that there has been no more than a total of \$20,000 put into the house. Throughout the years the major traffic route we see in the photographs grew up at Jane's doorstep; a six-lane highway, a hospital, and an enormous department store outlet, among other urban paraphernalia. Being a resolute and imaginative person, Jane turned her back on the street and made a private sanctuary for herself, including a quiet garden. Jane's house now resembles the semi-urban house of the traditional Japanese, within an American setting.





The barn red color was chosen by Jane's ex-husband who originally used actual barn paint because it would last longest, possibly ten years. This paint is no longer available.

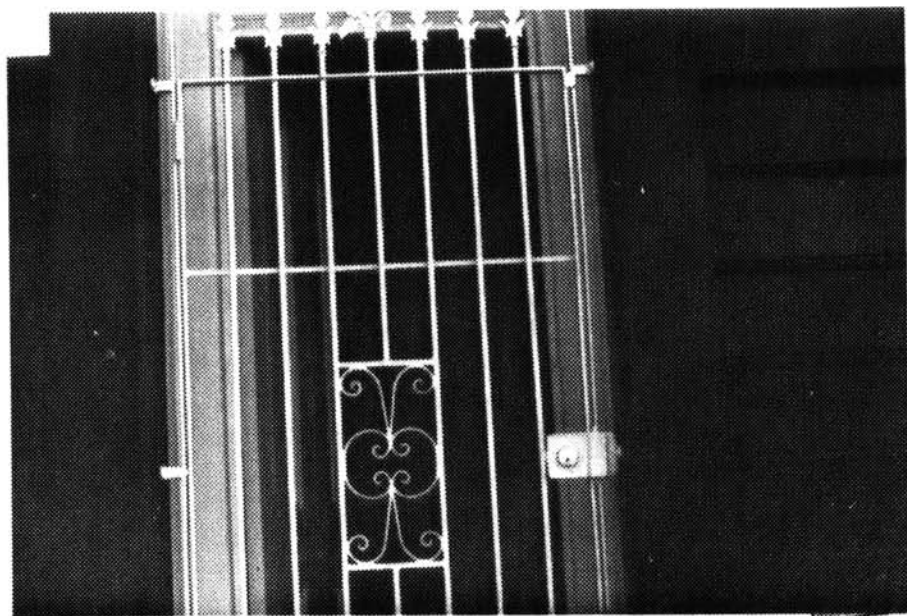
The houses in Jane's neighborhood were condemned after the war, but perhaps due to lack of funds they were not torn down.



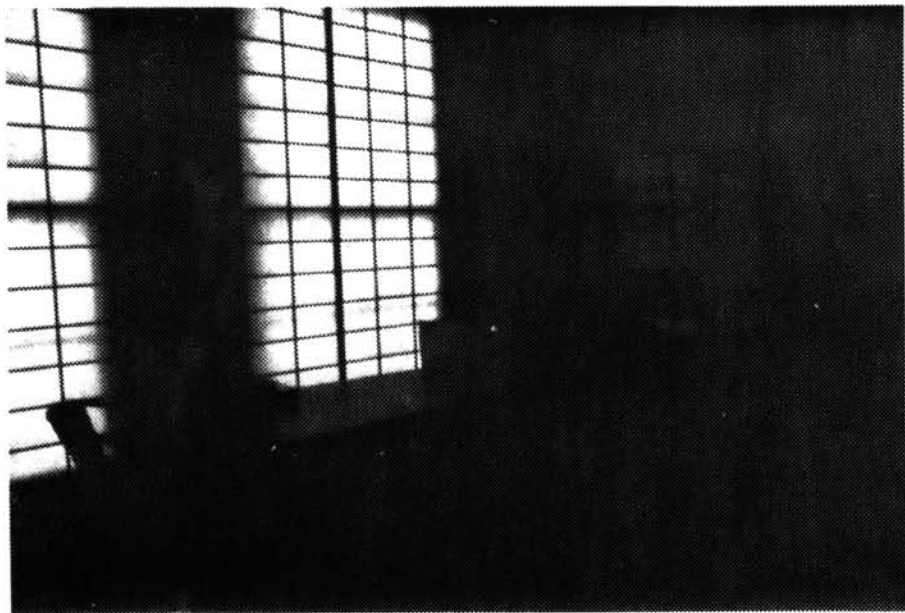
167

Houses like these stood on the hills all over San Fransisco. Jane laughs about a Japanese sea captain who thought the houses were massive cemeteries.

The style of Jane's house is "workman's cottage", built probably around 1870... so thinks Jane, due to some newspapers found in the crawl space during one phase of construction.

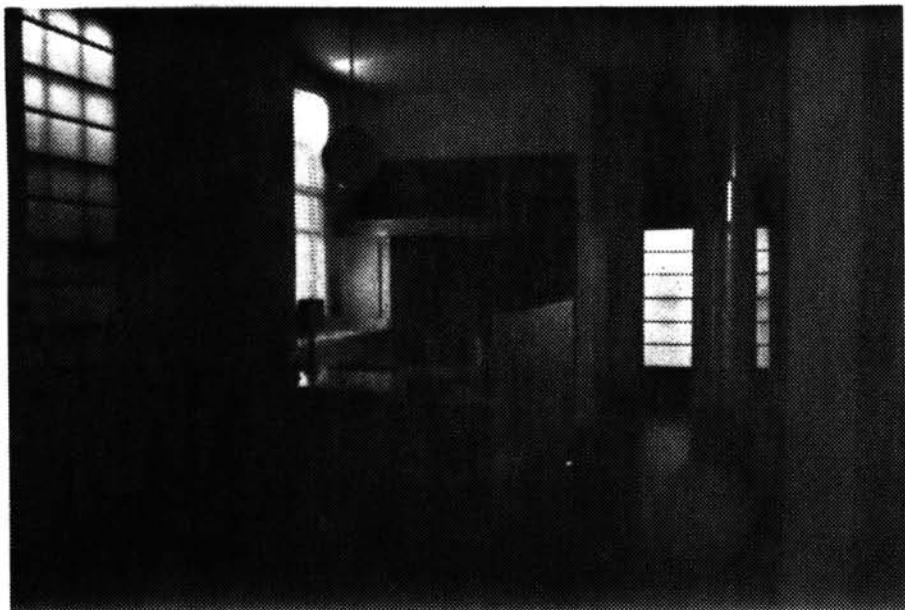


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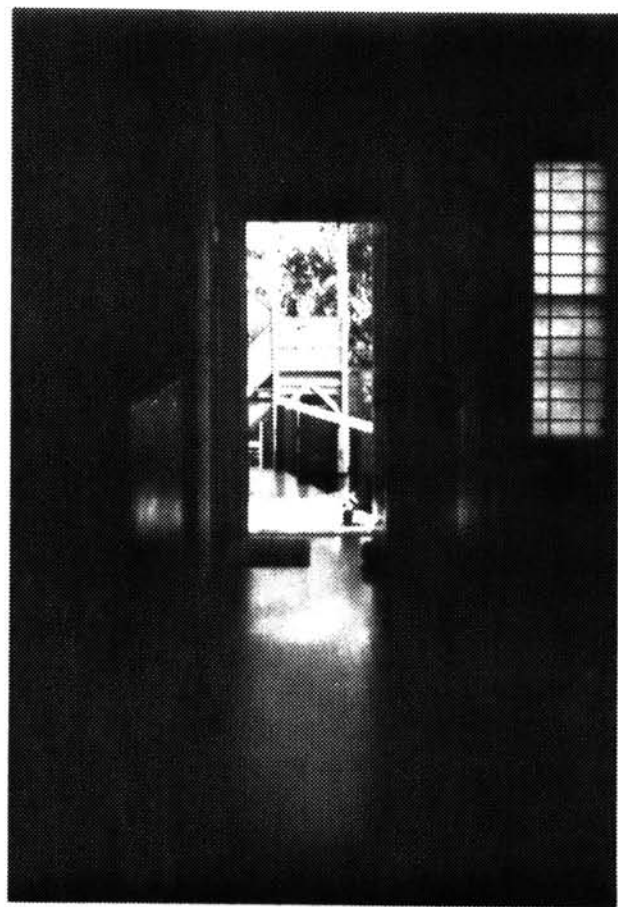
Specially made *shoji* -- of fiberglas -- add a barrier for the house against noise. They turn a confusing view into simple panels of light.

The play of light and color compositions have a leading role in the mood of the house. The house is decorated with a simplicity reminiscent of art deco but with a warm human touch of flowers, colorful fabrics, drawings, and wood. There are alot of grids so that elements of color, curves, or softness stand out in contrast.



Some walls were taken out in part or in whole to enlarge the interior of the upstairs rooms.

Reflections and light-colored walls are used to give the rooms a larger feeling.



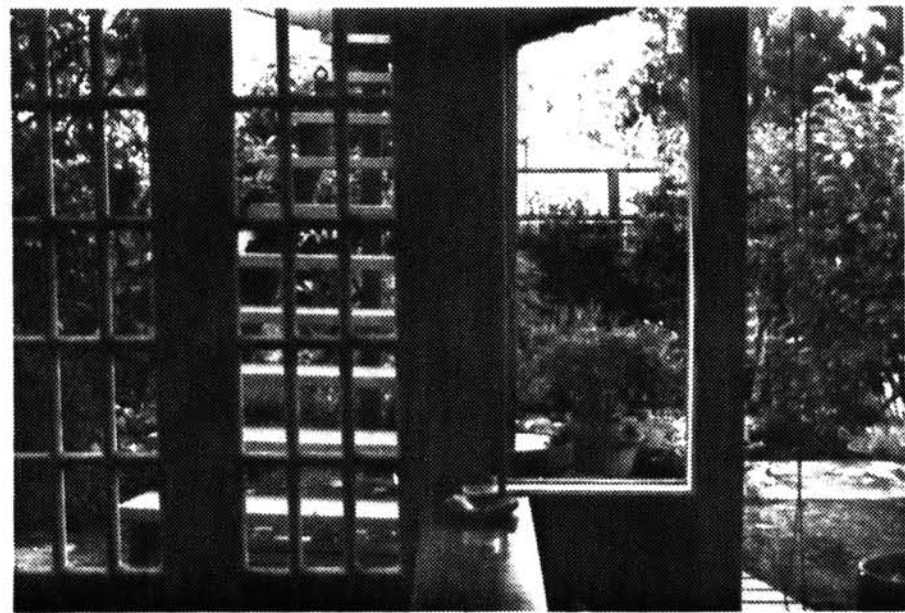
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When Jane moved in her "backyard" was actually a dump pile. Now every opportunity has been taken to open up the walls downstairs and let the garden in. The garden is another "room".

There are a number of different changes of level in the downstairs rooms which give a sense that there are more rooms and that there is more space. There are also changes of level in the garden.

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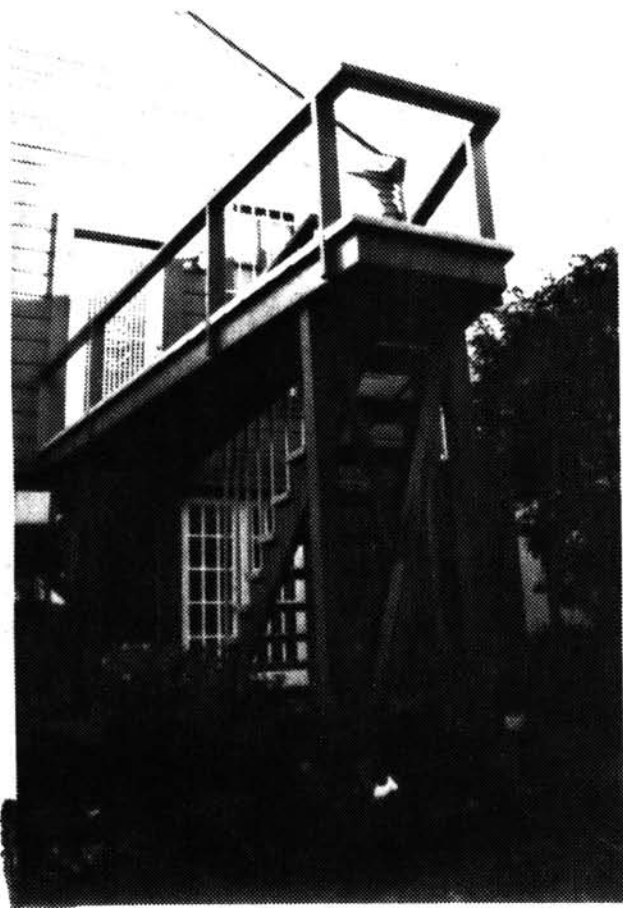




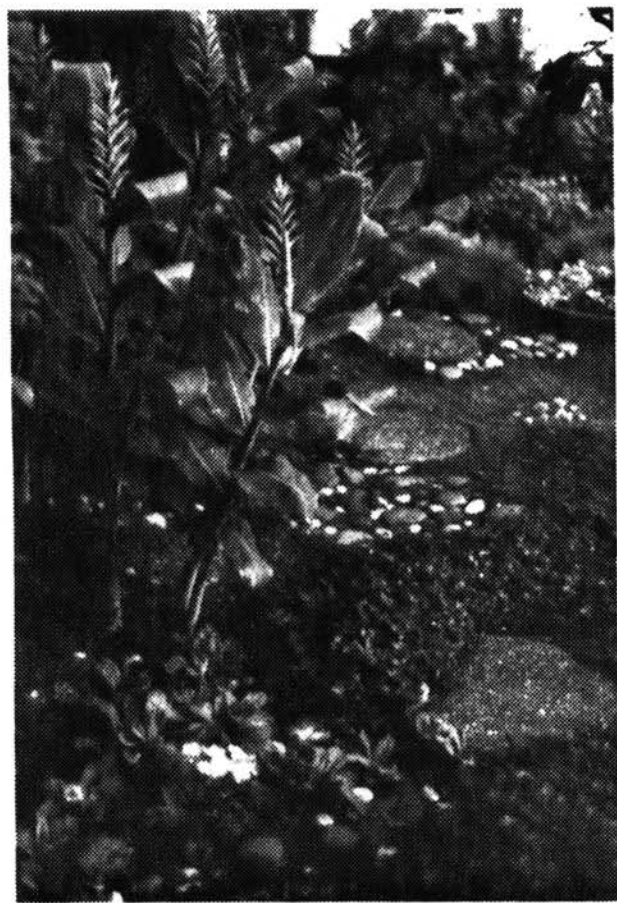
A staircase with forced perspective uses less space but gives the illusion of the garden being longer. The garden is nearly the same depth as the house in plan.

In 1972 Jane put in high, glass wind breakers which keep sand or seeds from blowing, and made the garden liveable.

The garden has flowers that bloom at different times of year. It is never "complete".



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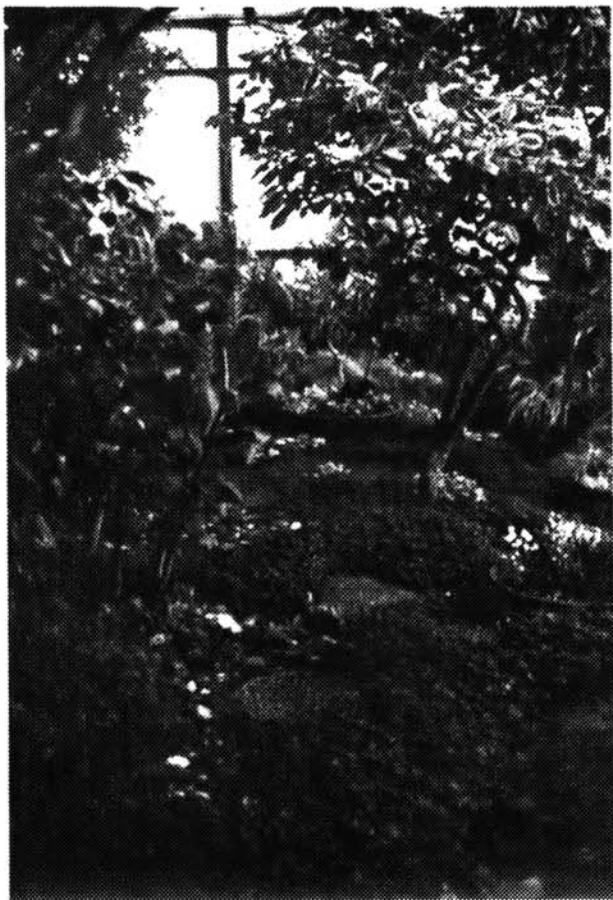


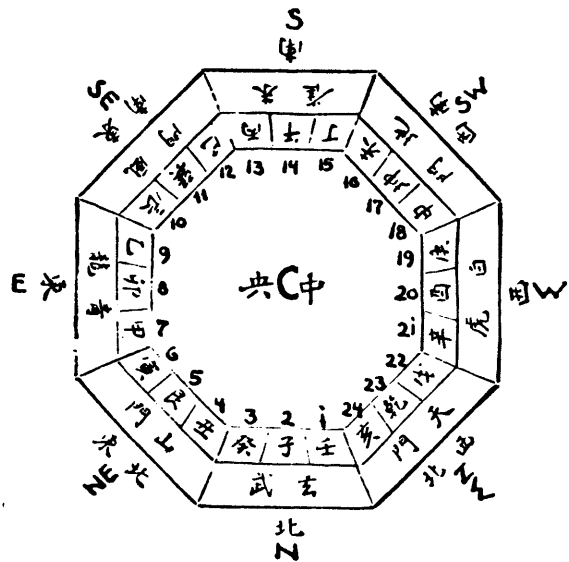
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Significance of the
Cardinal Points in Building

from *Houses and People of Japan*, p. 27

GEOMANCY

A paper for Julian Beinart's class; "Theory of City Form"
February 14, 1980

As designers we are always looking for clues to help us decide about the site and configuration of our built world. Once we realize THAT we need, and WHAT we need to construct, we then have to decide WHERE. And then, after we have chosen a site, we must decide what to build where on that site, and even to lay plans for the future. We justify our decisions by noting circulation, solar orientation, climate, economic and/or social restraints, technology, history,... in short; we try like mad to disclose plausible motives for our design actions. Still, no one would deny the designer, and especially the most sophisticated designer (even I.M. Pei), the divine moment of Intuition, where perhaps inspiration is unfollowable. Therefore, perhaps we modern westerners may restrain our skepticism and plea of sophistication while observing the, albeit complex, traditional Oriental rationale for their design choices: Geomancy.

Geomancy in the Far East has been shared and accepted by architect and layperson alike. Here I shall speak of Chinese systems, but the Japanese have borrowed widely from them, and even Taiwan has a history of astrological siting. Seventh and eighth century, Buddhist scholars returned to

Japan from China with writing and other cultural institutions, which often were adopted in their entirety (i.e. importation without adaptation). In 710, Nara, as a Japanese capital city, was planned in the model of the Chinese capital, Hsi-an: its streets and the placement of its Imperial Palace.

In fact, there have been many theories and techniques of geomancy (or *ti-li*), but they all have in common a look to astronomy and cosmology for the best placement of buildings in a site with beneficial energy qualities. With geomantic techniques, the proper relationship of human building to the immediate environment and the cosmos at large accepts the restraints of NATURAL processes over the human element... which may seem familiar to conservationists and ecologists. Every region is looked upon as a closed world, an isolated microcosm, within a greater fabric to which it is linked by an energy flow.

Two major schools of thought -- from which, I am told, the modern and practiced theory is a derived combo -- may be quickly divided into the categories of intuitive and analytical. The intuitive is also called the "Ancestral Hall Method" or "Forms and Configuration School" or "Mountain Peaks - Vital Embodiment School". In this method the specialist (geomancer) perceives the constellation

of terrestrial features directly, cataloging land forms, and determining patterns of cosmic energy flow to define the site. Sometimes it was felt the geomancer had to endure physical hardship in order to SEE clearer. The second (analytical) method is the "Kings Method" or "Directions and Positions School" or "Pattern-Energy School", and it is more concerned with the delineation and classification of land forms.

It deals more with abstract time and space dimensions of the site, and relies on *yin-yang* and the Five Phases theory (about which I shall not elaborate here), to determine the energetic situation. This method often uses a compass for siting, which is a laquered disc with concentric bands of characters which relate to some aspect of sky or earth, and a central chamber or "celestial pool", which houses a magnetic needle. Somehow the disc is aligned with the needle, coordinates of the site are found, and the placement of house or tomb or whatever are "easily" established. Originally, the intuitive, or more mystical approach was learned only through experience and ritual preparation, while the more theoretical required specialized book training. Now it seems everyone is taught by the book.

The energy element is called *ch'i* (Chinese), or *ki* (Japanese). It refers to the active energy that organizes matter into

configuratons causing or resisting change, as well as the physical matter which organizes the cause or resistance. Generally, where the topography changes so does the state of *ch'i*, and each change affects the cosmic energy. It is also altered by day and night and different seasons. (It is interesting to note that the Japanese use a calendar in which certain days are thought of as auspicious for certain occasions and not for others.) The quality of the site is largely dependent on the orientation of watercourses and natural land features which influence its exposure to wind, because wind and water are agents of *ch'i*.

A siting specialist must learn to recognize certain standard forms and configurations which modulate the flow of *ch'i*. One such form is the "Lair", which is an ideal site with three sides of hills; comfortable and protecting "like an armchair". The lair is the nucleus of a more complex form called "Dragons", which are mountain or ridge-like areas. Parts of the earth relate to parts of the human body as well. (Water and underground springs relate to blood and veins, earth to skin, foliage to hair, dwellings to clothes and doors and gates to hats and belts.) Then there are "resonance forms" which are not physically and directly influencing the wind and water flows, but rather have parallel significance to cosmographic design. (In MIT Historical Collections there is a small

globe which has a spherical case, and on the inside of this case, the configurations of the heavens are inscribed.) As early as 90 BC, sages discovered parallel structure of earth and cosmos. It is best when the shapes and proportions of the site can be found which harmonize with the very structure of the celestial order (heaven). There are "sign forms" too, which are land masses which physically (rather than by abstract correspondence), resemble some figure of the phenomenal world, for example fish, birds, animals, insects, flowers, and even Chinese characters.

The Japanese carpenter, as architect and builder, is familiar with the basic rules of geomancy, but if he is wise he will not take any chances and he will therefore have his plans checked by an expert in the mystic art (who sometimes is hired full-time). This professional soothsayer is something like a lawyer, so that if you have more money you have more influence on the doling-out of justice. The orientation of rooms, location of important, built feature, and organization of the total site is worked out with prime attention paid to the northeast-southwest axis. Geographical directions and axis' on the earth directly correspond to "Gates" controlling the cosmic energy flow, and by following particular rules of design, one is guaranteed the help of good spirits without provoking the antagonism of evil ones. To be more explicit: if the toilet or dirt, or even a gate or a store-

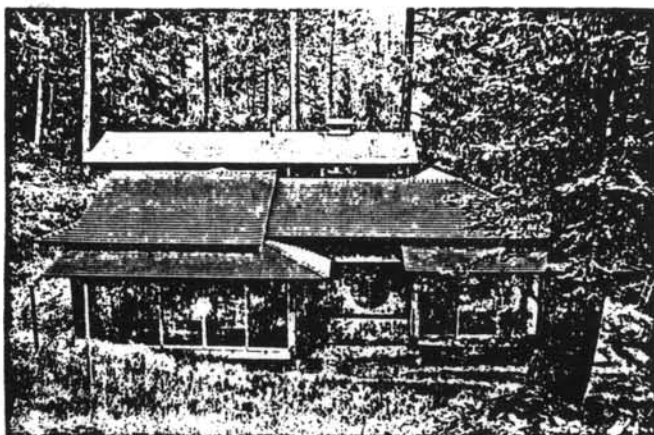
house is placed within the axis of northeast (Gate of Demon), and southwest (Gate of Man), it will bring diseases and misfortune. A firestead in the northeast will cause infantile diseases and an extension of the homestead in this direction will bring outright destruction. A garden hill in the northwest is likely to ward off all demons and will guarantee good luck, while a well in the southwest will insure continuous wealth for everyone in the family. Certain effects are inherited through the generations too.

Sometimes the ritual of geomantic ceremonies and decision-making brought people together and sometimes they caused conflicts, even intense, group conflicts. Cosmological zones sometimes overlap and sometimes granting good luck to one household means taking it away from another. Still, there are examples of otherwise powerless groups being able to "press claims on their superiors" in traditional, feudal societies. Beliefs in siting "governed villagers' willingness to comply..." but also "...shaped the government's accomodation to villagers' demands for participation"... like a two-way safety valve.

Finally, it is important I think, to notice that what necessitates a good site to the geomancer may correspond to that which is a good site to the ecologist and sensitive, practical designer today. In other words, mystical impli-

cations are intricately interwoven with practical. Especially with regard to climate, the rules for better cosmic energy flow are reasonable and helpful ones to insure the health and well-being of the inhabitants. Possibly the main distinction between our Architecture and the Oriental's is that their's has a consistent philosophical basis with the architectural.

Background research for this paper was accumulated from
+Steven J. Bennett's 1978 "Patterns of Sky and Earth -- A Chinese Science of Applied Cosmology," from Chinese Science, 3:1-26
+Heinrich Engel's, The Japanese House
+From discussions with and lectures by Gunter Nitschke
+and from experiences in Japan and America



88 FIRE HOMEBUILDING

AUGUST/SEPTEMBER 1981

A Modular Home

Japanese-style timber construction
in the foothills of the high Sierras

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