Looking at Windows
by
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1970

submitted in partial fulfillment of the requirements
for the degree Master of Architecture
at the
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
June 1977

signature of author

department of Architecture, May 12, 1977

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The images contained in this document are of the best quality available.
I would like to thank my advisor, Ed Allen, and my readers, Jack Myer and Donald Preziosi. Their interest and encouragement made writing this paper exciting and enjoyable.

For help with typing and editing, I'm grateful to my friends Bob Berson and Suzanne Smith.

And for their constant support, both emotional and financial, I am always grateful to my parents.
abstract

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I became fascinated by windows when I did a small renovation -- in which I simply replaced siding and made new windows -- and discovered how many decisions had to be made before the design of the windows. A building element whose form depends upon so many factors -- lighting, ventilation, view, weatherproofing, mode of operation, materials and building method, to name only a few -- deserves close attention. Some further reflection upon the design process revealed that it is subjective, and closely tied to one's previous experience.

The final form of the thesis reflects my belief in the value of paying attention to one's own experience; for even the most subjective mental processes have features which may be communicated and shared. It is a series of pictures and descriptions of windows which I remember from before architecture school, and a systematic examination of the qualities which make them memorable.

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Last summer I renovated a barn on my grandmother's farm. I didn't have much time or money, so I just replaced the siding and tried to do something interesting with the windows. I reused the old sashes and bought some new ones, figured out how to build frames for them, and, in the process of building the frames and figuring out where to put them in the walls, became quite fascinated by windows.

Not only were these windows objects on my workbench, they were tasks which had to fit into my budget and schedule, parts of my ventilating system, light sources, frames for view, and heat loss problems. They had to match the thickness of my walls, open and close, keep out the rain, let in the breezes, and be simple enough for me to build myself. Their height and size affected the uses to which the inside spaces could be put. I could assemble them in pairs, or rows, or make a whole wall out of them; I could fit them into the existing structure, or make new structures for them. Here I had started with a stack of sashes, and I found that almost every building issue I had looked at in architecture school somehow touched these windows.

The exercise of taking one part of a building and looking at it closely started to fascinate me. It is a good way to focus attention; and seeing how it is connected to other parts is a good way to expand awareness.
But what made my experience with the barn wonderful was not only this intellectual delight, but also the experience itself. I had taken these windows through a whole range: I had built them, and seen them piled up like so much cabinetwork on the workbench; I had installed them in the walls, having designed and planned the inside spaces they were to be part of; I had put up the curtains, closed the door, lit the fire and sat and watched the sun set out of these same windows. I feel acutely as I sit here at a typewriter that nothing I can tell you will be anything like that experience. But that experience -- how we feel when we sit and look out the window -- is what we need to deal with as designers.

Good design is going back to fundamentals; a child at work in a stable and reassuring world, a pair of lovers at play in a room where the scent of lilacs may creep through the window, or the shrill piping of crickets be heard in the garden below.¹

Feelings such as these are not easy to define or predict. There are no objective rules to follow, like the rules with which we predict the thermal resistance of a wall, or the loadbearing capacity of a floor. How do we tell how a building will make people feel? Certainly I want it to be warm and not to tremble, but all with the object that it feel good to its inhabitants. Objective rules and criteria cannot inform this knowledge; referring first to our own subjective experience is where we must begin.

A concrete bit of personal experience may be a small bit, but it is a solid bit as long as it lasts; not hollow, not a mere abstract element of experience such as the 'object' is when taken all alone. It is a full fact, even though it be an insignificant fact; it is of the kind to which all realities whatsoever must belong.... That unsharable feeling which each one of us has of the pinch of his individual destiny as he privately feels it rolling out of fortune's wheel may be disparaged for its egotism, may be sneered at as unscientific, but it is the one thing that fills up the measure of our concrete actuality, and any would-be existent that should lack such a feeling, or its analogue, would be a piece of reality only half made up.2

What you have before you, then, is a work in two parts: First, from my experience, bits of memories which include windows. And second, another look at these same windows in the ways I have learned to look at buildings since coming to architecture school.

To try to take one part of the world and separate it from the rest is sticky; as I pull it away, threads of connections cling. The exercise I have undertaken here tends to reveal that experience is seamless, and that the categories we make up for things are arbitrary and limited. Rather than try to cut these threads of connection, and to isolate the essence of window, I am going to follow along them, to look at how these windows are connected to the rest of experience. My subject is windows, but my object is to enrich the experience of looking at windows.

2W. James, The Varieties of Religious Experience, New York: 1958, p.377
I remember the room my crib was in. I don't remember colors, textures or details; the windows were the areas of light, the door was where my parents came from.
I can remember being in the back yard and the babysitter calling down to me from the window. She seemed so far away.
I wanted to lean out the window and call my mother the same way, but the window fell down on my hands. I couldn't lift it myself and had to call for help.
We had a party in the garage. One of the girls went outside to put on her lipstick. After she was done, she waved at me. The window was a mirror and a window at the same time.
A mirror is a window onto a world where everything's backwards and nothing is real. But how can you tell what's back in that corner you can't see?
My kindergarten had a big bay window with bookshelves. I loved sitting in the sun and looking at books.
Mr. Sheffer always came outside in the afternoon to crank down his awning.
The ticket lady had holes in her window to talk through and to pass through. She didn't have to wear a coat.
My mother said Jack Frost had painted the ice on the inside of the windows.
In the house we moved to when I was five, the headlights shone into my room and moved around the wall. I was scared every time it happened.
One night the shade flapping in the wind woke me up; I was scared at first because I didn't know what was happening.
I can still remember a nightmare I had back then of a window in the ground, red gingham curtains and flames blowing out of it.
In the living room was a big picture window which looked down on a brook, with little windows next to it which opened with a crank. Before the trees got big, we had a bamboo screen outside to keep the sun out in the summer.
When we sat in the living room at night, my mother would always pull the curtains first.
In my third grade classroom, the windows leaked cold air; we put rope caulk around them and didn't open them again until spring.
In the school I changed to in fourth grade, the windows were so tall that they had special sticks for pulling down the tops and they had glass fins at the bottom to keep the wind from blowing papers off the desks.
In the bathroom there was regular glass on the sink side and frosted glass on the toilet side.
There was a lounge next to the study hall which had once been a porch. We weren't supposed to climb through the windows, but sometimes we did anyway.
I moved downstairs to the guest room when I was nine. It was further away from the kitchen and the road, and it felt more private and secure. It was dark, because the windows were half-buried, but there was a forsythia that was beautiful when it blossomed.
The bathroom downstairs faced the back yard and the window was high up; I didn't have to worry about anyone seeing me when I took a shower, and I could look up at the branches of the trees.
It was exciting to run around closing windows when it started to rain suddenly.
A lot of the houses in my Grandmother's town in Connecticut put one candle in every window at Christmas time.
My Grandmother's door had little windows next to it; if you pulled aside the curtain, you could see who was in the driveway.
She had a bow window that looked out on her garden; her card table was in front of it, and on the window sill she kept a box filled with all kinds of cards.
In her breakfast room she had vines of *philodendron* growing all the way around. It was more like outside than any other room in her house.
The dining room of my aunt's house at the shore had only screens in the windows. I could hear the ocean and feel the wind as I sat at the table.
In the attic of that house was a place by the window where my uncle used to sit and write. He had died before I was born. Even though I only saw this place once, I remember it well.
When I was ten we spent a year in Austria. Every morning they opened the bedroom windows and put the bedding out to air.
All the first floor windows had wrought-iron grilles. There were different patterns in each house. My aunt's house had wooden curtain rings.
When we moved to an apartment in Vienna, we kept the food on the windowsill until we got a refrigerator.
The school we went to in Vienna had a huge skylight in the middle. You could see everything that was going on. The floor had glass block in it so there was even natural light in the basement.
On December 6, we put our shoes on the windowsill and St. Nicholas filled them with fruit and nuts while we were asleep.
One night my brother saw a face in the window. My father said it wasn't possible because we were on the second floor. My mother said it was a nightmare.
The house we went to see in Pompeii didn't have any windows.
When we got back home, the church had moved into its own new building. It was designed by an architect and had lots of glass. The Sunday School room was big and noisy and got very hot when the sun was out.
The new church had two windows at the pulpit end; you could see trees through the low one and only sky through the high one; I remember thinking that the blue wall which separated them represented the firmament dividing the waters above from the waters below.
My grandmother let me have this desk that had been in my mother's room. Having my books behind glass doors which locked with a key made them precious and important.
This is a picture of a fantasy of a perfectly wonderful place I had when I was about twelve.
We lived in a town house on Beacon Hill for a year when I was 18. From the third floor window I could see into several of the walled yards across the street. The bed and the windowsill were at the same height. I could spend a lot of time watching the neighbor children play.
Downstairs there were sliding glass doors looking out on our own little yard.
Almost every house had window boxes. There was a prize given at the end of the summer for the best one.
It's always hard to resist looking into a window at night when the curtains are open and the lights are on, especially if it's right at eye level.
This was one of my favorite buildings in Boston. Light reflected from the water could shine up through the little side windows, and flicker on the walls. There was a gold altar screen lit by a skylight. I would come here just to sit and be quiet.
My dorm room freshman year in college came with a bed, a desk, a bureau and one wretched window that was too high and too small. The first thing I bought was curtains.
I liked my second room better. I could see out the window when I sat at my desk, so it didn't matter that the room was small. I could climb through it onto the roof of the porch. I had red curtains which made the room all glow in the morning.
The Botany Department had an exotic looking greenhouse with a jungle inside. Sometimes I would go in just to smell things.
On the first spring days everyone in Wright Hall would study on their window seats. Nobody got much done.
I saw this window in Stiles College at Yale. I remember it because it was so unusual. A regular window would have looked out on a busy, noisy street. This one only let in the light.
This was one of my favorite places to study in college. The desk was like a big windowsill; the glass ran right into the brick without a frame.
When I was in college this image often entered my mind as I studied.
I went to Europe for a summer in college. In Italy we stayed in a 16th Century villa. The window in our room had a stone seat built into it. It got so hot at noon that we would close up the shutters and take a siesta.
In the streets in Italy, the windows were all alike; but the shutters could be adjusted in all kinds of ways so they never really looked the same.
There are windows all the way around the dome of the Hagia Sophia in Istanbul. It's so high, the sunbeams seem to go through miles of space.
I don't know how long I just sat and looked at the colored windows in Notre Dame.
My first apartment in Cambridge was in a basement like my room at home. But people were always walking right by the windows; I didn't like hearing them, and I always kept the curtains drawn.
I was lucky to get a desk by a window at work. It only looked out over the bus station, but it was better than nothing. I could find my window from the street by counting up nine and over seven.
I put my hair up and wore high heels to work. I always looked for myself in the window of the movie theatre as I walked by.
The day of my Grandmother's funeral my cousin and I went up to her attic to watch the sunset. It was the shortest day of the year.
I spent a lot of time looking through this window: a camera viewfinder. I could transform the world by putting a frame around it.
I had an apartment once with a glass storm door outside the door onto the fire escape. On winter afternoons I could open the inside door and warm the place up with the sun.
I've lived in a number of leaky old buildings. Taping sheets of plastic over the windows in the winter helps keep the place warm, but it's depressing not being able to see out.
I remember a building on my street which had reflective glass in the windows. I couldn't see in during the day. I hardly ever saw anyone go in or out. It was kind of spooky.
The Cranes had a wonderful house in Wood's Hole; there was a tower with windows all around it; we could see all the way to the Vineyard.
The Le Barons built their own house; I could see from inside how the roof beams fit together to make a place for clerestory windows.
When Nancy and Steve were away on their honeymoon, Marian put a stained glass window she had made into the window next to their front door.
I spent some time in Greece when I was 25. The windows in the houses were little and deep. In our house there were four rooms and two windows; we opened the door to have light to cook by, and we didn't use the room with no window. At Easter time everyone painted their houses, inside and out, with whitewash. It made them much brighter inside.
The shutters and windows could be opened and closed in several combinations.
When I came home I dreamt that my room had become a brightly lit drugstore; it was my room when I was outside, but inside it was a store with a counter.
In Buddhist literature there is a metaphor to describe this whole process, the creation and development of the ego. It speaks of a monkey locked in an empty house, a house with five windows representing the five senses.

Everything we know of the outside world passes through our sensory apparatus, each sense offering us a different type of information. "All through evolution, species have moved away from proximity-senses to distance senses. Touch, depending on actual contact is the earliest sense of all. Next in appearance are taste, smell, hearing and sight."¹

All our sensory perception has certain characteristics in common. Within the range of physical stimuli to which we are sensitive, a just noticeable difference bears a constant relationship to the existing stimulus. Thus, the difference between one and two footcandles of light will look the same as the difference between one hundred and two hundred footcandles.⁵

⁵ C. Trungpa, Cutting Through Spiritual Materialism, Berkeley: 1973, p. 128

¹ W. Labarre, The Human Animal, Chicago: 1954, p. 37
It takes ever-increasing amounts of stimulus to make equally perceptible differences. This graph shows this relationship, with stimulus on the horizontal, and what we perceive as equal intervals of sound, heat, light or weight on the vertical axis.6

Another characteristic all our senses have in common is that our sense of well-being and comfort is not directly related to the amount of the stimulus.7

More sound, heat, light are pleasing and comfortable up to a point, after which more makes us feel worse.

6Hopkinson, op. cit., p. 5
Our skin is our largest sense organ, and with it we can feel pain, pressure and contact, and heat and cold.

Our sense of pain requires an immediate, survival-oriented response.

The pressure-sensing aspect enables us to perceive the weight of objects, and to monitor and regulate our muscle movements.

Moving our bodies is something we learn to do with practice over time.
We can feel heat and cold not only through direct contact with our skin, but also through radiation to or from objects at a distance.

The cold I felt at the crack in the window was from direct contact with cold air leaking in from outside.

The cold I felt on my finger was from direct contact with the glass, but the chill I felt on my face was from my radiating to it.
The warmth I felt on my back was from the sun radiating through millions of miles of space.

We use our skin to regulate the internal temperature of our bodies. We produce heat in the process of metabolism and expel the excess through our skin through contact with cooler air and radiation to cooler objects. When the air gets as warm as our skin, we can't expel heat directly; we sweat, and we need moving air to evaporate the moisture, carrying with it the latent heat of vaporization.

My aunt's porch was comfortable on hot days, because we could avoid the radiation of the sun, and had a cooling cross-draft.
Taste also requires direct contact, but is specialized in the much smaller area of our tongue. Although it is a sense we as adults use primarily to enjoy food, drink and smoke, as children we get much more extensive use from it.

I can remember tasting the paint that chipped from the windows, and being told not to put dirty things in my mouth.

The frost tasted a little sooty.

Occasionally we can pick up a taste from air-borne vapor:

The taste of the salt in the air is part of my memory of my aunt's house at the shore.

The taste of sulphur in the polluted air is part of my memory of the downtown office I worked in.
The stimuli we smell are also carried by air-borne vapor. It is easier to smell things in a humid environment.

I remember the smell of moist soil both from my grandmother's porch, where she grew plants, and the greenhouse at college.

The smell of spring in the air which came in through the windows of Wright Hall was borne on air which was warmer and moister the the outside air had been for months.
We can hear through more distance than we can smell because the stimulus is wave motion of the air rather than a material substance in it. We can hear directionally, because the distance between our two ears allows us to tell which one hears the sound first.

An open window is an excellent sound transmitter, because wave motion continues uninterrupted through the opening.

Sound can travel through a closed window, if the source is loud enough or close enough.

Glass, like any hard substance, reflects sound energy. Large areas of glass made the room at the church school more resonant.
La Barre calls the sense of sight the "queen of the senses."

Only the later primates, among all the mammals, have the yellow spot in the eyes. This is a patch on the retina of the eye which the animal can turn on an object for especially clear vision -- at the same time keeping a lesser but serviceable grasp of the larger field of context. Huxley believes this yellow spot is the sensory basis of human attention and mind concentration. We might also speculate further that it underlies man's symbolic selectivity, discrimination and sense of parts and wholes and contexts as well.... Increased primate discrimination in sight is again evident in color vision. Comparative studies so far indicate that among mammals only the primates, and perhaps only the anthropoids, have developed color vision, which discriminates minutely among the wave-frequencies of light. 8

In addition to this special sensitivity, the overlapping of our two eyes' fields of vision allows us to focus on and judge the distance of objects. We rely heavily on our sense of sight for our understanding of the world, as such phrases as "I see" and "he's in the dark" indicate.

The unseen can be mysterious and scary; the corner of the room in the mirror which I couldn't see could have had anything in it. The unseen cars whose headlights crossed my walls scared me.

8 La Barre, op.cit., p. 38
As well as being acute, our vision is adaptable to lighting levels as different as moonlight and bright sunlight. However, we have difficulty with large and abrupt differences in lighting levels. Our attention is drawn to bright and luminous objects, and a bright light or area in an otherwise dimly lit place may cause the distraction or nuisance we call glare.

At very low light levels, our perception of white objects remains relatively clear, but colors lose their vividness and the differences between shades of gray become more difficult to distinguish. This lack of apparent contrast we call gloom, and there are situations with high lighting levels, such as overcast days, when lack of contrast, rather than inadequate light, may also give a sense of gloom.

We are able to see objects by virtue of the light which they reflect: dark objects reflect less light than light objects do. But even though a dark object in bright light may reflect more light than a light object in dim light, we rarely confuse them; for the senses are only one part of perception. Vision is not a mechanical process like the function of a light meter; it is a process of the mind in which information from our sense organs is selectively used to construct an interior model of the world.

So having taken a brief look at the windows of our senses, perhaps we had better look for a moment at the monkey, our mind.
The senses are only the first filter through which information about our environment passes; a much more essential organ of sense perception is our mind. How we interpret the sense data we receive -- what we call it and how we explain it -- depends in large part on what we have been taught: our culture. Culture has been called "an attempt to control the whole spatio-temporal phenomenon by symbolic means." Language gives us names for things, science and religion give us explanations for things, architecture organizes space, and calendars and customs order our time, all with the aim of controlling and making the world understandable to us. This outer phenomenon of culture and the inner phenomenon of mind are intricately interconnected. To separate thought from language, or our inner conception of space from the architecture we grew up with, is an impossibility. Each of us takes the tools given us by our culture and uses them to make explanations, to build up, through time and experience, her own inner model of the world.

The human drive responsible for the creation of the symbol-systems of cultures lives on within each of us. Each of us needs to symbolize, make explanations, name things, to create space and time special and different from other space and time. This need to explain, organize and control the cosmos is not a rational need; Einstein is quoted as saying:

9 J. Rykwert, On Adam's House in Paradise, New York: 1972, p. 21
Man tries to make for himself in the fashion that suits him best, a simplified and intelligible picture of the world. He then tries to some extent to substitute this cosmos of his for the world of experience and thus to overcome it... He makes this cosmos the pivot of his emotional life in order to find in this way the peace and serenity which he cannot find in the narrow whirlpool of personal experience. (Emphasis mine.)

We name and explain things out of an emotional need. Most of us have had the experience of waking up, and, for an instant, not knowing where, or even who, we are. For most of us that moment of timeless spacelessness is terrifying, and our minds quickly scurry to our memories to find our place.

When I woke up with the shade flapping in the wind, most of my fear came from not yet having understood what was happening. Once I woke up enough to see that the noise came from the shade, I was much less scared. None of the sensory input had changed; it simply had a new place in my mind.

We constantly give meanings to objects of our own creation, be they words, pictures, clothes or buildings. These meanings are not true or absolute. They are generated by our inner emotional need and our rational capacity to create explanations.

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When I was five, Jack Frost was a more satisfactory explanation for the frost on the windows than frozen condensation, because I had not yet built a scientific model of the world in my mind, and because I was emotionally dependent on my mother and needed to believe what she told me.

Each of our symbol-systems is limited in what it can communicate. The power of language lies in its ability to focus our conscious attention; architecture speaks to our dumb, animal senses. But the world of experience, a small part of which I looked at in the first part of this thesis, is much larger than any of our symbolic tools can control.

The symbol-system of language has dictionaries to regulate it and make it useful as communication. There is no dictionary of meanings we invest in built forms, and the meanings we invest in built places often go unnoticed. But we certainly feel differently about some places than we do about others. In order to understand better how this happens, I will need to focus my attention on parts, aspects, qualities which are memorable in the windows I have described. I am no longer looking at the specific contents of my own memory, but at the process of my mind remembering, a process which we all share.
We sense size and distance in relation to the size of our bodies, and much like our other sense perceptions, the increment producing a noticeable difference becomes larger as the distance itself increases.

Exact and elegant systems of the relationship of sizes — proportions such as Leonardo's Golden Section, Fibonacci's number series, and Le Corbusier's Modulor, are based on a belief that we are subliminally aware of such precise relationships.

Consciously, however, the sizes we are aware of are less exact. Nevertheless, we are aware of ranges of sizes, and they have an effect on our relationship to the built environment.
Most windows are about our size;

The ones which are memorable for their size are the ones which are much bigger or much smaller than we are.
Very often, parts of a smaller size add up to become something of a larger size:

My grandmother's bow window was made up of many little panes.

And in her breakfast room, three regular-sized windows added up to become the size of a wall.

The distance we have from something can alter our sense of its size.

I could fit almost anything inside the viewfinder of my camera.

I have no idea what size the windows of the Hagia Sophia were; I only know they were very far away.
Accordingly, as we get close to large windows, which don't have smaller sizes in them, the frame gets outside our view and tends to disappear; what we see through them or in them becomes more important.

Smaller windows, and windows with many small panes become something we look at as much as through.
Windows in facades usually give us a sense of the size of the building:

The absence of standard-sized windows in a facade may distort or disguise our sense of its size:
relationship to structure

We don't have a sense of structure. Structure is something we need to direct our attention towards, which we gain a sense for only after rehearsing and practice. Many of us are undisturbed by not knowing how something is built. But how a window relates to the structure of a building can affect the space around the window, and thus can become a memorable aspect of it.

Windows interrupt the continuity of a wall. Glass is a brittle and fragile material and needs to be supported and protected from excessive loads and deformations. The major gravity and wind loads a building is subject to must be channelled around the areas which contain glass.

If the structural system is a frame, then wall and window may be treated as equivalent panels of infill,

but when the wall is a bearing wall, an opening must be left as it's laid up, and its top spanned,
Special structures may be built especially for windows, bays and dormers being the most common.

The bay in my kindergarden room is the only window I remember from then; it was the combination of the extra light and the special place which made it memorable.

Smaller pieces of building attached to the bigger one may resemble a little house:

There is a kind of play common to nearly every child: it is to get under a piece of furniture or some extemporized shelter of his own and exclaim he is in a "house" ....at a later stage...he constructs or uses doll's houses and insists on a strict analogy between his own practices and those of adult life.But whether the child is playing under the table or handling a doll's house, his imagination is working in the same way. He is placing either himself of the doll (a projection of himself) in a sheltered setting....The ceremonial idea is important -- the idea of neatness and serenity within, contrasting with wildness and confusion without.10

10 J. Summerson, Heavenly Mansions, New York:1948, p. 1
Dormers are little houses built on roofs to shelter a window. The window in my grandmother's attic and my uncle's place by the window felt special because they had their own structures.

The little house idea describes some of the quality of my fantasy window seat, which had its own little roof and floor, separate from the big house.

The ticket lady's booth was a little house.

Grandmother's bow window defined a smaller piece of space within its structure. Though I couldn't put my body in the space, having something in there I could touch made it accessible to me.
In masonry building, the spanning of the top of the opening, a structural necessity, may be treated with special materials or forms which draw our attention to it.

Or the structure itself may be altered in order to accommodate a window.

The very thickness of a masonry wall can be exploited to make a people-sized space.
When the structure which supports the panes of glass is particularly rich or complex, the impression remains of its forming a screen.

In the greenhouse at college, the structure of the building and the frame for the windowpanes was the same.
In more recent buildings, it is common for the windows to be made of huge pieces of glass without subdivision. Without a secondary structural screen, the opening appears to be empty.
relationship to ground

One of the major changes our buildings make in space is to give us horizontal surfaces other than the ground for us to walk on. It is often through windows that we become aware of the difference between the level we are standing on and the level of the ground. The window's relationship both to the actual ground and to the ground we are standing on affects our feeling about the space.

When the ground level is the same on both sides, the window can be at a height which permits view, and possibly communication. In display and ticket windows, this is intended.

In homes, it usually isn't
In this situation, the window may exercise the option of becoming a door, either literally, as in the sliding glass doors on Beacon Hill,

or extemporaneously, as in the porch windows in my old school.

Placing the window above eye and body level prevents view and movement through it.
When the inside ground is below outside ground, my feeling about the window depended very much on what there was outside.

In my bedroom at home, where the outside ground was the back yard, which was itself protected by a fence, I felt protected and safe,

while in my basement apartment in Cambridge, where the outside ground was a public street, I felt vulnerable.
Being above the ground with a view down is one of the nicest feelings. Being within earshot and waving distance of other people on the ground enriches the experience. The window in Wright Hall was like this.

When the difference in level is too great, the option of associating with people on the ground is lost. The window in my downtown office was too high, and I felt disconnected from the ground.
The ground is not only the surface we walk on, it is also what plants and trees grow in. Outside our buildings, sun, rain and earth combine to create an environment suitable for growing things, and delight in this process motivates some of us to bring it closer to inside.

On Beacon Hill, a little ground and growing things were kept just outside the window, where people leaning out could tend them.

Since sun can penetrate glass and wind can't, it is possible to use windows to protect small pieces of ground and create artificially favorable environments for them.

Grandmother's breakfast room, and the greenhouse at college were places where windows had this protective relationship to the ground.
Some of these windows are memorable because of a certain feeling of ambiguity between inside and outside in their vicinity. If we think of the strongest division between inside and outside being this:

where the wall, window and weather skin are all acting together in one plane, and vegetation and weather are relegated to the outside,

then by diagramming the same elements in the ambiguous windows, we can see that each of them in some way rearranges this pattern.

In the back yard of the house on Beacon Hill, the structure of brick walls had been extended to include the outdoor space, rather than stopping at the window plane. It felt more like an outdoor room than a real yard.

In my aunt's dining room at the shore, the weather skin had been pulled in from the structure, allowing wind and weather to penetrate the inside space. It was more like a porch than a room.
The movie theatre had a huge overhang over the sidewalk. This extension of structure and weather protection beyond the windows made the sidewalk feel like part of the lobby.

In the school where the porch had been closed in, windows intended to provide weather protection no longer did. The weather skin had been extended beyond them.

The same thing was happening with the double windows in Vienna; I could open a window without penetrating the weather skin. The in-between space, especially when we were keeping food in it, felt like the inside of a cabinet.

The atrium in Pompeii was enclosed structurally, but had no weather protection from above. Having a garden within the structure of the house further confused my image of what was inside and what outside.
The foliage inside my grandmother's breakfast room and the greenhouse at college looked and smelled like outdoors. Having the weather protection of indoors, with the look and smell of outdoor plants created the ambiguity.

Because we can see through them, windows play an important part in creating a link between indoors and outdoors. But they don't do it all by themselves.

Just because glass is transparent, it fools no one that it is porous, or open, or in fact anything more than a hard, latently dangerous and impenetrable physical barrier. Thus while it may be made to play a part in the creation of the link, it can only be a part among others. Porches or terraces or overhangs or spurs or disengaged columns must cloak it, if the fullest linkage is to be achieved."

"R.W. Kennedy, The House and the Art of its Design, p. 468"
The lighting windows offer us is daylight, a combination of direct and reflected sunlight which is variable both due to the sun's constant motion in the sky and to changes in the weather and ground cover. The calculation of the amount of daylight for a particular point in a room depends on the reflectances of the surfaces and furnishings in the room, the dimensions of the room, the distance of the point from the window, and the size of the window.

But what makes the light of a space special is not its quantity -- which can be adequate over a huge range because of the adaptibility of our vision -- but its quality -- its direction, distribution, and color.

Most windows are in walls or roofs. Depending on their shape and orientation, they and their room will see a particular portion of the sky. But the brightness of the sky is variable.

This diagram shows the luminance distribution of a cloudless sky. Even on an overcast day, the luminance overhead is three times that at the horizon.²

²Lynes, op. cit., p. 58
The windows in my basement room were looking at the sky close to the horizon. It was rarely bright, and usually dimly lit.

The Le Baron's clearstory was looking at a piece of the sky close to the zenith; though they weren't very big, they were very bright.

Much more light came in the small, high window than from the low, wide windows of the church.
J.A. Lynes has observed that "most people prefer the predominant direction of the lighting to be from a direction between 15° and 45° above the horizontal; lighting from directly overhead has been found least acceptable."\textsuperscript{11} Places I remember which were not lit by side windows have a very different feeling to them.

The light in the atrium of my school in Vienna seemed whiter and purer. There were fewer shadows.

The pool of light that floods down on the altar screen in the chapel feels different from ordinary light.

Part of the magic of the jungle in the greenhouse was the overall non-directional whiteness of the light inside.

\textsuperscript{11}\textit{Lynes, op.cit., p.49}
The distribution of the light coming from a side window depends on the shape of the room and the reflectivity of its surfaces:

In a low deep room, like my first dorm room in college, the light does not reach the back well.

In a high, shallow room, like my second dorm room, the light is distributed more evenly.

When the inside surfaces are light colors, their brightness acts as a secondary light source, aiding in the distribution of the light.

Even though the windows were tiny, the whitewashed insides of the Greek houses were bright.

All the light that came into the room from this window was reflected from the light-colored masonry of the wall.
A smaller space near the window tends to be brighter: the dormer in my grandmother's attic.

and the window seat in Italy were the brightest parts of their rooms.

Light alone can create the effect of enclosed space. A campfire on a dark night forms a cave of light circumscribed by walls of darkness. Those who are within the circle of light have the secure feeling of being together in the same room.\footnote{S.E. Rasmussen, \textit{Experiencing Architecture}, Cambridge:1959 p. 208}

Bay windows tend to have this same effect:

The space within the windows is brighter, and the rest of the room darker than they would be if the same opening were simply filled with a flat window.
A problem with glare may arise with windows in walls. The piece of sky visible through the window may be too bright for comfort if the general lighting level in the room, to which our eyes are adapted, is much lower. This is most likely to happen in rooms with small windows where the interior finish is dark.

When I turned away from looking through the window in the garage, I had to blink and wait until I got used to the darker interior.

The white, reflective walls, and the splayed reveals in the window in Italy helped distribute the light and avoid glare.
There are subtle differences in the color of light from different parts of the sky, at different times of day.

Daylight in northern rooms will have a blue undertone because all light here is, after all, solely and exclusively reflection from the sky. Blue and other cool colors show up poorly, as if seen under a lamp which shed a bluish light.*

But a more direct effect may be made on the color of daylight by the placing of a colored filter in the window:

One of my favorite memories of my second room in college was the red glow the room had when the curtains were still drawn in the morning.

Placing stained glass in the window permanently alters the color of the light inside. That was much of the fascination the gothic rose window had for me.

13Rasmussen, op.cit., p. 223
The transparency of glass not only allows light to enter our buildings, but also necessarily permits us to see through it. Whether a window is memorable for its view depends both on what we see through it and where we are when we see it. For we speak of having a good view whenever we can see a large amount of territory, and use the phrase "point of view" metaphorically when speaking about how we understand things. Thus, view has to do both with what we see and where we stand.

Glass is about 90% transparent to visible light, depending on the angle of incidence, with most of the remainder being reflected. (The smallest part is absorbed to become heat.) If the light level is very different on different side of a window, the small percent of light reflected from the bright side will approach the amount coming from the dark side, and the reflection will become visible.

That is what was happening when the neighbor went out to the bright side to put on her lipstick,

and when I walked by the dark windows of the movie theatre during the day.
The inside is the bright side at night; my brother may have been seeing his reflection in the window.

Some windows are arranged to invite our view into them, so they try to keep the reflections on the glass from becoming brighter than what they are displaying.

This is one of the uses of awnings.

Bright lights inside attract our attention.

In my dream of my room becoming a drugstore, the bright lights inside made me want to go in.

Bright lights inside made me want to look in even when I wasn't meant to.
When we want to prevent people looking into our windows, we have several options.

We can temporarily block the view in both directions, as with curtains or shades.

We can exploit a particularly narrow viewing angle.

Sometimes the reflectivity of glass is increased, to provide one-way vision from the dark side to the bright side only.
The use of diffusing, opaque glass blocks the view in both directions permanently, while letting through most of the light.

I enjoyed the contrast of the clear glass on one side and the white glass on the other side in the bathroom at school,

but when all the windows in the house had to be covered with plastic to keep warm, being indoors felt depressing and isolated.
There are some places where the view is spectacular: where we can see great distances, or where the view of the natural world and its changes is fascinating. Views from high places often give the feeling of exhilaration and power of standing on a mountaintop.

The tower at the Crane's house was like that: it was the highest point, and we could see all around.

Places with a less expansive scope, but still high up, high perches, have both the protection of shelter and the power of view.

The places up in my grandmother's and my aunt's attics felt like this.

Windows can put a frame around a view and make it into a picture.

When I framed something with the viewfinder of my camera, I had a proprietary feeling about it; I took possession of it.
There are windows whose view of the natural world are very much a part of my memory of them:

The panorama of trees at the end of the church,

the closer look into the treetops from the library window,

and the startlingly close view of the forsythia in bloom,

are all included in my image of the places from which I saw them. In that sense, the views belong to these places.
This sense of ownership is increased when the window looks out on its own property:

My grandmother's bow window,

my parents' picture window,

and their basement window on Beacon Hill,
have the same proprietary feeling to them that looking through the desk windows at my own books has.

Another part of the pleasure in these views is sharing them with someone else. Having a comfortable place to sit and look out the window with someone else can promote the kind of easy contact characterized by side-by-side rather than face-to-face conversation. The comfortable place can be a sofa, table and chairs, or window seat, or even something as simple as a windowsill the right height to lean on.

Sharing the view with my cousin while we leaned together on the windowsill was an important part of my memory of that place.
Views which include not only the natural world but also its human inhabitants gain another dimension. They are colored by the relationship we have with the people we see.

Watching other people without them seeing me was part of the fun of the view from the upstairs window on Beacon Hill.

Having the option of calling out and talking to people I knew made sitting in the window in Wright Hall more interesting.

Watching me from the window was a necessity for my babysitter.
Places intentionally without view have a very different feeling to them.

The houses in Pompeii and the school in Vienna had no view out. They enclosed large spaces, however, and the school had its activity and the houses their courtyards which added to the richness of the inside place. They were like little, self-enclosed worlds of their own.

The chapel and my fantasy of a devoted scholar have windows which admit light, but don't allow view. Their spaces are small and singular. They have the feeling of a cell intended to promote inward-focused, isolated contemplation.
Sunlight is the source of both light and heat radiation. We can see sunlight with our eyes and feel it with our skin. Too much of us makes us hot, too little of it makes places gloomy. The sun's rising and setting makes our days and nights, and its changing altitude in the sky makes our seasons. It is not only the source of light and heat, but also our basis for measuring time. Sunrise, sunset and noon are not only times of day, but also events in space which have directions. The points of the compass and our sense of orientation are dependent on the location of the sun's daily and seasonal events.

Only a few of the buildings which I remember here appear to have derived their direction from the sun. The shape of the land, the direction of the road, and the customary way of building appear to have much more to do with the direction of their form. Even so, the sun's constant changes and unerring repetition makes certain windows special because of their relationship with the sun -- the way they change according to the time of day and the season.
Sun pouring through the windows can be a pleasure, as it was in the kindergarten room and grandmother's breakfast room,

or a menace, as it was to Mr. Shaeffer's store, our living room on hot afternoons, and the church school room.
The sun shining through the door in my apartment not only helped heat the place, it also showed me the passing of time by its motion.

In the chapel and in the Hagia Sophia, the sun's motion and direction are the only outside events I could perceive from inside.
The sunset I watched with my cousin was no mere sunset, but sunset on the shortest day of the year two days after our grandmother had died. The feeling of change which goes with this memory came from the changing of the light in the day, the changing of the seasons, and the feeling of change which death brings.
How our windows provide us with a feeling of security depends on what it is we consider a threat. They can offer us a number of physical barriers to invasion by insects and small animals.

by excessive sunshine.

by cold and wind.

Shutters block both view and sun.

by rain and snow.

Highly reflective glass allows only one-way view.

by unwanted lights, and people outside looking in.

The grilles in Austria kept robbers out.
A feeling of security can also come from knowing that we are able to get out.

In my second room at college, we were aware of the danger of fire, because it was an old wood building. Knowing I could climb out my window onto the porch roof was reassuring.

I could climb out of the basement window at home, too. Though I rarely did it, I liked knowing it was possible; it made me feel more independent.

Having other people watching from their windows can make an outside area secure.

The attention of people from their windows on the streets in Italy made the street into everyone's concern. I never felt unsafe on such streets.

I was allowed to play in the yard by myself when I was little, as long as someone could see me from the window.
The strategic position of being able to see without being seen is a secure one.

In my fantasy window seat, I was hidden from the room by the curtain, and able to see out.

My Beacon Hill window was high up enough that I could be sure none of the people I was watching would look up and see me.

I knew the people inside the building with reflective glass could see me, and that I couldn't see them looking at me. The uncertainty this gave me was part of the spooky feeling I had about that building.
We often have a feeling of security when we are enclosed within thick, high walls,

and the thickness of such walls shows at the windows:

And, when the window is high above the ground, we need to be reassured that we won't fall out.

"Building forms without precedent require a conscious effort on our part to adjust our sensibilities to them. Such adjustment may be difficult for it can defy all previous concepts of structure on which our sense of well-being and security depend. For example, people are often reluctant to approach the floor-to-ceiling windows in skyscrapers, yet the same person would not fear to look down between the crenellations of a castle."\(^4\)

Windows are the part of buildings which we operate. By opening and closing windows, curtains and shutters, we can have an effect on the internal temperature of our buildings, and by adjusting our inside activities, furnishings or position we can use the window's capacity for view and communication. Windows which allow us to touch or change them, and which allow us to use them by virtue of their sizes also thereby allow us to love them; for the process of caring for, tending, and using our buildings, and having them change in response to what we do creates a bond for which I know no better word than love. 

We don't feel the same way about windows which don't let us touch them, and we can feel angry at and frustrated by windows which, in spite of our efforts to operate them, don't work.

We operate our windows in response to the daily and seasonal changes of the natural world, according to our own inside habits and customs. The repetition over time of such tending activities can take on a meaning comparable to the ritual repetition of holiday observances, which are themselves linked to times of year.

How and how much we can open a window affects the way we feel about it:

I was scared of opening windows by myself for quite a while after this happened. Frank Lloyd Wright called double-hung windows "guillotine windows."

The tall windows at school which opened with a stick required some skill to operate; I remember the suspenseful silence with which the whole class would watch one of us try to get the hook in the hole on the frame without hitting the glass. What was wonderful about them was that they worked; every time we opened both top and bottom, we'd have air movement in the room.

I loved cranking the crank to open the casements in the living room; I would have done it for hours if I hadn't been told to cut it out. The only problem was that they never felt completely open, because they had screens inside. The way to open the casements in Wright Hall felt more direct; they were hinged the way my arm was. And when they were open, they were open all the way.
When what we do to operate a window doesn't have the intended effect, the result is often a feeling of frustration, which aggravates the physical discomfort which we were trying to relieve.

The church school room still got hot, even after we closed all the surtains. There weren't enough windows we could open. I remember feeling that it was stupid to even bother.

In my first dorm room, I couldn't get the air to move on hot days unless I opened the door to the hall. Then a blast of wind would rush through and blow all the papers off my desk. I hated that room.

There are times when the uses to which a window may be put come into conflict:

On hot summer nights, it was still light when I went to bed, so the shade had to be down. To keep cool, however, the window had to be open. When the wind changed in the middle of the night, it flapped the shade and woke me up.

I wanted to be next to the window at work so I could have a view and get some fresh air. Unfortunately, there was nothing out there that was nice to look at, and I had to listen to traffic noise if I opened the windows.
Even if we can't open and close a window, we can use it if it has elements of the right size:

A window sill with the right height can be extended by putting furniture next to it:

Grandmother's card table was a virtual extension of the window sill. This window didn't open and close, but it still let us use it.

I put my bed right next to the window sill in my room on Beacon Hill, extending its use.
The daily and seasonal changes which windows go through are linked to feelings in our own lives.

My mother always closed the living room curtains in the evening. By covering the cold, hard surface of the glass, they made the room feel warmer and sound softer. This was the beginning of an oft-repeated family custom of sitting together in the living room before dinner.

Mr. Sheaffer put down his awning every afternoon when the sun started to shine in. He seemed to like getting out the crank and going outside for a little while.

Going all around the house to close all the windows was a special thing we did only when it rained. It was exciting, because we had to do it fast, and it made me feel grown up to do something that had to be done.
Learning how to tend the shutters in the house in Greece was one of many new things we had to learn to get along there. When we realized we had to close the shutters in the middle of the day to keep cool, then it also made perfect sense to take a nap, too.

When I figured out that I could save fuel by opening up the door in the afternoon, I enjoyed not only the warmth, but was proud of myself for having figured it out.

Whenever I put rope caulk on windows in the fall, I feel a little twinge of sadness that it's going to be months before we open the windows again.
We possess a variety of symbol-systems for communication. The most specific is language, but gesture, dress and other forms of display communicate, though their meanings may not be unambiguous or easy to put into words. An older definition of "to communicate" is "to share, to have a common channel of passage,"\textsuperscript{16} rather than "to express oneself"\textsuperscript{17} The older definition touches on the shared aspect of communication, which it is important to keep in mind; for when we express our own unique point of view with a particular gesture, statement, or symbol, we are often unaware that we are simultaneously expressing our belonging to the group or culture whose language, gestures and symbols we share. Thinking of communication in these terms, it is possible to see several modes of communication operating in my windows.

The window the babysitter opened to call through was a channel for spoken verbal communication.


\textsuperscript{17} \textit{W. Morris, ed., The American Heritage Dictionary of the English Language, Boston: 1976, p. 269}
Through the windows of the movie theatre ticket booth passed not only spoken words, but money, another shared symbol system.

The talking and waving and discussions of the weather that happened in the courtyard of Wright Hall were a more generalized mode of signalling than the words that were spoken would indicate.

Gesture and dress are totally non-verbal manners of communication; I was checking out my visual image in the movie theatre window, to try and see what others would see, and try to discern what my body and dress were saying.
Speech, gesture, and dress are modes of communication which require the presence of both parties in the same space at the same time. Leaving something behind us as a signal extends the range of our influence through space and time.

When I saw the pillows out on my aunt's windowsills, I knew Hilda was upstairs cleaning. They were only out in the morning.

The window boxes on Beacon Hill stayed out all summer. They displayed in a more permanent way that the people inside cared about their houses.

The candles in the windows in Connecticut were there only for Christmas. On one street there was a candle in every single window of every single house. That was a powerful display of respect for the custom.

I put red curtains in my dorm window at school partly because I knew that they would look special when I was inside with the light on; people would notice, and my friends would know I was home.
In order to communicate meaning through time, the window itself may be given a special form and color. This more enduring form of display often partakes of some shared symbolic form or imagery characteristic of the people who make it.

From materials worked by human hands under the guidance of connected ideas developed in temporal sequence...a shape in time emerges. A visible portrait of the collective identity, whether tribe, class, or nation, comes into being. This self-image reflected in things is a guide and a point of reference to the group for the future and it eventually becomes a portrait given to posterity. 18

A lot of the doorways in my grandmother's town had decorative transoms and sidelights. They were a way of displaying respect for tradition, good taste and wealth.

The color of the glass and the intricacy of the tracery of the windows in Notre Dame fascinated me; I had difficulty deciphering the stories and figures they represented.

The complete understanding of such imagery is the property of an in-group, and identifying that group is one of its purposes.

18 G. Kubler, The Shape of Time, New Haven:1962, p. 9
A story can become an important part of the meaning we feel in a place.

I had a very special feeling about the place in the attic where my uncle used to write. I probably wouldn't have even remembered it if my father hadn't told me about him.

The window next to Steve and Nancy's front door took part of its specialness from its being a wedding present. Because I knew that, it had more meaning and became more memorable.

In some cases, the window I remember is only part of a larger story, with a character such as Jack Frost or St. Nicholas using it as a setting for their activities. The repetition of such stories and the activities associated with them is a ritualized way of transcending time. Mythic characters and customs continue beyond the span of generations, much as our language and architectural forms are passed on. Rituals are memorable because they employ a special place and time, and have special activities and stories associated with them. The windows in these cases are simply one of a number of mnemonic devices.

Some stories are playful fantasy; the story my mother told me about the other room on the other side of the mirror, and her drawing attention to the corner I
couldn't see was such a case.

The things my parents said to my brother when he saw the face in the window were stories told to soothe and reassure him when he was scared.

Our lives are filled with such fantasy and explanation, sometimes told to us by others, sometimes generated by our own minds, directed towards making us feel better about things we don't understand, or simply towards exploring, speculating and playing with the world inside our mind.

There are two cases where I made up my own stories about the meaning of the windows:

The windows in the church were certainly not intended to represent the waters above and the waters below; such imagery was generally avoided by rationalistic Unitarians. But I had heard the story in the context of church, and my reverie took its imagery from there. The assigning of the story to the form was a way of amusing myself when I wasn't listening to the sermon.

The building with reflective glass in the windows seemed unfriendly and mysterious to me. The fact that I didn't know anyone who worked in there or what they were doing was part of the story. The fact that I couldn't see them and they could see me added to it. Once when they had the lights on inside at night and I could see it, it bothered me; I didn't want to have to change my judgement about the place.
We are always telling ourselves stories and making explanations. The effort required to silence our minds and shut off this interior dialogue is beyond our capacity most of the time. Moments of reverie, when our minds are relaxed, allow the explanations and associations to become looser and less logical, and my mental images of fantasy places which I found pleasing and comforting were born in such moments. Even when we are asleep, our mind busies itself creating dreams for us. And though the exact imagery of our dreams and fantasies is personal and individual, the phenomenon of dreaming and of communicating with ourselves symbolically is universal. Dreams and fantasies take material from our waking lives and rearrange it in a way which is meaningful to us. Their meaning is not accessible through rational analysis, but demands a different kind of attention.

To look at the windows in my dreams and fantasies, in an attempt to understand their meaning, must take on a tone of "intuitive speculation" as opposed to "objective analysis," where analogy and association is used to enrich and inform our understanding.

19 C. Cooper, The House as Symbol of Self, Berkeley: 1971, p. 47
In my five-year old nightmare, the surface of the ground is a boundary between what is seen and what is unseen. There is something dangerous going on on the unseen side. I had been told that hell was under the ground and that it was filled with fire. Analogous to the boundary of seen and unseen is our skin. At that time, people had been telling me not to put things in my mouth, not to touch my vagina, not to yell and get angry. Analogous to an opening in the boundary, a window, are openings in our skin, mouth and vagina. The flames were inner feelings of anger and sexuality which were forbidden, and which I was becoming fearful of.

In my twelve-year-old fantasy window scene, I'm perched between inside and outside in my own safe, protected space. The analogy of being perched between childhood and adulthood comes to mind: the outside adult world being something I can see, but not go into, and the inside, childhood space something I have a choice about reentering. The window here is the barrier of time before I grow up.
In my college fantasy of the scholar, the strength and thickness of the walls is a strong barrier between the inside and outside, and the windows is where I can see the strength and thickness of the walls. At that time the feeling of protection provided to me by college was hard to distinguish from a feeling of confinement. The window is small and high -- impossible to climb through. So the window is analogous to my awareness of my confinement.

I was 26, living at home again, and trying to decide whether to go back to school when I had the dream about my room becoming a brightly lit drugstore. The boundary between inside and outside had become more penetrable, and invited me in. If the room is analogous to my inner self, then this dream invited me to introspection.

These interpretations are not meant to be the meanings of these images; they are simply an exploration into the mechanism of assigning meaning which is common to all of us. We can't look up window in a dream book and find its meaning, but must rely on the context in which it appears to tell us something about it.
Throughout this paper I have been concerned with windows which I care about, and with correlations between their qualities and what I felt. There are some which I like -- some which are good in some way. Are they good because I care about them, or do I care about them because they are good? Or are care and quality names for "internal and external aspects of the same thing?"^20

It appears that the attitude with which we approach a thing affects what we see.

It is quite impossible to set up absolute rules and criteria for evaluating architecture because every worthwhile building has its own standard. If we contemplate it in a carping spirit, with a know-it-all attitude, it will shut itself up and have nothing to say to us. But if we ourselves are open to impressions and sympathetically inclined, it will open up and reveal its true essence. ^21

And there appears to be a part of the processes both of perception and of creation for which we have neither words nor tools:

Even the most precise description, enumerating all visible characteristics, will not give an inkling of what we feel is the essence of the thing itself. ^22

The architect must break down the material he uses into a series of typical problems, small enough and encompassable enough to be examined

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^20 Pirssig, op. cit., p. 269
^21 Rasmussen, op. cit., p. 236
^22 Ibid., p. 82
rationally....The final creative act of design is the synthesis of solutions to all existing problems into a meaningful and efficient whole. This is largely an unconscious process...

We can describe and analyze the outer appearance of things, we can break a problem down into small and manageable pieces, but there is something else, called the "essence of the thing itself" by Rasmussen and "an unconscious process" by Kennedy. It is something which is associated with childhood:

All creative work is the offspring of the imagination, and has its source in what one is pleased to term infantile phantasy.24

or with dreams:

The good architect must be passionately concerned with dreams, with bringing them to the surface and with interpreting and using them once they are there.25

It is something which by definition we cannot describe, analyze, or talk about. It is the other side of experience which we refer to when we set up pairs of opposites such as outer/inner, objective/subjective, reality/imagination, scientific/poetic, conscious/unconscious, male/female.

The way I and many of us have been brought up has assigned value to the outer objective reality conscious scientific male side, and rejected, devalued, or simply ignored the inner subjective imagination poetic unconscious female side. In the thinking that preceded the writing of this

23Kennedy, op.cit., p. 137-8
24Summerson, op.cit., p. 1, quoting C.G.Jung
25Kennedy, op.cit.
paper I have become aware that value cannot be assigned to only one side, and that quality lies in the relationship between them. It is for this reason that I have chosen not to try to be objective and not to be completely subjective in my approach -- not to dwell either on the outside nor on the inside.

He saw that quality couldn't be independently related with either the subject or the object, but could be found only in the relationship of the two with each other. It is the point at which subject and object meet. Quality is not a thing, it is an event. It is the event at which the subject becomes aware of the object. And because without objects there can be no subjects -- because the objects create the subject's awareness of himself -- quality is the event at which awareness of both subjects and objects is made possible.\textsuperscript{26}

And perhaps there lies some of my fascination with windows. For they are the event, at the boundary between inside and outside, at which awareness of both is made possible.

\textsuperscript{26}Pirsig, \textit{op. cit.}, p. 233
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