

INTERIORS

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**“HAVE YOU HEARD OF HAPTIC?
IT’S THE KEY TO INTERIORS
THAT FEEL WARM AND COZY”**

HAVE YOU HEARD OF HAPTIC?

It's the key to interiors that feel warm and cozy.

by Kent Bloomer

There is probably no human sensibility that can be completely lost and later re-discovered by a culture. On the other hand, it now seems evident that a basic sensory orientation can be assigned so little significance that for many it becomes virtually unknown. The haptic sense, which we will describe in this article as an "expanded" sense of touch, seems until recently to have had very little significance in the design literature of this generation. Indeed, it has become common practice to characterize architectural design, when treated "esthetically" rather than technically, as a visual art rather than, for example, a haptic or a kinesthetic art. Obviously, properties of touch, body movement, sound and smell are considered carefully by serious designers, but it is also true that the visual properties of a design are generally regarded as representing the "esthetic" properties, while most other sensory considerations tend to be assigned to a more technical realm as physiological or design "factors."

Could it be that this over-emphasis on the visual in design has had the odd effect of depriving modern design of its full esthetic potential? Could it be that designers, in the understandable effort to recognize and dramatize the visual nature of their professions, have been guilty of promoting a brand of sensory overspecialization for art's sake? Even sculpture has become regarded today almost wholly as a visual art, when not so long ago it was regarded as an art of touch as well.

The word esthetics is derived from the Greek word *aesthetikos*, meaning "of sense perception." Esthetics was developed during the Enlightenment as a branch of philosophy concerned with the beautiful, the sensual, and the pleasurable. Esthetic thought traditionally dealt with the full range of sense, although there was always lively debate about which senses were superior and inferior for the perception of beauty.

Why then have so many come to accept the rather frozen and singular concept that the esthetic in architecture is limited to the sense of sight, and in particular, what has become of the sense of touch? It has been argued that sight has been so historically associated with philosophical or mental truth (i.e. vision, insight, illumination, revelation) that it was inevitable that it would be assigned the highest role in the judgement of beauty by critics and historians. But another explanation may be found by reviewing a dilemma, indeed a confusion, that occurred in the scientific investigation of the human senses in the period from roughly 1830 to 1930. (See James J. Gibson. *The Senses*

Considered as Perceptual Systems. Boston, Houghton Mifflin, 1966. pp. 97-98.) As a consequence of the descriptive methods of that period, a profound understanding of the sense of touch was temporarily lost, or at least scrambled in such a way that it might have become difficult to regard "touch" as a serious esthetic sensibility.

Briefly reviewed, the sense of touch was di-

PHOTO: ROBERT TOBEY



Professor Kent Bloomer

vided by 19th century investigators into the five other sensations of pressure, warmth, cold, pain and kinesthesia (body motion), and this division continues to be perpetuated in the popular parlance of today. Touching did not appear to have a precise instrument with which to sense (e.g. seeing has the eye, hearing the ear, smelling the nose, and tasting the tongue), and it became increasingly difficult to describe the nature of touch perception in a time of scientific history when it was customary to separate and identify the function of the myriad small parts of an organism such as the body. The detection of temperature change was distinguished from the detection of shapes sensed by the fingertips, and the sensing of joints chafing within the body was regarded as instrumentally distinct from the whole body chafing against a wall. Could the painful sensation of nausea be classified with the visceral sensation of pleasure? All of these sensations might result from the body activities of touching solids, liquids, or air, but they did not in their separate ways seem to point to a unified instrument of sense, or at least not until after 1930.

By then it was becoming apparent that perceptions of pressure, temperature, kinesthesia and some forms of pain and comfort were in fact served by a single instrument which is (crudely stated) a system of nerve fibers which is centrally unified by the spinal cord and brain and which specializes in detecting mechanical motion both inside and on the surface of the body. This component of the nervous system which occupies the skin, the joints, the muscles and other mobile parts of the body is the machinery of the haptic sense. By detecting the world of motion throughout the body, from tiny thermal and mechanical changes within the body to painful collisions with external objects outside the body, the haptic sense both perceives and imagines a world of hard and soft, bounded and centered, inside and out, secure and dangerous, and in the most fundamental sense, of life and death. It harbors, in fact, a vivid and emotionally charged sensibility which can be understood as a valuable esthetic property of design.

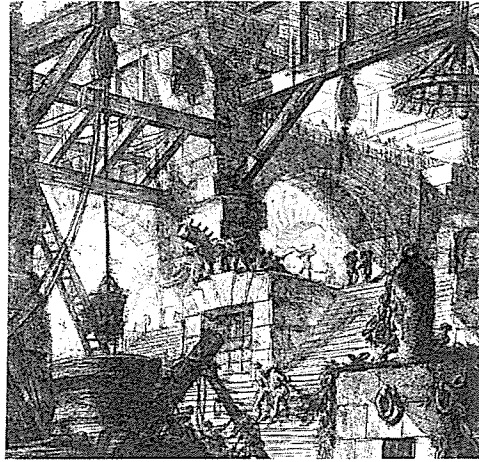
Certain spatial experiences and actions which belong to the haptic sense may be contrasted with the visual sense. First of all, body movements and reactions include sensing the interior of the human body, which is invisible to the eye. From these internal percepts we create an image of an organic as well as a naturally "spatial" model of an interior world which we distinguish from the external world. This world inside a world is not the province of visual perception which is oriented to looking away from the body.

Secondly, because the haptic sense involves the active participation of the entire body in the process of perceiving, haptic perceptions generate powerful feelings of being centered in the world. This orientation marshalls a sense of the body as a "real" place in the haptically perceived environment. The geography of the haptic world can therefore be distinguished from the geography associated with the visual world which, by contrast, fosters a dislocation and disorientation of the body and hence of one's sense of center-place. Themes of space travel, geometry, and fragmentary illusions typified by television and cinema, for example, illustrate the possibilities of visual independence from a corporeal center-place and of a sensory detachment from the body.

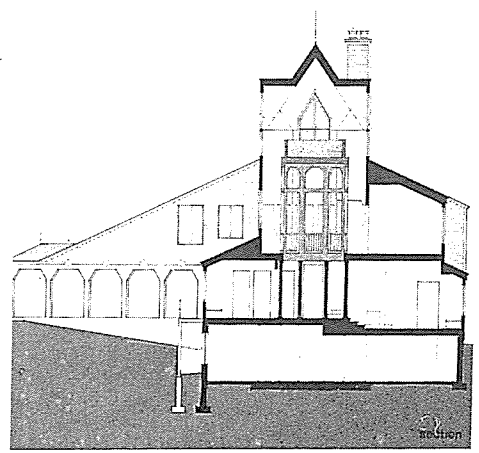
Thirdly, haptic sensing heightens an awareness of the dynamics of boundaries because it arises from the motion and conflict between bodies. Perhaps the most dramatic example of a haptic boundary is the sensitized zone that surrounds the entire body. When we feel something haptically we literally alter the source of



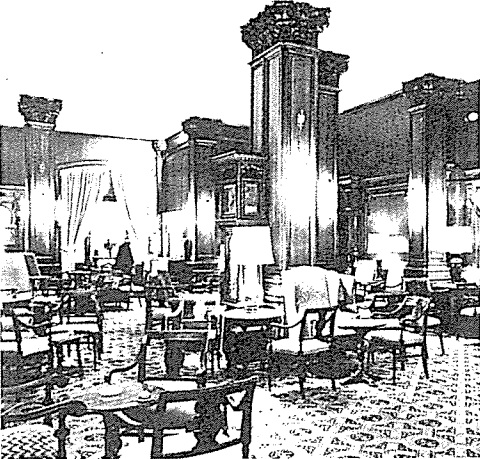
1. Santa Barbara faculty club



2. Piranesi's prison interior



3. Bradley house by Peter Rose



4. Algonquin hotel lobby

Only recently architectural thinking has been over-associated with the visual sense. Vision also means feeling and insight.



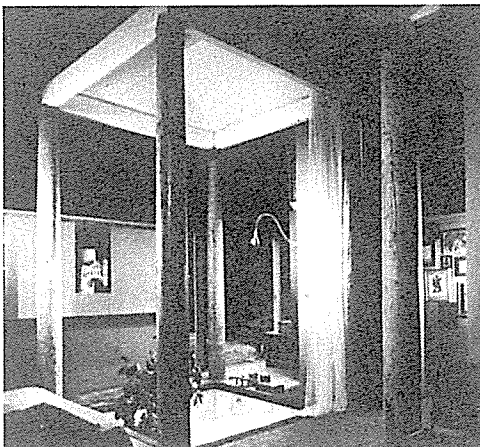
5. Huamantla street, Mexico



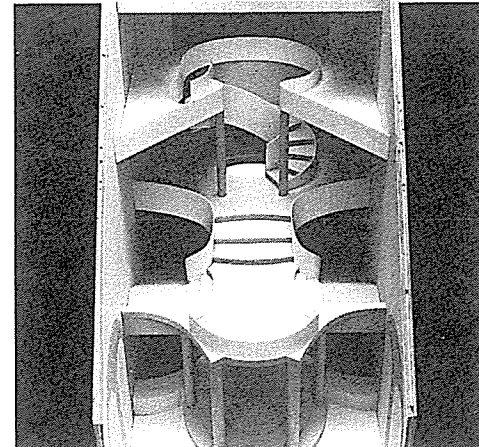
6. Berlin Philharmonic Hall



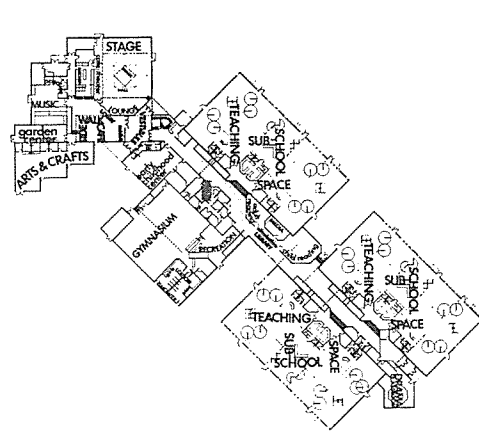
7. Rosary chapel, Puebla, Mexico.



8. Charles Moore's bathtub



9. Fetterolf staircase



10. Gananda interior hallway

this feeling, and conversely the source alters us, which is to say that haptic perceiving and doing are simultaneous events. That which we "touch," in effect, is also, and at the same time, "touching" us. Haptic perception stimulated by an esthetic object does not stand off and view, but rather engages and manipulates that object.

And finally, the haptic sense is literally the most human and emotional of sensibilities because its form and imagery derives from the universal human body rather than external abstractions such as mathematics or other symbolic languages. Our lives begin with dominantly haptic experiences, and these experiences constitute our innate understanding of space. It becomes difficult to believe that specialized visual languages, such as a system of visual signs and symbols constituted to direct and instruct body actions, could substantially replace the emotional cues, human imprints, and hierarchies of places perceived haptically by the body. And, in any case, why should we want to replace or suppress a native sensibility which, in concert with the visual and all of the other senses, has so immense an esthetic concern with the boundaries, internal landmarks, textures, motions and rhythms by which we locate ourselves in the physical world?

History abounds with examples of buildings and interiors which seem to spring from haptic perceptions. Any structure that connects directly with the body and is subject to body-reflex action not only extends the range of touch, but attaches the landmarks of the environment to the internal landmarks of the body. When we hold onto a cane, for example, the sensation of touching a hard surface moves out to the end of the cane, yet this "hardness" is also felt internally as the body resists. This expansion of touch is achieved in architecture by our being physically engaged with the total form of the building rather than being kept at a distance from its textures and form.

A bathtub in Charles Moore's house in Orinda (illustration 8) is set into the floor of the main room of the house and is bounded by an open aedicula of four columns. In a primitive and formal way, the haptic boundary is extended by immersing the body in water, attaching the tub to a miniature building, and connecting the miniature building to the framework of the larger house. The aedicula itself, with its elegant co-ordinates of front-back, left-right, top, center, bottom, is an archaic symbol of the deified person, a symbol which, in this case, is worn by the bather. This aedicula, in turn, wears the house as an outer garment; and each layer augments the last.

In the Bradley House in Quebec, by Peter Rose (illustration 3), the tower possesses the bodily co-ordinates of front-back, left-right, and up-down, while housing an interior tower within the house. It is possible to sit on top of, within, or underneath the interior tower and remain connected by that monumental object to the outer boundaries and vistas of the house. The lofty gables of the roof become a ceremonial mask for an extended upright body.

Handrails are naturally formed by touch, but the esthetic potential of an entire stairway (illustration 9) becomes haptic when all of its

properties are choreographed to the building, rather than limited to the needs of direct access. In a staircase designed for the Fetterolf residence in Somerset, two main runs ascend out of pools of water and converge on top of a pavilion. This landing has a seat which is located at the center of this tower of paths, from which a person may "take-hold" of the larger dimensions of the house and landscape. Sitting there is intended to be a tranquil attachment to the paths of ascent and descent.

There are no clear places for tranquility in the stairways of Hans Scharoun's Berlin Philharmonic Hall (illustration 6), nor are those stairs situated in the virtual center of the building. Instead, they are sandwiched between ceilings and floors, which give way to their tautness. Those upper and lower surfaces seem to be pulled towards a middle plane of congregation. Because of the programmatic necessity of isolating the stairhall from the auditorium and the outdoors, it becomes a transitional zone between two great exterior and interior spaces.

The word haptic comes from a Greek term meaning able to lay hold of describe it as an expanded sense of touch

The "space" of this zone is less important architecturally than the events that surround it. Thus, by pulling on the boundaries of the stairhall rather than standing alone as an object within a stairhall, the stairways serve to haptically extend the public feelings of arrival and departure.

The center hallway, stairs, and bridges of the Santa Barbara Faculty Club (illustration 1), by contrast, do not deform the floors and ceilings of their domain as much as dash in and out of the side walls, although with an unclear sense of exactly where they are going or coming from. Indeed, this is an example of the haptic collaborating with the visual to produce a place dizzying in form and orientation, but powerfully interior in feeling. Although the higher reaches of the space which are marked visually with neon and traditional chandeliers are practically inaccessible, they are accessible haptically. You not only look at the sky, you walk through its space.

In Piranesi's vision of a prison interior (illustration 2), every possible passageway and edge is populated and the occupants are alerted to the axes and domains of their world from which there is no exit. Bridges are blocked by piers, windows appear from an opaque underworld, and the outside is sealed off by an iron grille. There is no "freedom" here, nor infinite vistas, nor obvious places of settlement. Each

bodily action is countered by a massive wall or an outsized dimension of height; yet there is a feeling of tremendous excitement and certainty. It seems that Piranesi is describing a haptic world without illusion, a world which is material without deception.

In the streets of old Italian villages, built by hand and trafficked mainly by foot, the haptic boundaries accumulate over time. Raymond Gindroz studied some of those "popular" streets in Zagarola, Italy, and observed that the principal street serving the churches and the ducal villa (which was a latecomer to the village) adopted many of the cues and fundamental spatial forms of the surrounding tightly packed streets and miniature plazas. For his own sake, the Duke enlarged, extended, and architecturally monumentalized the key elements of his domain with public arcades and landmarks. This adaptation of the haptically "found" to the visually "designed" conserves formally the nature of the village streets in which artifacts accrued to develop the haptic textures and social boundaries. In 1974, Urban Design Associates transplanted the formal design elements of Zagarola's center to the interior of a new neighborhood center in Gananda, New York, this time to restore a communal sensibility rather than establish an aristocratic one. Thus, haptic street forms have found their way into the industrialized twentieth century and have influenced the design of an interior hallway (illustration 10). These haptic forms intentionally interfere with body movement and redirect the pedestrian to intimate and multiple parts of a complex interior.

In Huamantla, Mexico (illustration 5), streets are again a focus for perpetuating both primordial and historical haptic sensibilities. On the midsummer night of the Assumption, a statue of the Virgin dressed in gold leads a nocturnal parade over three and a half kilometres of downtown streets. The tremendous importance of the sacred pathway is evidenced by the effort to transform its surface for one night into an enormous network of tapestries composed of colored sawdust (*alfombres de aserrín*). The celebrants parade over these delicate surfaces in the house between midnight and dawn. Each step of the parade, however, contributes to the destruction of this fragile and temporary streetscape, so that the haptic act of seeing, touching and destroying simultaneously is the substance of this ritual of death and rebirth. For the citizens of Huamantla, the ritual is also a twentieth century expression of possession, a bodily and ethnic claim upon their streets.

Haptic claiming may be found also in the more permanent plaster, wattle, and gold ornament of the Rosary Chapel in the Church of Santo Domingo in Puebla, Mexico (illustration 7). This cosmic chapel had a Spanish architect, but the Mexican artisans come strongly forward in the formal details of the ornament on which they applied their own sense of touch. Not only do their curved structures memorialize a native craft, they reveal that essential property of a haptic sensibility which evokes a feeling of an interior world. In studying this ornament, the internal domain within the curves is as poignant as the interior of the entire chapel. This internalization reaches deeper lev-

Continued on page 92

haptic design

Continued from page 84

els when their ornament is understood as revealing the collision between an instinctively haptic, native Indian world and an urbane Spanish world.

Collisions that occur along boundaries reveal the dimensions of haptic space. Groups of people nearly colliding along ad hoc social boundaries often generate the most pleasurable dimensions. Open markets in the tropics exemplify the public potential of this experience. Why, then, do we try so hard to rope off, streamline, and over-regulate the paths and services of modern lobbies? Are not the floor plans of regulated traffic and fast service really machines of segregation serving one-track interests rather than the more fragile qualities of public feelings?

In New York's Algonquin Hotel, built in 1905 (illustration 4), the main floor preserves an earlier notion that lobbies are places of hospitality. Checking in, waiting, eating, drinking, phoning, and relaxing are jammed into a big room which is overpopulated by modern standards of efficient programming, yet altogether inviting and cozy. This is a place where the subdivisions of the plan result as much from the haptic sensitivity of individual bodies as the sensitivity of the architecture which, in addition to being the "right size" is also comfortably appointed with responsive fabrics and furnishings.

Certainly the haptic vies with the visual for recognition as a primary esthetic sensibility. But must one spatial sense be superior or exclusive to another in a period of architecture which is trying to extract itself from the emptiness of over-specialization? After all, the human body attempts to integrate all of its senses, and constantly seeks a collaboration between sensing the world and thinking about the world. In traditional western thought the word "vision" was originally used to refer to thinking as well as sensing, and it may be only recently that architectural thought has been over-associated exclusively with the visual sense. Perhaps this is because of an acquired belief that pure thought could be contaminated by the physical body and that somehow the eye was the most direct route to the mind. But today we have begun to re-examine that biased and rationalistic emphasis by allowing a more expanded interpretation of knowledge. We even refer to body knowledge. It seems especially appropriate, therefore, to expand our understanding of esthetics to re-include haptic perception. Indeed, we may be rediscovering that "vision" also means feeling and "insight."

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