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BOOK NOTES

The Eyes of the Skin: Architecture of the Senses

Juhani Pallasma

- Steven Holl – “He practices the unanalyzable architecture of the senses.” p.7
- Book: “Questions of Perception” a pre-cursor to “Eyes of the Skin”
- Book: “Experiencing Architecture” (1959) by Steen Eiler Rasmussen
- Book: “The Visible and the Invisible” by Merleau-Ponty. Chapter “The Intertwining – the Chasm”
- Merleau-Ponty – “No more than are the sky and the earth is the horizon a collection of things held together, or a class name, or a logical possibility of conception, or a system of “potentiality of consciousness”. “It is a new type of being by porosity, pregnancy, or generality...” p.8
- “In 21st Century, these thoughts go beyond the horizon and beneath the skin”
- Book: “An Architecture of the Seven Senses” (1994) deals with questions of perception.
- “I had become increasingly concerned with the dominance of vision and the suppression of other senses in the way architecture was taught, conceived and critiqued, and the constant disappearance of sensory and sensual qualities from architecture.” p.11
- “Eyes of the Skin” was title used to express the significance of the tactile sense for our experience and understanding of the world, as well as creating a conceptual short circuit between the dominant sense of vision and the suppressed sense of the modality of touch.”
- Ashley Montagu discusses how the skin is the “oldest and most sensitive of organs...
Touch is a parent of our eyes, ears, nose and mouth”.
-Touch is the “parent” of all of the other senses.
- **“Touch is the sensory mode which integrates our experiences of the world and ourselves.”**
- **“All the senses, including vision, are extensions of the tactile sense.”**
- “Life-enhancing architecture must address all of the senses simultaneously, and help fuse our image of self with the experience of the world.” p.12
- “In art, you lend your emotions and associations to the space, and the space lends you its atmosphere, which entices and emancipates your perceptions and thought.”
“Architecture doesn’t work this way... It offers pleasurable shapes and surfaces molded for the “touch of the eye” and other senses, but it also incorporates and integrates physical and mental structures, giving our existential experience a strengthened coherence and significance.”
- **QUESTION:** Is the “touch of the eye” significant in creating an experience which has strengthened coherence and significance? Without the “touch of the eye”, the person

would need to use other senses to develop and interpret space... This interpretation would be different from person to person. The coherence and significance of the space would be interpreted much differently. (Look at top of page 46)

- “The computer creates a distance between the maker and the object.” Drawing by hand and model making provides haptic feedback. Our perception of space is held both in the mind and in the hand.” p.14
- “We are both inside and outside the conceived object at the same time.”
- **QUESTION:** Peripheral vs. focused vision. Which is more important? p.14
- “Unconscious peripheral perception transforms retinal gestalt (images) in to special and bodily experiences.” p.15
- “Peripheral vision integrates us with space, focused vision pushes us out making us spectators.” Architecture theory is too focused on vision... It’s missing out on the bigger picture.

PART ONE

“Vision and Knowledge”

- Sight has historically been seen as the “noblest” of senses.
- Today, vision and hearing are now “privileged sociable senses”... whereas the other three are considered archaic sensory remnants with a merely private function. p.18
- Dominance of vision leads to a bias in cognition
- “Architecture is our primary instrument in relating us to space and time.” “And giving these dimensions a human scale.” p.19
- **QUESTION:** So then why is architecture primarily dominated by vision? If it is 3-dimensional would we have a better perception of space by using our sense of touch? (See “Critics of Ocular-centrism”)
- Our culture is “Ocular-centric”

“Ocular-Centrism and the Violation of the Eye”

1. Architecture has been regarded as an art form of the eye.
2. Vision is regarded as the most noble of the senses, and the loss of eyesight as the ultimate physical loss. p.21

Critics of “Ocular-Centrism”

- Rene Descartes equated vision with touch stating “Touch is more certain and less vulnerable to error than vision.” p.22
- **QUESTION:** There are many references to the eye as something that “Touches”. Why are they using touch as a metaphor for sight? (Look at “The Gaze” on p.45)

- Space-time compression is occurring due to technology (all information is at our grasp)... Consequence of this is a reversal of the two dimensions; p.24
 1. A temporalization of space.
 2. Spatialisation of time.
- The only sense that can keep up with the increased speed of technological world is sight. Perceptual present is flattened by speed and simultaneity.
- Our culture is one of vision. Products are developed and sold based off of imagery. The same is happening in architecture with superficial architectural design. Imagery is devoid of any tectonic logic and sense of materiality and empathy. p.25
- The role of the senses in the utilization of collective and personal space.
 - Book: "The Hidden Dimension" Edward T. Hall p.25
- **QUESTION:** Today, is our sense of touch being replaced by Augmented Reality? Are object being developed within AR being made to utilize touch? Is "touch" becoming redefined as a means to shape what our eyes see? (ex. Hololens, moving hands around in air to manipulate digitally augmented objects.)
- "Regardless of our prioritization of the eye, visual observation is often confirmed by our touch" – Caravaggio p.27
- We moved from written to oral language... = movement from situational thinking to abstract thinking. Oral = sight, Written = touch. p.27
- **QUESTION:** How does this affect blind people? They have never been able to see, so is the oral language still vision? Do they perceive what people are saying differently?
- The hierarchy of the senses in the 16th century placed vision third behind hearing and touch... The favored organ was hearing. p.28
- "Growing hegemony of eye is parallel with development of western ego-consciousness and the gradual separation of the self and the world. Vision separates us from the world whereas other senses unite us..." p.28
- **QUESTION:** Is this due to the fact that vision is used primarily as a tool for criticism? We are fooled by vision and its ability to deceive us, whereas the other senses serve a more important or purposeful role... More specific roles... Hearing, smell, touch, taste.
- Indigenous people shape construction haptically using clay with no regard to how it looks... function over form... this is the opposite of western culture.

Ocular Bias

- Greek architecture consisted of optical refinements so building would look visually "perfect".
- "I exist in life only if I can see" – Le Corbusier p.30
- Corb's haptic senses are apparent in his paintings and sketches but he gives all of the credit to his sense of sight and not touch.

- “The perception and experience of architectural form has most frequently been analyzed through the “Gestalt” laws of visual perception.” p.32
- “Gestalt” – An organized whole that is perceived as more than the sum of its parts.
- “The reality has come to seem more and more what we are shown by the camera.”- Susan Sontag p.33
 - This statement is true... images of the “ideal” person, advertising, almost every image we see is showing a false-reality.
- Photography makes us feel the world is more available than it really is.
- Two opposing views p.37
 - “The contemporary city is the city of the eye, ones of distance and exteriority.” – Le Corbusier
 - “The Haptic City is the city of interiority and nearness.” – Palasmaa

“The Haptic City”

- “The loss of focus brought about by the stream images may emancipate the eye from its patriarchal domination and give rise to a participatory emphatic gaze.” p.40
- Technological extensions of senses have reinforced the primacy of vision. New technologies may also help the body... To dethrone the disinterested gaze of the discarnated Cartesian spectator.

PART TWO

- “The body is informed mainly (fundamentally) from the haptic and orienting experiences early on in life. (Babies cannot see well when they are born)
- “Our visual images are developed later on, and depend for their meaning on primal experiences that were acquired haptically.” p.44
- “Every touching experience of architecture is multi-sensory; qualities of space, matter and scale are measured equally by the eye. Ear, nose, skin, tongue, skeleton and muscle. Architecture strengthens the existential experience” (Ones sense of being in the world). p.45
- “Senses are mechanisms not passive receivers.” There are five sensory systems; Visual system, auditory system, taste-smell system, basic orienting system and the haptic system.
- “All the senses, including vision, can be regarded to as extensions of touch... As specializations of the skin.”
- Sterinerian Philosophy assumes we utilize no fewer than 12 senses. p.45
- The eyes touch (gaze). Gaze implies an unconscious touch. p.45
- Hegel claimed that the only sense which can give a sensation of spatial depth is touch. p.46

- “Sight isolates whereas sound incorporates. Vision is directional whereas sound is omni-directional. The sense of sight implies exteriority, but sound creates an experience of interiority.” p.45
- “Hearing structures and articulates the experience and understanding of space.” p.53 (when we watch horror movies, sound creates tension... turn off the sound and it’s not scary...)
- We only need 8 molecules of substance to trigger and impulse of smell. p.58
- We can detect more than 10,000 different odors.
- The most persistent memory of any space is its smell.
- Particular smell makes us unknowingly re-enter a space completely forgotten by the retinal memory. p.58
- **QUESTION:** Can smell be used to provide cues as to what a space is like more efficiently than sight? Does the fact that one remembers a space more by its smell than visual characteristics mean that smell is better at cognitively shaping space for the user?
- “Hands are organs for thought” – Heidegger p.62
- “The skin reads the texture, weight, density and temperature of matter.” p.62
- “Our skin traces temperature spaces with unnerving precision; the cool and invigorating shadow under a tree, or the caressing of warmth in a spot of sun, turn into experiences of space and place.” p.62

“Oral Sensations”

- “There is a subtle transference between tactile and taste experiences. Vision becomes transferred to taste as well; certain colors and delicate details evoke oral sensations.” p.63
- “Our sensory experience of the world originates in the interior sensation of the mouth, and the world tends to return to its oral origins. The most archaic origin of architectural space is in the cavity of the mouth.” p.63
- “The sense of gravity is the essence of all architectonic structures, and great architecture makes us aware of gravity and earth.” p.72

“An Architecture of the Senses”

- “Alongside the prevailing architecture of the eye, there is a haptic architecture of the muscle and the skin. There is architecture that recognizes the realms of hearing, smell and taste.” p. 75

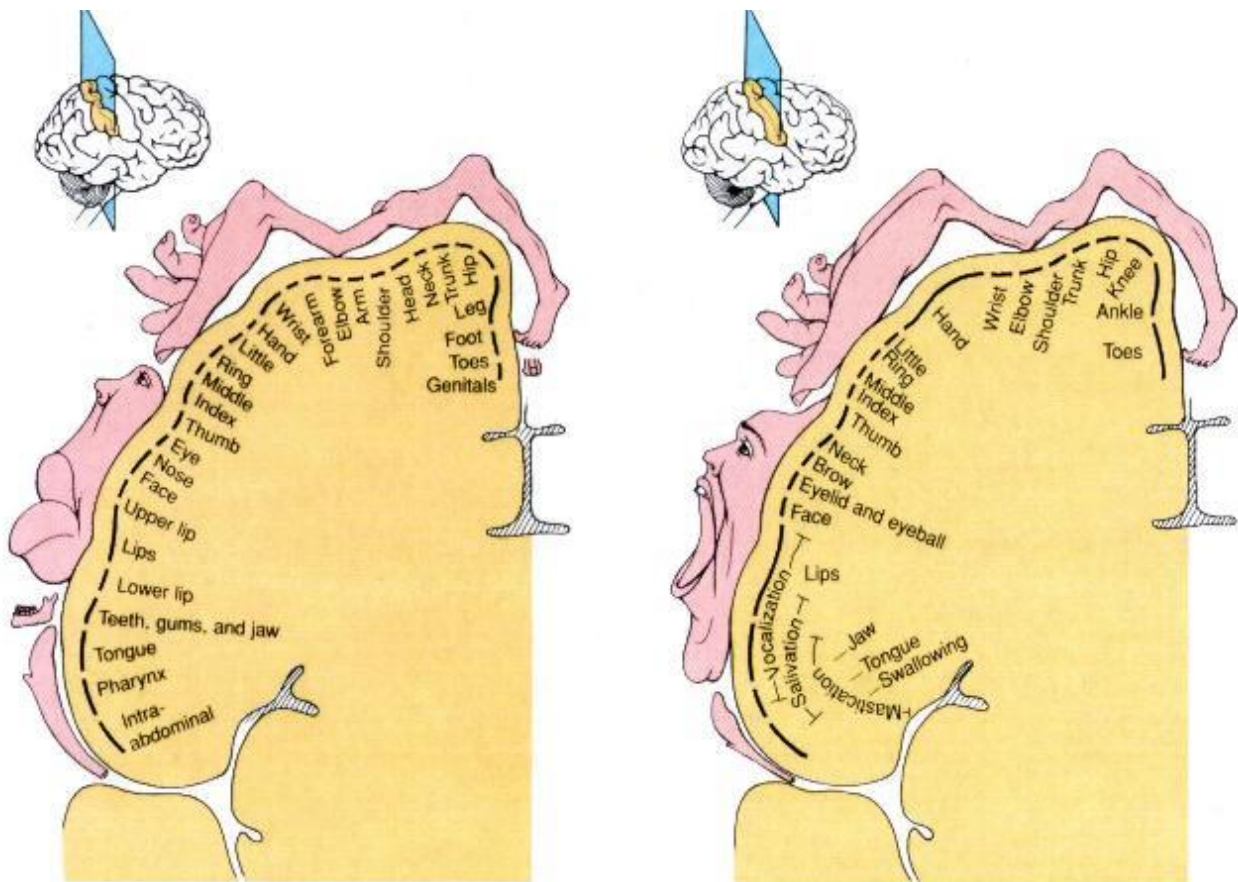
"Pain and Touch"

Lawrence Kruger

- Fingers have 9 times as many warmth spots as the upper part of the arm. p.6
- Many more receptors than spots, but it usually requires the simultaneous stimulation of several of them to arouse a sensation. p.6
- Sense of vibration is related to pressure. p.14
- "Active Touch" (Haptics) p.15
- Active vs Passive touch?
- Perception of texture doesn't change if person moves fingers over texture or if texture moves over finger. p.57

"Touching"

Ashley Montagu



(a) Somatosensory cortex in right cerebral hemisphere

(b) Motor cortex in right cerebral hemisphere

Sensory Homunculus

- Evaporative Cooling – When you step out of a warm shower you feel cold. This is because the water on your skin begins to evaporate. In order for it to change into a gas, the water requires heat energy. It acquires it by sucking up heat energy from the droplets on your skin. The result is the water on your body cooling.
- Water better heat conductor than air
- Humans can hear the difference between hot and cold water being poured... Scientists have long known that cold water is more viscous than hot water, because the molecules are wiggling less rapidly, so they are effectively stickier. How viscous a liquid is affects how it pours, and therefore how it sounds
- Water Temps
 - 78.8 F (Normal Water Temperature)
 - Above 82.4 F (Increased heart rate, Dilation of blood vessels and decreased blood pressure)
 - Under 77 F (Reduction of core body temperature)

Survival Times in Cold Water Without Protective Clothing

Water Temperature		Loss of Dexterity with no protective clothing	Exhaustion or Unconsciousness	Expected Time of Survival
Degrees C	Degrees F			
0.3	32.5	Under 2 min.	Under 15 min.	Under 15 to 45 min.
0.3 to 4.5	32.5 - 40	Under 3 min.	15 to 30 min.	30 to 90 min.
4.5 to 10	40 - 50	Under 5 min.	30 to 60 min.	1 to 3 hrs.
10 to 15.5	50 - 60	10 to 15 min.	1 to 2 hrs.	1 to 6 hrs.
15.5 to 21	60 - 70	30 to 40 min.	2 to 7 hrs.	2 to 40 hrs.
21 to 26.5	70 - 80	1 to 2 hrs.	2 to 12 hrs.	3 hrs. to indefinite
Over 26.5	Over 80	2 to 12 hrs.	Indefinite	Indefinite

http://www.shipwrite.bc.ca/Chilling_truth.htm