

Capitalism and nature: multisensory spatial design

4	Introduction
6	Vision
7	Touch
8	Time
10	Technology
11	Memory and emotions
13	Conclusion

The multisensory design concept recognizes that humans acknowledge and react to space in various ways, consciously and unconsciously through all their sensory organs. Jinsop Lee emphasizes how a human's life's greatest pleasure is one that combines all senses at a maximum scale: one which explores the sense of sight, sound, smell, taste, and touch. Nevertheless, triggering one of the senses can significantly intensify another: the concept of *colour sense*¹ on which colours can have an effect on human thoughts, moods, behaviour, feelings, and emotions. Josh Renouf has designed an alarm clock that explores all five senses: hearing the sound of the alarm go off alongside the boiling water for the coffee brew, smelling the coffee as it pours into the cup, seeing and locating said cup, touching and grabbing it, and tasting the freshly brewed coffee – this is as described a *human's life's greatest pleasure*.

Architecture is the expression and representation of the human being in the world, and it is therefore confronted with complications and quandaries of the human body in space and time. Since aesthetic and cultural practices involve the construction of spatial representations and artefacts based on human experience, they are exceptionally vulnerable to change in space and time.



Architecture is our primary instrument in relating us with space and time, and giving these dimensions a human measure

- Pallasmaa, J. (2012)

The practice engages with metaphysical questions of interiority and exteriority, time and duration, life and death. As a result of these correlations, priorities regarding the senses in addition to their relative roles and interactions, have a critical effect on the nature of design and its production. Similarly, many aspects of contemporary architecture today can be explained by an analysis of the senses, and a critique of the ocular bias of our culture at large. Modern architecture and cities can be seen as inhuman because of their neglect of the human body and its senses, which derives from the imbalance and disorder of our sensory system.

1. color sense stands for the ability to perceive variations in hue, luminosity, and saturation of light.



Architecture is the art of reconciliation between ourselves and the world, and this mediation takes place through the senses

- Pallasmaa, J. (2012)

Plato considers vision as the *humanity's greatest gift* and philosophers such as Peter Sloterdijk appraise the eyes to be the *organic prototype of philosophy*.

Taking up nearly half of the human brain resources to handle information, vision is the protagonist to capture major threats, nutrition supply and reproductive opportunities, making the eyes the principal human organ to collect contextual data and ultimately defining vision as the most important out of the five senses. This ideology took place during the renaissance, while a hierarchical system had structured senses beginning in vision and concluding in touch, a system which related to the image of the cosmic form: "vision was correlated to fire and light, hearing to air, smell to vapour, taste to water, and touch to earth"².



Modernist design at large has housed the intellect and the eye, but it has left the body and the other senses, as well as our memories, imagination and dreams, homeless

- Pallasmaa, J. (2012)

In architecture, ocularcentrism, or the importance of visual qualities, is traditionally emphasized over other senses – it is not surprising, however, given that formal design principles used in academics today are verifiable elements of architecture, whereas sensory elements are not. For an architectural community based on the substantiation of and observation of visible characteristics, the other four senses become unreliable sources of design parameters³. As a result, there has been increased interest in the visual sense and a decrease in other sensual qualities of the built environment, leading to a dominance of visual perception and virtual images. Most buildings and their designs no longer create spatial experience grounded in expression. A building's digital representation is judged before it even gets to be experienced – an interpretation that extends beyond the aesthetic quality of architecture to include the environmental aspects as well.

2. Pack, S. (1994) *Discovering (Through) the Dark Interstice of Touch*. McGill School of Architecture.

3. Malnar, J. M. (2004) *Sensory Design*. University of Minnesota Press.

The sense of touch is unavoidable: “all the senses, including vision, can be regarded as extensions of the sense of touch”⁴. And while the idea of moving into spaces that are *touchless* is nowadays a term of social distancing and personal space, the instinct for visual observation is often confirmed by the sense of touch.

In psychology, the word *haptic* indicates the ability to experience the environment through active exploration, typically with our hands. In other words, hapticity is analogous to touch - it is two dimensional, whereas haptic experiences are three dimensional.

To understand the build quality or structural integrity of a material, it is important for there to be a physical encounter between the human body and the material in question: the sense of touch predominates in this encounter. Space is presently experienced through movement while neglecting the tactility of its boundaries: while walking through space wearing clothes and footwear, the person does not have a direct skin perceptiveness of what the surface they are walking on feels like. This results in contemporary construction being flattened by a weak sense of materiality “scaleless sheets of glass, enamelled metals and synthetic plastics – tend to present their unyielding surfaces to the eye without conveying their material essence or age”⁵.



¹ Giles Miller used materials imaginatively to create a tactile experience: the mural entitled *Miranda* holds a silicon base layer with over 65,000 polypropylene fibres to its facade. The fibres incentive the users to brush it side to side with the outcome of creating images and patterns which then reside on the wall until further disturbed again.

4. Pallasmaa, J. (2012) *The Eyes of the Skin*. p 45. Great Britain: Wiley-Academy.

5. Pallasmaa, J. (2012) *The Eyes of the Skin*. p 34. Great Britain: Wiley-Academy.

Today's environment weakens the experience of time, which harms the human mind on a profound level. We are experiencing a distinct reversal of time and space, as space is becoming temporalized and time is becoming spatialised - a fusion of space and time. Humans lose their sense of self as a historical being and feel threatened by the *terror of time*⁶ when time is no longer defined by duration or echo in the past.

Architecture has the task of making us feel we are rooted in the continuity of time, and the man-made world has the task of facilitating this experience through architectural design. Likewise, architecture domesticates unlimited time and enables us to dwell in it, but it should also domesticate endless space and enable us to inhabit the continuum of space. "I dwell in the city and the city dwells in me"⁷. These immense columns of matter, space, and time are eternally entwined in the spaces between; they merge into one singular elemental experience, the sense of being.



This fear of the traces of wear and age is related to our fear of death

- Pallasmaa, J. (2012)

The patina of wear adds the experience of time to the construction with natural materials, which express the ageing process and the story of their origin and use. All matter lives in the continuum of time; abrasion adds the experience of time to the construction of natural materials. The architectural design of the technological era intentionally aims at ageless perfection, the subtle feel of continuous-time, and they do not incorporate the element of ageing nor its unavoidable and mentally significant process. It is clear that tectonic illogic and a sense of materiality and empathy are absent from superficial architectural imagery today. It is at this stage that the effects of industrial development in the building are most evident, replacing natural materials with artificial ones, homogenizing, and artificializing doubtful materials, and employing products with fixed compositions.

6. Harries, K. (1982) *Building and the Terror of Time*. The MIT Press.

7. Pallasmaa, J. (2012) *The Eyes of the Skin*. p 43. Great Britain: Wiley-Academy.



**Nothing gives man fuller satisfaction than participation in processes
that supersede the span of individual life**

- Booth, G. (1980s)

With today's technologically advanced and strengthened eyes, humans can peer simultaneously into matter and space from opposite sides of the globe. Sight is the only sense that keeps up with technological advancements despite the astonishing increase in speed. In the last century, the astounding speed of technological development has collapsed time into a flat-screen, on which the simultaneity of the universe is projected. In spite of the hegemony of vision strengthened by new technologies, they may also help to rebalance the senses.

In recent decades, the inherited construction of reality has been dramatically shattered, resulting in a crisis of representation. The architecture of today has adopted the psychological strategy of advertising and instant persuasion, instead of providing an existentially grounded spatial and physical experience; buildings have become abstract image products devoid of the depth and sincerity of existence. There should be more to an architectural experience than a sequence of retinal images - architecture is an encounter, a confrontation with memory that exceeds a mere visual experience.



We are made to live in a fabricated dream world

- Pallasmaa, J. (2012)

The human brain uses a conceptual understanding of space through sight, memories, options, and emotions to satisfy the visual cortex information demand – this allows for the human to comprehend their surroundings more vigorously the more they experience them, meaning that the perception of one’s environment is a hybrid of both stored and received data. “the body is not a mere physical entity; it is enriched by both memory and dream, past and future”⁸. Human remembers as much through their bodies as through their nervous system and brain – they have an inherent capability for remembering and imagining space.

Memory, perception, and imagination are constantly interacting with each other, fusing the realm of presence into images of the imagination and memory. We keep building an immense city of evocation and remembrance, which is like a metropolis of the mind, enclosing all the cities we have visited. The impact of design arrangements on emotional responses and the meaning that those responses have for the building’s occupants are essential considerations to be taken by every architectural designer. A person’s response to a space cannot be predicted by an architect, but they must follow their instincts to prevail over this outcome. As a result, the more diverse the spatial design is, the more sophisticated the perception of the occupants will be.

8. Okakura, K. (2000) *The Book of Tea*. Charles E. Tuttle.



Memory takes us back to distant cities, and novels transport us through cities invoked by the magic of the writer’s word

- Pallasmaa, J. (2012)



Even the eye touches; the gaze implies an unconscious touch, bodily mimesis and identification

- Pallasmaa, J. (2012)

A multisensory experience in architecture should not only be one of a visual experience but also act as a physical experience in a place. “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”⁹. A powerful function of architecture is to reflect, materialise, and immortalise ideas and images of an ideal life. Architecture is a timeless language of existence that creates concrete examples of our being in the world. Alvaro Aalto’s architecture focuses on sensory realism: the disruptions, skew confrontations, abnormalities, and polyrhythms in his work evoke physical, muscular and haptic experiences. Intimacy and warmth are evoked through elaborate textures and details that invite the sense of touch towards his work.

Our perception and understanding of permanence and change are enhanced by architecture, providing us with a sense of place in the world, and of our place within the continuity of culture and time. In order for architecture to serve a healing or emancipatory purpose, we must examine the countless ways it is tethered to the prevailing mentality of the time, instead of intensifying its eroding meaning.

The very thing that is most vital to architecture today is the very thing that is most vital to life – integrity. Integrity is the deepest quality in a building, just as it is in an individual – in succeeding, we will do a great service to our moral nature. Those who uphold the integrity of their building will uphold that same integrity not only in their personal lives but in their social and reciprocal relationships as well¹⁰.

To construct sustainably is no longer an individual’s choice, it is now a public regulation: this means that looking forward, we’re more likely to see natural, sustainable resources that carry out more than one function in the foreground. There are several approaches on which a material can be considered to its full potential within space, such as by identifying these materials’ characteristics and categorising them by their structural, textural, or thermal integrities while sourcing them through ecological means. Technology can still take part in the articulation of these materials as well as on how to best sustain them. Neri Oxman has led the innovation of scientific research and technologies with an emphasis on integrative eco-design across installations and architectural spaces.

Architects must aim at fulfilling their mission with emphatic expression, a view even more urgent in the future than at the time of this writing, and one that demands a full understanding of human nature and its environmental context.

9. Pallasmaa, J. (2012) *The Eyes of the Skin*. p 45. Great Britain: Wiley-Academy.

10. Wright, F. (1954) *The Natural House. Bramhall House* 233p

CONCLUSION

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