Examining the Phenomenology of Human Experience in Design Process and Characteristics of Architectural Approaches

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Abstract. Research into phenomenological contexts of architecture has been shaped by shifting dynamics, the influences of changes within societies and their relationship to human perception. The sensory construct of Steven Holl’s architectural design heritage can be ascribed to ‘natural phenomena’ theories that seek philosophical revelation in the process of understanding architectural design. Phenomenological theories are characterised by the relational premise between architecture’s sensitivity to the focal design inspiration and the innate human sensory perceptions of atmosphere and material culture, resulting in an aesthetically balanced, fluid and organic framework, enriching building character and positioning humanity rather than spatial rationality. To evaluate the contribution of phenomenological architecture, an outstanding project work of American architect Steven Holl in planning and creating the building design for St Ignatius Chapel, an institution of religious worship in United States was analysed to understand how the use of forms, textures, light and shadow affect the spatial perception of architectural space. The use of visual perspective to reflect on the phenomenology of spatial and material suggests the importance of intrinsic sensory experiences intertwined the architectural design process, as they weave in ‘human’ content, our emotions, intuitions and organic dimensions of relations with others, providing buildings and places depth in aesthetic meaning.

Keywords: phenomenology, multi-sensory, perception, spatial, material

1. Introduction
Phenomenology of architecture is theoretically constructed on the paradigm of observed and interpreted human experiences and behaviours towards physical sites through the analysis of sensory influences. As a scholarly discipline, this is significantly different from research based on studying design functionality, efficiency and performance of buildings, as principled on rationalist and socioeconomic contexts. Phenomenology’s approach acknowledges the complexity of double-fold levels of knowledge: ontological or objective, foundational characteristics of the life-world, and epistemological, where lived experiences become a primary source of self-knowing, developing richer, authentic perspectives through our emotions, sentiments and memories [1].
Alberto Perez-Gomez relates the role of modern architecture itself as a lived experience at the epistemological level; affirming the belief by architectural academics like Joseph Rykwert that built structures are theatres of our memories and meaning-making, since geometrical arrangements are similar to human experiences with spatiality and temporality [2].

This paper gives insights on how phenomenology influences the philosophic intent behind architecture, through a critical discourse on Steven Holl’s phenomenological approach as the intertwining of the sensorial and experiential, and argues for his discernment of the spirit of modernist structural design that leads to existential revelation of the resulting work.

2. Literature Review
Merleau-Ponty [3] pioneered applied phenomenology, founded on the nature of perception expounded by Edmund Husserl and Martin Heidegger, who theorised that conscious experience from the first person’s point of view, derives from perceptual dimensions.

Perceptions, the instrument connecting our physical bodies through sensory organs (i.e. sight, sound, taste, touch and smell), enables us to experience the world intelligently and intimately, form the foundation of our creative receptivity and the subjective intertwining of each person’s self with others [4]. Seamon [5] elaborates the development of consciousness through perceptual awareness as the lived aspect of innate material experiences, and researchers’ need to be constantly involved in some aspect of the world as their object. Finnish architect Juhani Pallasmaa [6] focuses architectural phenomenology discourse as an intellectual form of ‘inner language’ of spaces, by philosophically examining the experiences preceding from authentic “emotional forces” through introspection. This field of research, he states, is fraught with the challenge of ocularcentrism: looking at the surface, rather than seeing to understand the metaphysical.

Hsu; Chang and Lin [7], seeking a comparative design syntax by studying various contexts in the development of modern architectural design philosophy, present literature arguing that phenomenological perception of spaces instils sensory experiences through focusing on the emotional, poetical realms of geometric aesthetics being the metaphysical foundation of the designing process which enables inhabitants to relate to the genius loci, or unique character, of a place in their own meaningful ways. Current literature pushes forward these debates, describing and investigating the aesthetics of spatial and material beauty [1], and what has emerged are flawed understanding about our place within landscapes and sites, as the quality of what we perceive is affected by “shadows, voids, opacities, transparencies and translucencies” [8]. In questioning the perceptual value of design to contemporary architecture, Pallasmaa [9] point out: “Every touching experience of architecture is multi-sensory; qualities of matter, space and scale are measured equally by the eye, ear, nose and skin, tongue and skeleton and muscle”. Haptic architectural forms thus include sensorial depths, embracing visual, tactile, aural qualities; even a sense of odour can be conceived to be presented as a physicality of the building form [8].

Achieving this form of hapticity, Pallasmaa [10] believes, requires that architects think with their bodies in the designing process. By recording imageries and embodying the sensory wisdom of what they touch and feel in their muscular memories, they could lucidly present these images to communicate ideologies of designing with and for a sensual body. Many philosophical treatises have been produced to examine contradictory outcomes with regards lighting and materials as the basis of perceptual design dimensions; these projects have also been subject to critical phenomenology research. For instance, Peter Zumthor arranges the physical framework of spaces to seduce, kindle and extend human perceptiveness. Experimentation with memories of his childhood, vividly sought these stories as the “reservoirs of architectural atmospheres and images” which directly inspired his projects [11]. In Atmospheres, he states his idea with materiality with light experimentation: “So the first of my favourite ideas is this to plan the building as a pure mass of shadow then Afterwards to put in light as if you were hollowing out the darkness”. Zumthor [11], [12] conceives the tectonic of light in dark spaces, such as the Therme Vals (Figure 1), describing it as “(an initial) feeling … for darkness and
light, for the reflection of light upon water, for the diffusion of light though steam-filled air … for the ritual of bathing”.

Figure 1. Therme Vals, Switzerland by Peter Zumthor [19]

In summary, multi-sensory experiences are considered “ambitious” theorising in principle, as the scale of interpretations for framing and referencing perceptions seem scholarly impossible to pinpoint, review or determine in terms of value and effects since they are formed out of physical limitations, obstacles, change and biases. The notion that human experience is at the core of architectural phenomenology movement has produced vocal conflicts of opinions among scholars of contemporary architecture. Contemporary researchers, as Bognar [13] and later, Seamon [5] point out, have reached a point of concurring that integrating human experience phenomenologically enjoins theories with application in architectural design process, reminding us that people and surroundings comprise “an indivisible whole”.

3. Methodology
In enlarging the scope of discussions on the objectives, applications, issues, methodologies and implications of qualitative phenomenological research, the body of critical phenomenological research establish their position to provide relational interpretations between studied variables and elements [14].

Figure 2. Interior view of St Ignatius Chapel [20]
To consider how phenomenology influences the philosophic intent behind architecture, the Chapel of St. Ignatius (Figure 2) located in the University of Seattle, designed and constructed between 1994 and 1997, will be presented for case study analysis in this study. To map the ideological derivation for the design of this Jesuit place of worship considers how watercolour sketches were translated into built form. A critical discussion of Holl’s *eidos* (intellectual form), follows the case study.

4. Findings and Analysis
Holl introduced the concept of ‘Seven Bottles of Light in a Stone Box’ (Figure 3) as a metaphorical visual of spiritual life-world awareness to acknowledge the seven sacraments symbolising God’s divine covenant with His believers. Thematically, the seven lights are oriented towards the chapel’s roof tectonics while the stone box represents the brutal expression of the building as in Figure 4 and 5 [15]. Conceptually, each of the bottles represents the seven Jesuit orders closely identifying each religious exercise, with the spatial environment organised accordingly. To capture pure meditative serenity, Holl uses ethereal lighting reflected from coloured windows, baffles and clear glass panes as the ‘structural material’ of architecture; natural daylight sheds a sacred atmosphere, both intimate and warm, to invite the congregation as well as individuals to present their prayer offerings.

![Figure 3. The Concept of “Seven Bottles of Light in a Stone Box” [21]](image)

4.1. Light as structure
Light becomes fundamental in phenomenological architecture. As Holl [16] explains, “Space is oblivion without light. A building speaks through the silence of perception orchestrated by light”. St. Ignatius Chapel shows the uses of light as a phenomenon of personalised experience, as the interplay of darkness and shadow imputes one’s inner spiritual thoughts, referred to as *consolations* and *desolations* [17]. The emphasis shifts from tectonic logic to light and shadow to illuminate the intertwining of images and emotions in the lives of worshippers partaking in religious devotional rites. The idea of “intertwining”, as pointed out by Yorgancioğlu [15] in his thesis, was initially borrowed from Merleau-Ponty:

“In a three-dimensional triad, the reciprocal insertion of the body – oneself – in the interwoven landscapes of architecture yields identity and difference. This insertion of oneself is an intertwining of one with the ‘others’. Without purpose as an object, without recourse as a style, architecture depends on this reciprocal insertion of the other, oneself.”
Theoretically, Holl’s phenomenological constructs corresponds with Pallasma’s perception of multi–sensory experiences of physical space, colours, light and textures. Perception of spatial depth, as argued by Pallasma [6] cumulates in the use of haptic memory through contact with light as the material of structure and distance to intensify the act of believing from what is understood visually.

Figure 4 and 5. Watercolour sketches of St. Ignatius Chapel [22]

Holl further illustrates phenomenological hapticity in the chapel’s exterior. Holl [17] explains that tactility, represented through interlocking concrete slabs for the chapel’s windows and floor, invite worshippers to engage deeply with their faith. While some critiques consider the exterior’s drab “stoniness” as uncomplimentary of the breath-taking interior, the construction of the building in “tilt-up” style is Holl’s signature parallax concept, an attempt to fuse the physical tactility and intelligence of material, space and the church (building owner)’s outreach mission into the result.

5. Discussion and Interpretation
To critically acknowledge perceptual living experiences as central in the development of depth (rather than breadth) in spatial architecture, an evaluation of its unique approach is necessitated. Holl uses the technique he calls ‘parallax’, a series of perspectives aimed at integrating sensorial depth by imagining how ‘the spaces of eternity’ feels like through the art of watercolour to express phenomenological concepts, drawn from the writings of Merleau-Ponty and other philosophers [18]. In Holl’s watercolour perspective sketches, the experiential potential of concept is sought. By beginning the reflective process of memorialising his perceptions, the transference of intangible experiences from sketches to real buildings clarifies the exactitude of experiences he wanted to capture and immortalise spatially [12].

Imagining thus begets the design process for architecture for Holl, reflecting Pallasmaa’s [10] theory of multi-sensory perception as an essential exploration, reinvigorating our process of understanding, helping us gain subjective yet substantial insights of architecture as meaningful representation of valuable human emotions. As a water-colourist, Holl sketched to visually articulate an indeterminate idea into a more definite concept. From the review of literature and discussion, it could be critically argued that phenomenology architecture emphasise on the role of light to create perceptual awareness, humanising places and buildings through conscious design. From this perspective, there is a definite resemblance to Pallasma’s [9] theory, emphasised in the latter through reinforcing multi-sensory perception to create a rich embodiment of material and spiritual construct. At the same time, Holl refined the collaborative phenomenological construct using the tectonic of light to uniquely portray his ideology of human perception of a chapel as a site for deepening one’s relationship with God. Holl illustrates a set of intentional values to reveal a heightened state of awareness. Employing poetic spaces, and lighting nuances in building design “diminishes” our human physicality, metaphorically “dislocates” our traditional rationality, expresses our imagination and augments the atmosphere of the place [12]. Essentially, Holl’s precise emphasis on the existential potential of architecture conceptualises his belief that our lived experiences contribute metaphorically towards thoughtful architecture. The chapel’s interior perspectives manifest eternities through the artful effects of light and shadow to abstract perceptions into spiritual emotions.
6. Conclusion
The essence of change itself encourages us to keep searching for humanity’s “wonderful possibilities” [1], however, architects’ intellectualised removal of personalities from the process of designing, much favoured in the modernist movement of the 20th-century until the recent decade, has resulted in an emotive void, hampering aesthetics from becoming an integral part of the intelligent, intimate cognition of places, landscapes and topography.

Phenomenological architecture visited in this research shows the importance of metaphysical interpretations of “pure looking” [10], where the aim is to appreciate the simplicity of structural design, light, shadow and space as the context of perceptual experiences that move, change and even fundamentally orchestrate landscapes, revealing fully the human spirit [8]. Phenomenological association between human perceptions, space and form can be studied in various architectural concepts. Diagrammatical sketches and the application of haptic/tactile elements such as light and textures nevertheless continue as problematic scholarly treatise in the broader context of contemporary architecture practice. Acknowledging phenomenology’s application beyond the domain of theoretical scholarship is crucial; human perceptions must not be neglected but instead integrated into spatial architectural designs bearing our sensory experiences. Pallasmaa [9] believes that for buildings to embellish meaning and embody memories, they should do more than reflect practical environmental realities of planning geographical and physical spaces to fit surroundings. By abstracting our emotional connections and perceptual awareness, phenomenological architecture expresses the sanctity of human contexts, capturing empathy, joys, sorrows and the shared experiences of people’s lives, their feelings, memories and consciousness.

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