

A SENSORIAL FORAY INTO ARCHITECTURE

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ARSNET, 2022, Vol. 2, No. 1, 2-9

DOI: 10.7454/arsnet.v2i1.52

ISSN 2777-0710 (online)

ISSN 2777-0702 (print)

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The sensorial approach of design challenges the flatness of architecture, in which the architecture enables the relation and mediation of the world and projects meaningful experiences (Pallasmaa, 2012). The articles in this issue explore the potential of bodily sensory as the primary driver of understanding and constructing space. The city is assembled by bodies, linking human consciousness to the materiality of the built environment (Grosz, 2005). In doing so, "(a)rchitecture articulates the experiences of being-in-the-world and strengthens our sense of reality and self..." (Pallasmaa, 2012, p. 11). The body's perceptual dynamics create the more subjective ways of understanding space, driven by the interaction between our sensory system and the quality of the inhabited environment (Matteis, 2020). The body and space are interrelated, creating reciprocity that "define, command, and affect each other" (Atmodiwirjo & Yatmo, 2022, p. 1).

The first urgency in addressing architecture subjectively through the sensorial approach was driven by the diverse capabilities of bodies to perceive and navigate the environment. The design field has focused on accommodating users with the ideal and the typical abilities, which creates an exclusion of people with different capabilities (Renel, 2019). Such differences may be driven by a more transient situation of bodies due to sickness (Sengke & Mustikawati, 2019), gradual decline as can be seen in the condition of the elderly (Holmes, 2007), as well as in people living with more permanent disabilities and impairments (Renel, 2019). The sensorial approach of architecture enables appreciation of more diverse possibilities of bodies, as well as the subjective navigation of such bodies in space, transcending the idea of bodies simply in response to their physical measurements, but also holistically considering their relations with space (Nast & Pile, 2005; Renel, 2019).

The urgency of sensorial discussion in architecture followed through with the need to move beyond the understanding of humans as "visually dominant creatures" (Spence, 2020, p. 2). Pallasmaa (2012) asserts similar arguments, outlining that such visual dominance renders architecture to become no more than "strategy of advertising and instant persuasion"...where "building have turned into image products detached from existential depth and sincerity" (p. 30). Our perception of the environment reflects a complex multimodal system within our bodies that regulates and integrates internal and external stimuli to generate "a coordinated and appropriate response" (Ahlquist et al., 2017, p. 92). The neglect of our other sensory systems demonstrates

a negative impact on the overall well-being, leading to global health crises such as sleeping disorders and sick building syndrome (Perez-Gomez, 2016; Spence, 2020). The heightened physiological stress and attention fatigue are pervasive in urban contexts due to the often hidden sensorial need of urban dwellers to access a restorative environment that is limited in cities (Hedblom et al., 2019). Architectural engagement towards the different senses, as well as the connection between them, become imperative to support the integrated and balanced existence of humans in space.

The exploration of multisensory in architecture potentially projects a deeper meaning of space. Various sensory stimulants bring forth different sensations, from the calming fragrance of flowers as well to "the olfactory enjoyment of a meal" (Pallasmaa, 2012, p. 16), creating re-sensualisation of architecture. Among these sensations, appreciation of natural qualities in sensory-driven architecture has been well-documented, yet it exists in multiple, often contrasting dimensions. A wide discussion of urban discourse has annotated the positive impact of sensory stimulants that can be found in urban green spaces, such as singing birds and natural smells of vegetation (Hedblom et al., 2019; Holmes, 2007; To & Grierson, 2019). On the other hand, a growing body of work has instead highlighted the subnature dimension of the environment (Gissen, 2009), which points out toward the more dialectical and unstable stimulants of sensory which exist due to natural processes of the environments, from seasonal weather to other environmental traces such as dust, puddles, and debris (Gissen, 2009; Vignjević, 2017). Such differing perspectives of nature as the source of sensory stimulants demonstrate sensorial discussion that responds to the static and ideal notion of the environment yet also recognizes its volatility and temporality, thus enriching the possibilities of sensorial experience.

Discourses that discuss the sensorial experience in a more everyday setting pay attention to the bodily movement in conducting daily activities, exploring how sensorial stimulants are shaped by such movements (Degen & Rose, 2012). In doing so, such discourse demonstrates how sensorial experience is not passively gained, but instead as a product of the different actions of moving along with the world (Ingold, 2000). The sensorial experience in such a particular context would then be created through the relation between the activity, subjective experience, and the physical space itself (Berg & Sevón, 2014). Enjoying the olfactory and tactility of a meal, for example, not only refers to the food as the source of the stimulants but also the act of processing the food. The ways of doing such everyday activities are subjectively shaped by the social and the cultural background of the individuals, which influence aspects such as collective habits and preferences, which then limit or reinforce the sensorial experience (Pink, 2008).

The construction of space driven by sensorial stimulants contributes to the modulation of spatial features, as well as the creation of specific qualities of space (Edwards, 2018;

Spence, 2020). The dialectical compositions of physical spatial properties such as openness versus closedness, high versus low, and linear versus curvaceous space (Spence, 2020) are assembled to create a sensory reinforced environment that is "engaging, transformable, and multivalent" (Ahlquist et al., 2017, p. 99). On the other hand, sensorial design methodologies have also explored possibilities of constructing space through appreciation of the atmospheric qualities (Zumthor, 2006). The sensory-driven architectural expressions are therefore able to manoeuvre between the physical and the ethereal spatialities, as part of an architecture that aims to accommodate sensorial needs, activate spatial engagement and navigation, or celebrate the context.

The collection of articles in this volume investigates a sensorial reading of space and how it can be utilised as a part of architectural design methodologies, spanning between evidence and parametric driven architecture for the atypical sensory needs, interpretation of architecture based on the sensorial experience of nature, understanding of everyday space governed by sensory stimulants, as well as the construction of form through a certain sensorial expression. The first paper by Ersalina Trisnawati, Julia Dewi, and Susinety Prakoso investigates design strategies to optimise space for the deaf, creating visual and acoustic simulations to support spatial qualities needed for the deaf to occupy the space and communicate in them. Multisensory simulations using Ecotect and depthmapX are performed to examine different spatial parameters which produce specific visual and auditory qualities that are beneficial for the deaf. The study concludes with the different spatial models with various forms, enclosures, and orientations that generates the multisensory performance of a deaf-friendly space.

The second article by Valerio De Caro examines the notion of resilience as a relationship between nature and architecture, which is translated through multiple interpretations of natural presence and natural qualities in space. Through a series of architectural case studies, the article outlines how these interpretations exist in a sensorial way, through the production of visual expression, the experience of the subnatural dimensions of space, and the bodily experience in the presence of natural entities in architecture. Through the conceptual reading of such interpretations, resilience is no longer defined through an advanced technological system that orchestrates the robust qualities of space, it is instead defined by capabilities to organically coexist with nature, producing a new understanding of space and natural elements in the context.

The next two articles explore the projection of food-related sensorial experiences in an everyday domestic setting. The article by Rania Saraswati Wijayakusumah and Rini Suryantini explores the noodle-cooking process, arguing that an intertwining between material transformation and sensorial experience alters the understanding of kitchen in architectural discourse. Such reading of cooking practice

demonstrates how the cook alternates between following and appropriating cooking procedures, where continuous sensorial examination throughout the cooking process defines the timing of movements, the sequence of activity, and the manipulation techniques needed for the dynamic material conditions of the food. Through following the practice of cooking and annotating material and sensory interaction happening in the process, the idea of a kitchen evolved, no longer as a space with calculated spatial precision with upheld hygienic standards, but as a space of cooking strategies and tactics.

The second food-related article by Fatimah Indonesia Saffana Zayn and Paramita Atmodiwirjo explores the spatialities of food in the micro setting of the home, tracing the overall food process, from obtaining, to preparing, cooking, and eating food. Food has been discussed as something that is always there, creating neglect to the complex process of sourcing and preparing food to be readily eaten. Through mapping such processes, the study examines how they are related to the idea of visibility and invisibility of architecture as a form of sensorial expression. Important dialectical mechanisms are proposed, where the choreography of the relationship between food process and product, food existence as tangible and perishable entities, and the dynamic existence of food as something that can be hidden as well as revealed. Such mechanisms signify that the food system at home intertwines between being visible and being invisible. It is argued that such findings reflect possibilities of architectural programming as a layered existence, whereas one layer may become spatialised and another layer hidden. Despite their visual existence, these layers are interdependent with each other, enabling the operations of the everyday system of food.

The last article by Resza Riskiyanto and Gustav Anandhita discusses the visual driven expression of architectural tectonics, reflecting how colour as spatial property produces sensorial stimulants that shape the formation of architecture. Using Hue, Saturation, and Lightness (HSL) analysis, the study explores eight case studies of Starbucks colour systems, highlighting how the expression of particular colour composition generates spatial logics that define the function and performance of its interior space. These colour driven spatial logics influence spatial proportions, creating illusions of size, length, and depth of the interior surface, directing attention and emphasising the meaning as well as functions in such space. The colour system also responds to the surrounding environmental conditions, particularly to the existence of natural light, generating a dynamic formation of the spatial tectonics throughout the day with varying sensorial experiences.

This edition of ARSNET explores the experience and intervention of architecture that are driven by sensorial stimulants of the body in interaction with the space. Measuring, interpreting, tracing, and constructing the spatial elements and spatial processes driven by sensorial qualities expand the possibilities of architectural design methodologies. Further inquiries are needed to address how these methods

can be applied through more varying sensorial needs and sensorial situations. Such understanding will offer a thorough perspective on the varied and subjective ways architecture can be experienced and engaged in a sensorial way.

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