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## Body, Space, Architecture

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# Editorial Board



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# Contents

# Editorial

## Body, Space, Architecture

*Aurosa Alison*

The relationship between body and architecture is substantial. It can be regarded as the principle according to which the design of habitability is connected to that of the body living and relating in space. The body moves in the surrounding space and, in addition to figuring itself as a biological and natural presence, it is configured to all those meanings that correspond to it. In fact, space, as well as being architectural, can be social, cultural, institutional, and political. And so can the body.

About the involvement and reconnection of the body with architectural design, Maurizio Vitta, a historian and theorist of architecture and design, refers us to the principle of "habitability":

> *The dwelling tells the story of the inhabitant, draws the figure of the inhabitant, represents the inhabitant before others and for others to the extent that it is shaped by those who inhabit it. The way of shaping the architectural environment through the use of space, the distribution of furnishings, the choice of furniture and furnishings, the subtle hierarchy imposed on objects, the patterns of use of utensils, the laborious selection of images, are so many narratives of a personality that is inscribed, mostly unconsciously, in the domestic environment in order to be reflected in it.* (Vitta, 2008, p. 27)

Beginning with Vitruvius, classical thought emphasized the correspondence between the body and the architectural complex as an example of beauty and harmony. The *homo bene figuratus* becomes a canon of perfection, in which the concepts of measure and proximity correspond. Similarly, Le Corbusier's Modulor has affected modern culture not only in terms of the correspondence of the body's distance in space but especially regarding the conception of a mode of measurement stemming from the body itself.

The identity relationship between space and *Leib* is consequential; architecture lends itself to the reasons of the living body, a body that is not reduced solely to physical presence but also includes a set of symbolic and pragmatic meanings: "Very roughly speaking for the moment, Körper denotes the physical body as object, while Leib typically signifies the lived, feeling body or the body as intentionality or subject" (Shusterman, 2010, p. 207). The pragmatic value of the body is reflected in its improvement, and in this regard, the distinction that Richard Shusterman introduces regarding *soma* and the body is evident:

> *Somaesthetics can be provisionally defined as the critical, meliorative study of the experience and use of one's body as a locus of sensory aesthetic appreciation (aisthesis) and creative self-fashioning. It is therefore also devoted to the knowledge, discourses, practices, and bodily disciplines that structure such somatic care or can improve it. If we put aside traditional philosophical prejudice against the body and instead simply recall philosophy's central aims of knowledge, self-knowledge, right action, and its quest for the good life, then the philosophical value of somaesthetics should become clear in several ways.* (Shusterman, 1999, p. 302)

The key to understanding Somaesthetics is in is in the enhanced quality of life that is achieved through the enhancement of valuing of the body. This dynamic, according to Shusterman, also applies to the relationship between *soma* and architecture: "If architecture is the articulation of space for the purposes of enhancing our living, dwelling, and experience, then the soma provides the most basic tool for all spatial articulation by constituting the point from which space can be seen and articulated" (Shusterman, 2011, p. 288). Architecture, beginning with the soma, can be conceived as a necessary tool for the improvement of our lives—visual coordinates, depth, verticality, size, gestures, and the relationship with our surroundings are all features aimed at being able to improve the quality of habitability and thus of being (Shusterman, 2011, pp. 288–290). In addition to these, there are real identifications in which *soma* is reflected in the structure of the building; in fact, to be qualitatively appreciable, a building must be appreciated for its beauty and function—must ideologically represent a space—and so must the body (Shusterman, 2023).

There is a correspondence between somatic conditions and architecture, and increasingly architects and designers are using this relationship to highlight people's use of shared and private spaces. In recent years, discussion has developed about the somatic use and experience of spaces, particularly in the city, but also of objects and private spaces. In this regard, Shusterman has often dwelt on these issues by addressing the issue of Somaesthetics as a principle that can be used in design and architectural projects. At the International Conference organized at the Academy of Fine Arts in Krakow in 2021, "Body and Public Space," he presented a lecture entitled "Soma as and in Space: Public and Private." In 2022, he presented a lecture entitled "Somaesthetics and Design" at the Cyprus University of Technology (Department of Fine Arts); and in 2023, he delivered a talk entitled "Soma and Space" at the International Conference organized by the Department of Architecture of the University of Bologna dedicated to "The Historical City as a Critical Reference and Role Model for Innovative Urban and Metropolitan Development."

The interest on the part of engineers, architects, and planners in general has been increasingly directed toward this dialogue, in which the *soma* acquires a double value, as follows: 1) that of experience in relation to the perceived reality and 2) that of the pragmaticity in relation to the reality to be built. It is with this in mind that the idea of dedicating this issue to the relationship between the body, space, and architecture was born. Indeed, the body and architecture dialogue through the concept of space, which is declined in increasingly transdisciplinary ways.

Indeed, in the contributions, we find many keywords such as city, experience, soma, gesture, relationship, urbanism, built, environment, and virtual. In fact, the distribution of articles is based on the multidisciplinary encounter and experimental reading of the relationship between *soma* and urban, private, and virtual spaces.

The argument of the body as a relationship between emotional experience and architecture is the focus of the article "Motion and Emotion: Understanding Urban Architecture through Diverse Multisensorial Engagements" by Tenna D. O. Tvedebrink, Lars B. Fich, Elisabetta Canepa, Zakaria Djebbara, Asbjørn C. Carstens, Dylan Chau Huynh, and Ole B. Jensen. The authors consider some experiences located in Budolfi Square in downtown Aalborg in northern Denmark. In addition to the livability of Budolfi Square, this paper addresses a very interesting proposal—that of using a *body-centered approach* to analyze the relationship between human body sensations and the urban context. The article also presents a discussion of the relationship between somaesthetics and architecture, in which the authors focus on the *living body* as theorized by Shusterman and the elaboration of Neuro-Architecture —that is, the *empathic* experience—from a neurophysiological background. The moving body, in this way, becomes the object not only through the theorizing but also through the planning of living spaces. The experiential approach to architecture is at the center of the discussion.

Lukáš Makky's paper "Aesthetic, Somatic, and Somaesthetic Experience of the City" emphasizes the somatic and aesthetic aspects of the experience of the city. In fact, Makky argues, like Shusterman, that architecture provides the framework for experience. The body is always the starting point, but in this case, the direct references are to John Dewey and Walter Benjamin regarding an aesthetic sensibility capable of experiencing. All the inhabitants of a city can consider themselves involved in the aesthetic experience of the everyday. Similarly, the experience of the city can be considered from the *somatic* point of view—that is, through the living body. Makky, at the end of his argument, inserts the case study of Alcazaba, the Phoenician fortress in Malaga on which the city's strong identity—and consequently the experiences that could be created—depend.

In addition to the topic of aesthetic experience, this issue makes apparent two other aspects—that of inclusive design and that of digital change in new conceptions of virtual reality (VR) spaces. In Mark Tschaepe's essay "Somaesthetics of Discomfort and Wayfinding: Encouraging Inclusive Architectural Design," the object of analysis is the body's orientation within cities and public spaces, often directed by satellite navigators. Tschaepe highlights the sense of discomfort and anxiety at the moment we lose our orientation in an unfamiliar place. In this regard, he uses discomfort as a starting point to be developed through somaesthetics, with a view to better orienting people in a city. That discomfort not only makes it possible to design, through somaesthetics, better spaces, such as hospitals, where discomfort is related to a physiological need or lack, and garages, as in the case of orientation.

VR is another area showing the applicability of somaesthetics in the design and perceptual fields. In Jessica Fiala's essay, "Sensing the Virtual: Atmosphere and Somaesthetics in VR,"

interest lies in the new avenues that virtual application offers to the realms of atmosphere and the body, moving simultaneously in both real and virtual space. Indeed, the sensation of space amplifies our perceptions, bringing the place of the virtual closer to concreteness. In the studio projects of Design I/O (https://www.design-io.com), Fiala emphasizes the designers' interest in creating a virtual environment capable of simultaneous interaction with the virtual body and the physical body. In this way, the proprioceptive aspects of somaesthetics are stimulated by two conditions—the programmed and the instantaneous. Another very interesting example is the documentary *Munduruku: The Fight to Defend the Heart of the Amazon* made by the Munduruku community in 2017. With this film, the audience is immersed in the Amazon basin via the reconstruction of the sensory elements of the Amazon rainforest that are appreciable in different booths. Here, the five senses are stimulated by smells, noises, lights, and materials that augment the virtual reality and vice versa.

Complementing these contributions are two *essays* and an *artistic statement*, which emphasize the importance of an artistic and pragmatist analysis of the relationship between somaesthetics and built, political, and design environments. The topics of these pieces are based on somaesthetic involvement, which is analyzed through specific contexts, including soundscape, design, and politics. In architecture, in fact, the importance of sound or silence is often argued ; the issue of hearing has been researched several times in the fields of atmosphere and architecture (Zumthor, 2006). In this regard, the paper by Bálint Veres, "Notes on the Aural Aspects of Built Environment," connects the built environment with the acoustic dimension. Here, the multisensory dimension of the *kinesphere* cannot be excluded in the design world. Veres offers a reflection regarding our sensations and perceptions of architectural and artistic environments, capable of considering acoustics as a physical term.

In this way, the art world has increasingly used the sphere of somaesthetics, and Bartlomiej Struzik offers an *artistic statement* exposing a new configuration of somactive art in his contribution "Is Space Recognizing a Form? A Contributory Study for the Theory of Somactive Art." The subject of his exposition is that of sculptural art connected to places, which together create and restore memory. Moreover, the movement of the body in space amplifies the identity recognition of space. The materiality of sculpture, in this context, can do two things: in the case of the artist, one can recognize oneself in the act of creation; in the case of the audience, one can recognize the identity of what is created.

In addition to artistic performativity and fruition, in built environments, some contexts relate back to somaesthetic involvement. For instance, gesture is a form of expression and communication but also a symbolization in political and social realms. Pradeep A. Dhillon, in *Architectural Gestures in International Relations*, manages to provide a careful analysis of the gestural relationship with established forms of expression in the embassies of Belgium and the United States in New Delhi, India, and Finland in Canberra, Australia. The somatic dimension of the Wittgensteinian gesture is not only the signification of the architectural project but also of what happens *somatically* in the configuration of the project itself. Dhillon's reference to

Wittgenstein is inspired by Kantian transcendental idealism, in which the function of the body is no longer to be considered solely as a *medium* but also as a *bonding* element, a network capable of being the backdrop for our activities in the everyday, private, and public spheres.

Increasingly, somaesthetics is being taught and illustrated in schools of architecture and academies of fine arts in order to understand how the livability of places is rooted in a connective tissue that is within everyone's reach. This democratic reading of the discipline helps us to understand how everyday life can also be improved through a new design reading of spaces and objects. I have had the good fortune of introducing the theory of somaesthetics on several academic occasions—the first time was in 2021 within a doctoral course, "Philosophy of the Architectural Interior," in the School of Architecture and the School of Human Sciences at the Federico II University of Naples, during a lecture entitled "Somaesthetics. From Architecture to Design." For a second time in the same year, I introduced this theory during a three-day workshop at the Academy of Fine Arts in Naples, entitled *The Living Body: A Multimedia Experience*. Most recently, in 2022 in a lecture, entitled "From Gestalt to Somaesthetics" at the Academy of Fine Arts in Naples, I presented these ideas. Simply from the titles of these contributions, the importance of the aesthetic discipline in many areas of performance and design is evident.

Even more so, from reading the rich contributions of this issue, what emerges is the openness of using somaesthetics in the development of architectural contexts, as well as design in virtual worlds and those of augmented reality. This means that resorting to primary sensations still remains a fundamental matrix of our knowledge.

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# Motion and Emotion: Understanding Urban Architecture through *Diverse* Multisensorial Engagements

***Tenna D.O. Tvedebrink, Lars B. Fich, Elisabetta Canepa, Zakaria Djebbara, Asbjørn C. Carstens, Dylan Chau Huynh, and Ole B. Jensen***

***Abstract:*** *Understanding how (dis)abled human bodies interact with the built environment is critical in Urban Design. We examine if somaesthetic theory combined with a neuro-architectural framework can help advance our understanding of human bodily interaction with the built environment. We do so first from a theoretical point of view, and second with an analysis of the situated context: Budolfi Square in Aalborg, Denmark. Our take-home-message is that architects and urban designers need to move beyond the established understanding of the multi-sensory soma, into an understanding of a* situated mobile-emotional soma.

***Keywords:*** *Somaesthetics, neuro-architecture, human body spectrum, situated relational interaction, mobile-emotional soma.*

***Photo credits:*** *Lars B. Fich and Tenna D.O. Tvedebrink*

**Figure 1** *Budolfi square in Aalborg, Denmark*

## Introduction

Even though cities and buildings appear solid and static, urbanism and architecture are all about movement and emotions. We, as human beings, move and are moved by buildings and urban spaces; understanding the built environment only as solid, static, and sedentary objects is a mistake. The human *body*, with its diverse capacities for movement and emotional experience, is the key to comprehending how buildings become architecture, and how spaces become urban ecologies. In this paper, we apply a theoretical framework to appreciate the multisensorial, embodied, and mobile engagement with the city, focusing on an urban plaza. We examine if the Somaesthetic theory combined with a neuro-architectural framework could uncover how motion and emotion affect *diverse* human bodies in different intimate and unique ways. We take as an example a variety of situated experiences at the newly renovated Budolfi Square in the city center of Aalborg, Northern Denmark.

**The Experience of a City**

Picture 1 illustrates Budolfi Square, a plaza in the Danish city of Aalborg. Completed in 2020 by Landscape Architecture studio SLA, Budolfi Square is part of a major urban redevelopment in the historic center. The square sits next to the 400-year-old Church of St. Budolf (known as Budolfi Kirke in Danish). In this setting, local authorities envisioned a central meeting place to encourage urban livability and health-promoting recreational activities, as well as incorporating climate-adaptive solutions to secure biodiversity and rainwater collection (Aalborg Kommune, 2019). Budolfi Square is a hybridization: a mix of an urban plaza, parking garage, and "pocket park." This project lies in the intersection of landscape, urban, and building design. Mixed public services and hospitality activities offer opportunities for rest, exercise, and entertainment. A variety of textures, colors, scales, and scents amuse the five senses — in addition to the sophisticated material choices in surfaces and urban interiors. In 2021, the Budolfi Square renovation was nominated among six Danish projects for the renowned European Green Cities Award (Nielsen, 2021). Unfortunately, the project did not win, and despite international recognition, the local community expressed divergent opinions on the architectural quality and everyday livability of the place (Sonne & Søndberg, 2020).

Recently, one of the authors went to Budolfi Square with her family: two children aged six and ten, and the grandmother and grandfather, both sixty-two years old. The 6-year-old daughter had been there before: upon reaching the corner of the street, she immediately recognized the square. This recognition triggered a retelling of her experience when was there with her classmates. With great confidence and enthusiasm, she joyfully talked about running up and down the several labyrinth-like pathways, touching the blended vegetation, and climbing the benches and staircases. The girl, very dynamic and minute in the bodily figure, explored with great curiosity the play opportunities, paying less attention to the surrounding shops, restaurants, and historic buildings. The grandparents, on the other hand, who are less mobile, overweight, visually impaired, and suffering from a series of chronic diseases (like diabetes and arthritis), had never been there before. Their immediate reaction to the urban setting was a series of speculations on how to avoid climbing the stairs or walking up the inclined pathways. Their conversation revealed the anticipation of a time-consuming and strength-demanding effort, as well as great concern and insecurity about their bodily abilities. When asked about their specific worries, they disclosed concerns about blood pressure, heart rate, and the risk of breathing problems. They anticipated how extra bodily activities would cause more pain and discomfort than already present. We might call this "present" situation their "everyday bodily state." As Critchley and Nagai argued, "bodily states shape mental content" (2012, p. 163). Furthermore, with reference to neuroscientist Antonio Damasio (2010), Critchley and Nagai elaborate on *how* "body-mind interactions are of particular interest to understanding emotions and motivations" (2012, p. 163). Finally, in contrast to the little girl and grandparents, the 10-year-old son paid little attention to the urban setting or passing of pedestrians. He took the urban landscape for granted as his conversation and bodily movements seemed strictly determined by the forthcoming restaurant experience. His chatting circulated on what he was going to eat, what he expected of the meal experience, and how to get there as fast as possible. He used the guidance of his parents, and different visual cues provided by signposts and restaurant front facades, to wayfinding through the site.

The takeaway of this *family narrative* is that specific urban settings ostensibly triggered very different spatial experiences within a small group walking together. This walking situation is referred to as a "mobile with" by Ole B. Jensen (2013), and underlines how the city fabric

is assembled through a series of entangled human bodily experiences and environmental affordances [1] construed from a continuous oscillation between "what was," "what is," and "what if". Yet, this curious situation further illustrates how different bodily states and their associated "feeling stamps" prime divergent reactions and contradictory perceptions of the "same" built environment. According to the theory developed by Damasio (2010, 2018), feelings are a "value stamp" of our conscious experience in the homeostatic state of the living body. Humans can simulate bodily states and anticipate feeling *as if* an event happened simply from a memory recollection. The family narrative sparked a series of questions on human movement, spatial perception, and emotions that triggered further academic curiosities about the built environment and its relationship with the human body, affect, and wellbeing. Along with speculations on how divergent bodily states and feeling stamps are encountered throughout life, we studied feeling stamps' relevance for future urbanism, architectural design thinking, and professional practice.

**Methodology and Structure**

Based on these informal observations, the topic of exploration is understanding the relationship of moving, sensing human bodies within an urban environment. We propose a *body-centered approach* that may enact new emotional dimensions traditional planning and modern architecture overlook. Ultimately, we are curious about unfolding the body-centered perspective to understand the implications of Somaesthetics in an urban setting. Our research's short-term goal is to advance our understanding of the relationship between the human body and the built environment by articulating the relevance of human consciousness and feelings. In the long term, we hope our findings will inform contemporary and future designers in academia and the building industry.

With the Somaesthetics theory, an interdisciplinary approach rooted in philosophy and insights from cognitive science, we hope to gain a deeper understanding of a body-centered perspective in design research, practice, and education. To do so, our research is based on a theoretical approach (framing the thinking), using the exemplary case of Budolfi Square in Aalborg, Denmark (questioning the practice). So, first, we move inward: to the body itself. To best understand the body's relationship with its environment, we turn to Richard Shusterman's Somaesthetics theory (2008, 2012a), specifically from his essay *Somaesthetics and Architecture* (2012b). Additionally, we study the notion of soma design, developed within the field of interaction design by Kristina Höök (2018), on the background of Shusterman's writings. It should be noted, we apply a narrow focus on the theoretical perspectives of Shusterman, deliberately excluding his practical studies and actual somatic training. We then handle a brief introduction to the concept of neuro-architecture, absorbing valuable insights from neuro/cognitive science. We limit ourselves from going into detail about the human neural system, neurobiology, or detailed accounts of neural activities.

It is difficult to address this topic on a theoretical and abstract level because it is situated by nature: a specific situation, with unique constraints and personal embodied experiences. To accomplish this situation, we move outward: to analyze the above-mentioned family situation and the built environment of Budolfi Square. Recall the grandparents' reaction to the fundamental site elements providing access to the square: the stair, ramp, and elevator. The anticipated result is a weaving together of the parts learned from Somaesthetics theory and the neuro-architecture

1 As coined by James Gibson (2014 [1979]), but extended by Andy Clark (1999), *affordances* refer to opportunities for use and action that the physical world provides an agent and are determined by the "fit" between the agent's physical structure and skills and the environment's action-related properties. It is a central concept in ecological psychology but has since been extended to numerous disciplines resulting in altered definitions (Djebbara, 2022).

to help scrutinize the inside-to-outside relationship between different human bodies and the built environment.

## Theoretical framework

### Human Bodies in an Entangled City Fabric

Understanding the body's reaction with the built environment is neither new nor particularly significant. Ten thousand years ago, prior to Mesopotamia, humans have been practicing urban design and architecture. This is evident by the vast number of buildings and urban spaces constructed throughout time, and the significant human ability to evaluate, envision, and improve the built environment for comfort and our ever-evolving needs (Fazio, Moffett & Wodehouse, 2013; Höök, 2018). This attention to the interrelationship between human needs and the built environment reached a new level in 1933. The International Congresses of Modern Architecture (CIAM) with the *Charter of City Planning* sparked a series of design principles meant to guide modernism and functionalism, highly influencing building practice throughout the twentieth century and early twenty-first century. The design principles focused on objectivism and standard measurements (Tvedebrink & Jelić, 2018). Many architectural scholars and practitioners have studied the psychological and behavioral effects of the built environment.

In a Danish context, we have Steen Eiler Rasmussen (1959), Jørn Utzon (2008 [1962], 2009 [1948]), Ingrid Gehl (1971), and Jan Gehl (1971), who each argued for a continued focus on the interaction between people, buildings, and urban spaces. Among others, these individuals prioritize the human condition, human perception, human scale, and a variety of people's needs within their respective disciplines: architecture, city planning, and psychology (Sim, 2019). In parallel, a series of international scholars, including Richard Neutra (1954) and Kent C. Bloomer & Charles W. Moore (1977), described the problems with modernist city planning and advocated for a more humane, empathetic perspective in architectural theory by drawing on psychology, Gestalt experiments, and studies of sense perception. Neutra (1954) applied knowledge from biological and behavioral sciences to architecture and community planning. Bloomer & Moore (1977) highlighted how they, dating back to the mid-1960s, attempted to introduce architectural thinking and practice to students from the standpoint of how buildings affect the individual and community. Rather than simply tectonic structure, a series of prescribed technical goals and standardized construction principles, architectural design is a "sensual social art responsive to real human desires and feelings" (Bloomer & Moore, 1977, p. ix). Based on a historical review of the philosophy of beauty, aesthetic theory, and environmental psychology, we know the body is fundamentally three-dimensional, and body movement and memory are essential to understand architectural and urban form.

Other, more recent advocates of a body-centered architectural perspective are Frampton (2002), Mallgrave (2013), Robinson & Pallasmaa (2015), Goldhagen (2017), and Robinson (2021) who, similar to Neutra (1954) and Bloomer & Moore (1977), strongly oppose the visual dominance and philosophical alienation of the body from the mind in postmodern and late twentieth-century architectural theory and practice. Instead, with a foundation of neuro-architecture, they advocate for a multisensorial and embodied approach. Over the centuries, inspired first by the Vitruvian thesis, architectural theory evolved several notions of *embodiment* (Pasqualini, Llobera & Blanke, 2013). They emphasize kinesthetic movement above vision and highlight the importance of tactile sensory inputs from material choices. Throughout the years, this perspective translates to an increased awareness of the multisensory bodily experience: a

focus on *designing for all the senses* (Malnar & Vodvarka, 2004; Gehl, 2010; Sim, 2019; Roe & McCay, 2021).

From an urban perspective, scholars like Timothy Cresswell (2006), John Urry (2007), Albena Yaneva (2012), and Ole B. Jensen (2013) have criticized urban planning for studying the built environment as static objects, disregarding cities as complex, richly diverse, situated, and embodied settings. As highlighted by Jensen, "the 'mobilities turn' has, for two decades, provided us with new, detailed and at times provocative insights into the 'meaning of moving' and the cultures of mobilities" (2021, p. 67). The notion "mobility" grows out of a "pragmatic shift" referring to more than physically traveling from A to B. It denotes a rich societal phenomenon addressing everyday urban life. Mobility is a way of theorizing on what *forms* today's cities, to better understand the *lived* social, cultural, sensorial, emotional, and material experience. Because everybody and every *body* is unique, each have unique movements and social interactions. Thereby highlighting both the act of moving itself, and the experiences and emotions that are created *while* moving in the urban fabric (Lanng, Wind & Jensen, 2017). Yet, as argued by Wang, Sanches de Oliveira, Djebbara & Gramann (2022), a deeper understanding of *how* the built environment possibly affects bodily perception and everyday experiences remains uncovered in most urban and architectural writings, as well as in urban and architectural design guidelines. Not to forget the lacking attention in established educational programs and the pedagogical methods used to teach and train future urban design thinkers (Tvedebrink & Jelić, 2021). Unfortunately, urban designers and architects rarely relate their design to the human body and its multiple forms of embodiment (Imrie, 2013; Mallgrave, 2013). When the body is regarding in design practice, it is usually imagined as a "normal" body or one characterized by standardized geometrical proportions (Imrie, 2013; Tvedebrink & Jelić, 2018; Condia, 2020). We could claim a gap exists between philosophical speculations in contemporary theoretical frameworks and the knowledge used to inform design practice on a deeper understanding of how (diverse) bodies interact with the built environment.

Nonetheless, moving outside the traditional borders of the architectural and urban disciplines, we find the more recent writings on Somaesthetics put forward by Richard Shusterman (2008, 2012a). On a pragmatist philosophical foundation, he highlights the human body (which he refers to as *soma*) is a "medium" through which the built environment is experienced and co-created. Shusterman argues the body constitutes and relates to the surrounding world in a sensorily, emotionally, and cognitively dynamic relationship, thereby pushing the entanglement and possible translation of established urban and architectural theoretical frameworks even further into the domains of neuro/cognitive science.

**Somaesthetics and Architecture**

Richard Shusterman is, in his own words, "integrating Western philosophy, cognitive science, and somatic methodologies with classical Asian theories of body, mind, and action" (2012a, p. I). He advocates greater attention to "the role of body consciousness in knowledge, memory, and behavior" (p. I), as well as a plea for a deeper understanding of how the rich dimensions of human bodily senses intertwine with human actions and experience. Shusterman introduces a body-centered perspective, highlighting the term "soma," that the body is more than a physical object and a mere sensory instrument (pp. 1–4). He derives the term "soma" from the Greek word for "body" and frames the living body of a person — thereby suggesting a dynamic ever evolving organism, rather than a static object (p. 5). So, the emphasis on the term "soma" indicates an understanding moving beyond the bodily senses of sight, hearing, smell, and

taste. Shusterman accentuates the feelings of skin (touch), proprioception, kinesthesia, bodily temperature, balance, and pain (p. 6). He emphasizes the *lived-living body*, core issues of human embodiment, and the ongoing processes of perception, consciousness, and feeling.

The expression "lived-living body" refers to the holistic complexity of human corporeality. The human body as a biological organism (namely, the *living body*, an anatomical infrastructure responsive to sensory impressions) is integrated by life experiences that make every individual unique (as embedded in the lived body, which allows the perceiving subject to grasp the personal meaning of the world with which they interact). From a methodological perspective, the study of architectural experience has been dominated by a phenomenological approach, focused on the observation of the lived body. In recent years, a greater biological emphasis on the living body has been promoted by breakthroughs in natural human sciences (neuroscience, among others). This research may shed new light on the lived body by complementing the living body, of which the brain and autonomic nervous system are constituent parts (Condia, 2020, pp. 6–8).

For Shusterman (2012a), taking a point of departure in Pragmatism includes the recognition of social, cultural, and political forces in the experience of architecture. Thereby further emphasizing the relevance of human perception of built environment, not only as an architectural object, but as social and cultural patterns in an urban and public domain. Returning to the disciplines of architecture and urban design, this understanding of the human perception of built environment indicates, in accordance with the before-mentioned "mobilities turn" (Jensen, 2017, 2020), a close attention to the multisensory experience, specifically the *movement* through space and related *spatial experience*. Most importantly, Shusterman indicates the body is more than a universal embodied consciousness and normalized body. It is a subjective and individual co-construction. To repeat the words of Shusterman: "somatic consciousness is always shaped by culture and thus admits of different forms in different cultures (or in different subject positions within the same culture)" (2012a, p. 4). A viewpoint which diverts from the more universal embodied consciousness argued in classical phenomenology.

Richard Shusterman states "the basic somaesthetic logic is that rather than rejecting the body because of its sensory deceptions, we should try to correct the functional performance of the senses by cultivating improved somatic awareness and self-use, which can also improve our virtue by giving us greater perceptual sensitivity and powers of action" (2006, p. 8). We can interpret his reasoning in terms of *empathic design skills*. As designers, a somaesthetic approach may improve our "somatic awareness and self-use" (2006, p. 8) by permitting us to better comprehend our inner experiences. Becoming more attuned and sensitive to our bodies and the internal sensations arising from them (interoceptive processing) is a fundamental step to enhancing our bodies as a *design* tool. Thanks to a somaesthetic education, designers can address the need for an empathetic understanding of others' experiences, by acquiring a "greater perceptual sensitivity and powers of action" (2006, p. 8). The timely argument put forward in Shusterman's theory on Somaesthetics is to address the *diversity* of human bodies and the different ways we experience the world with them. Designers should learn and implement this principle, starting with tuning into their bodies and consequently improving their empathetic sensibility.

**Unfolding the Bodily Experience in Design Thinking**

In 2018, the interaction designer Kristina Höök developed a soma-grounded design approach, based on her interest in Shusterman's Somaesthetics theory (2008). Her argument for the soma-grounded design approach was in line with those by Robinson & Pallasmaa (2015). Höök argued

to "reincorporate the body and movement into a design regime that has long privileged language and logic" (2018, p. XVI). Hence, an argument for a much stronger focus on the bodily spatial experience beyond mere visual sensory stimuli. In addition to the inspiration from Shusterman (2012a), Höök (2018) draws on the recent developments in neuro/cognitive science, emphasizing the writings by the neuroscientist Antonio Damasio (2010, 2021). Damasio's thesis is that there is no distinct separation between the (physical) body and the (mental) mind. In line with Shusterman (2012a), Höök emphasizes empathic engagement not only with other people but with surroundings in general. She highlights the movement through space; the perception and emotional engagement with space; how the movement triggers specific bodily rhythm and various postures; attention to the tactile and kinesthetic experiences causing tension and relaxation of muscles, as well as the activation of the nervous system (2018, p.3); the embodied interaction with surroundings; but, simultaneously, a series of behaviors, actions, reactions, experiences, and feelings. In summary, our bodies are not passive objects, but embodied subjectivities, and, as argued by Höök, "movement is always varied, always adapting and always in dialogue with the changing world around us" (2018, p.13). In that sense, there is an inseparable link between movements, emotions, experiences, and thinking (2018, p. 2): merging the mind and body.

**Neuro-Architecture: Experiencing through the Body**

The increasing interest in the discipline of neuro/cognitive science and architecture (often referred to as "neuro-architecture") are sparked by an overall aim to better understand how human bodily experiences are affected by interactions with the built environment — with the goal of improving future design solutions to better support human wellbeing and everyday thriving (Eberhard, 2007; Arbib, 2021).

Modern technologies, such as mobile brain/body imaging techniques, allow for a new horizon of neuroscientific and cognitive experimental research findings (Makeig et al., 2009; Gramann, Ferris, Gwin & Makeig, 2014) and computational analysis. Updated research methods allow us to scrutinize the inner workings of the human body and mind, the neural network, and sensory and motor systems. New insights and better empirical evidence are now possible regarding the long-standing debate about human perception and spatial cognition (Bower, Tucker & Enticott, 2019; Gramann, Hohlefeld, Gehrke & Klug, 2021; Djebbara, Jensen, Parada & Gramann, 2022; Wang et al., 2022). Despite the existing methodological limitations in neuro-architectural research (Higuera-Trujillo, Llinares & Macagno, 2021), new methods show promising results to perform better empirical research studies on how human bodies and brains process spatial experiences and atmospheric moods (Canepa, 2022).

The field of neuro-architecture combines insights from neuroscience, cognitive science, architecture, and environmental psychology to address questions relevant to architectural features and the experience thereof. The theoretical backdrop is grounded in a philosophical framework, drawing among others from James J. Gibson's ecological psychology (2014 [1979]) and a phenomenological focusing on the body's experience and its impact on cognitive skills — namely, embodied cognition (Thompson & Varela, 2001; Thompson, 2007; Gallagher, 2017). Neuro-architecture has a biogenic framework where the human body is a living organism undergoing the process of autopoiesis to maintain its homeostatic balance. Crucially, it is the maintenance of the homeostatic balance which adjusts internal parameters in response to fluctuations in the environment, ensuring the organism remains alive. Homeostatic balance is a fundamental principle of all living systems. Human beings, specifically, rely on this balance for our everyday survival, reflecting a basic measure of thriving and wellbeing.

An important task of *homeostasis* is to prevent lethal errors from happening by anticipating environmental changes based on cues learned through previous lived experience (Sterling, 2012). Having this error-correcting mechanism implicitly engaged is fundamental to an organism's ability to survive due to the numerous surprising observations it can make about its environment. By sensing and acting upon its environment, a living organism can both alter and be altered by external conditions. When an organism senses, for instance, the thermal conditions of the environment are too cold, the organism can either change internal states by shivering to generate heat or change its external conditions by simply moving into a warmer condition. This important interaction between sensation and action is referred to as *sensorimotor dynamics*, and can reveal a great deal about human behavior and experience. Importantly, architectural affordances have been demonstrated to have a fast and continuous impact on these dynamics (Djebbara, Fich, Petrini & Gramann, 2019; Djebbara, Fich & Gramann, 2021).

The brain, body, and environment produce sensations and responses allowing sensory and motor dynamics to co-exist. The result of considering interaction to be *process-oriented* rather than substance-oriented is an allowance for sensory flow and human experience to exhibit fundamental principles of continuity (Rescher, 2000; Spivey, 2008; Thompson, 2007). Therefore, objects, other humans in the environment, and our behavior are continuously shaped by the flowing trajectory of these interactions. Our actions and potential for action are directly related to sensations and our processing of them encaptured as the ecological concept of *affordance* (Gibson, 2014 [1979]). Here, perception is understood as the potential for action — an emerging predictive feature of the living system (Friston, 2010). As stated by Djebbara et al. (2022), "in the biogenic sense, affordances reflect the essence of allostasis, which is the anticipatory process that proactively predicts the outcome of a situation before it can have a potentially lethal impact on the homeostatic. By predicting the environment and the appropriate actions, we adapt and improve our chances of remaining alive, which is the objective of a living organism" (p. 12).

As argued by Wang et al. (2022, p. 5), the Gibson's ecological view takes its point of departure in the co-dependent relationship between "organism and environment," where human perception is understood as "an act, not a response, and act of attention, not a triggered impression, an achievement, not a reflex" (1966, p. 149). In this statement, James J. Gibson concludes "perception is also for action" (Gibson as cited in Wang et al., 2022, p. 5) and coins both an enactive and a predictive perspective with relevance to affordances. He underlines that the brain cannot be separated from the body nor the environment, suggesting that an embodied and dynamic interaction between brain, body, and surrounding environment governs human perception and behavior.

The conscious experience of feeling is typically associated with a bodily sensation and is the result of a two-step process. This consists of 1) a *bodily reaction*, and 2) a *cognitive appraisal*, which seeks to find an appropriate explanation for the bodily reaction in the given context. After experiencing a stimulus, the bodily reaction comes first, by activation of the sympathetic nervous system, and is largely non-specific in relation to which emotions is later consciously produced. As early as the 1960s, research showed activity related to the sympathetic nervous system acts itself as stimuli, and "physiological changes are considered to function as stimuli or cues and are represented cognitively as feelings or sensations. These feelings, in turn, arouse further cognitive activity in the form of attempts to identify the situation that precipitated them" (Schater as cited in Valins, 1966). The bodily sensation experienced is not in itself a feeling, but an experience of autonomic reactions (e.g., elevated heart rate). The next step is a cognitive attempt to find an explanation for the bodily sensation appropriate in the given context. Furthermore,

both steps can be manipulated. An injection of epinephrine artificially induces an autonomic reaction that can cause experimental manipulation of the context, resulting in diverse feelings like euphoria or anger. The same sensations are not present in test persons who have received a placebo (Schachter & Singer, 1962). Likewise, the sensation of amusement can be manipulated by injecting epinephrine, placebo, or chlorpromazine — a drug that inhibits autonomous reactions (Schachter & Singer, 1962). An illusion of an autonomic reaction can even be produced just by playing a previous recording of a participant's elevated heart-rate (Valins, 1966). Conversely, if there is no interoceptive autonomic sensation, for example, a threatening context will not produce a feeling state (Schachter & Singer, 1962). Both the relative non-specific bodily reaction and the cognitive context-determined appraisal are necessary for an emotion to occur.

The findings so far are based on psychological experiments, which took place in the late 1950s and early 1960s based on the James-Lange theory (James, 1884). The neurophysiological background has since been clarified (Critchley, 2005; Gray, Harrison, Wiens & Crithley, 2007; Craig, 2009; Damasio, 2010). The point is that architecture can produce both steps, as context (e.g., for rituals, plays, and performances) or other guided behaviors designed to induce emotions. Most recently, Iodice et al. (2019) have shown false auditory heart-rate feedback can produce a bodily response like an interoceptive illusion of effort. As an example of architecture's impact on bodily responses, consider how an effort of climbing stairs or ramps is a vertical movement and emotional "trick", deliberately used throughout architectural history: from the Ziggurat of Ur to Egyptian temples like Hatshepsut; from the Mayas pyramids to Greek and Roman temples; from the stairs in the renaissance, baroque, and classical architecture to the modernistic promenades of Le Corbusier, or the Stadtkrone motive frequently used by Alvar Aalto in townhalls and other important institutions of society. One would imagine the effort associated with ascending the stairs to town hall in Säynätsälo (Finland) adds a tone of seriousness to the negotiations occurring inside the monumental space.

## Analysis: Situated Context

### Budolfi Square, Aalborg, Denmark

Now, let us return to the example of Budolfi Square. We would like to pause a bit and linger on our family episode from before, to analyze how different bodily states contribute to different spatial experiences and investigate these moments from the perspective of the theoretical framework outlined above. Thereby understanding the human experience prior to designing a physical place.

When we allow ourselves to zoom in on mundane moments in everyday human relational interaction with the urban environment, we find (with insights from Somaesthetics and neuro/cognitive science) that our bodies are constantly met with numerous external and internal sensory stimuli. *Externally*, one may experience the subtle changes in pavement from cobblestone to gravel, traffic noises, odors from passing pedestrians and surrounding restaurants, or the spatial transition from a narrow pedestrian alley to a large inclining landscape (as is the case in Budolfi Square). As argued for by Ole B. Jensen, "practicing situated mobilities in everyday life may be seen as a constant juggling of material spaces, social interactions, embodied performances and networked technologies. As we move across time and space, we may find ourselves placed at different levels of the mobility skills ladder" (2013, p. 137). *Internally*, one may experience the sense of hunger and or an increased heart rate. Yet, we typically are not aware of most external and internal stimuli. In the everyday, it is impossible to constantly take notice of every movement

in our joints and muscles, or to be attentive to one's bodily and feeling states, detecting small changes in, for instance, temperature and light conditions. Instead, the brain "narrates" the collection of sensory stimuli and bodily attention. This narration allows us to be consciously aware of a small percentage of any situation; the rest operates as a nonconscious backdrop (Djebbara et al., 2022).

According to the neuro-architectural framework, every situation in our daily lives is met with previous experiences: previous sensorimotor schemes, attached feeling states, and associations. Triggering a series of predictions and expectations in the current situation based on a selection and modulation of these history-dependent situations. This is a *future-oriented attunement* process, as previously argued. Given the limited energy available and the cost of neuronal activity, humans are naturally frugal creatures regarding the use of environmental features to guide behavior (Djebbara et al., 2022).

Now, let us take a closer look at fundamental architectural elements of transition in the example of Budolfi Square: 1) the *stair*, 2) the *ramp*, and 3) the *elevator*.

**Figure 2** *Different staircases in Budolfi Square. A broad staircase facing north with a central position and direct entry point to the plaza. A more ziggurat staircase facing south providing an explorative walk in the urban landscape*

### The stair

As seen in Figures 1–4, we find different staircases in Budolfi Square. A stair is an architectural element allowing for a transition between two separate spaces with a vertical movement either up or down. It brings increased attention between the foot and the surface of the step, further enhancing the kinesthetic movement of leg muscles, nerves, and tissue engaging the vestibular system. Recalling Somaesthetics, Richard Shusterman (2012a) dwells on the staircase when debating architectural design. He emphasizes that "in descending a staircase, we are rarely aware of our kinesthetic movement, our proprioceptive feelings of balance and extension in space, [or] the tactile qualities of contact that our feet make with the steps" (p. 235). Shusterman refers to the situation as an "implicitly felt quality," which is both a central core of spatial atmosphere and an explicit part of our experience, with strong influence on our behavior, attitudes, and moods. In the case of the grandparents visiting Budolfi Square, they were both aware — before the actual walking experience — of the implications climbing the stairs would trigger. When confronted with the worries about their body abilities in the urban setting, the grandparents revealed a twofold perspective: 1) a personal worry related to the fear of muscle pain and lack of strength; and 2) a deeper concern for what might be framed as "social situated inequality" related to their appearance in front of others: the worry of sweating and heavy breathing is ill-regarded by "urban etiquette" or "urban civility" (Goffman, 1959). This is a clear example of the *action-perception loops* and *co-dependent relationship between the human body, brain, and built environment*. Consequently, a stair could be a dangerous and exhausting element for people unable to easily climb the steps, thereby excluding parts of the human bodily spectrum. In design practice, to accommodate for human diversity, the shaping of a staircase demands adhering to building codes with technical, measurable considerations to safety and accessibility. Too little attention is given to how the stair makes different people *feel* in a sociocultural context.

### The ramp

In-between the staircases in Budolfi Square we find two ramps: a metal ramp and a gravel pathway (Figure 3). Compared to the stairs, ramps and pathways as architectural elements offer the potential of uninterrupted continuity and transition through an inclining or descending terrain. The ramp and pathway afford a steadier walking rhythm and a less strength-demanding or balance-dependent access point. In design practice, the ramp is frequently referred to as a more utilitarian device with a gradual angle of inclination, allowing for universal accessibility: people with wheelchairs or strollers and those walking with the support of walkers or canes can use a ramp. Not to forget the potentials for sack trucks, shopping bags, bicycles, and other convenient transportation devices. As with the scenario of the staircase, the grandparents visiting the square immediately noticed the prolonged pathway and length of walking this route offered compared to the staircase, before appreciating the vegetation or scenic views of the surroundings. So again, despite the functional design, the anticipated effort and related feeling prevented the grandparents from using that access opportunity.

**Figure 3** *Above: gravel pathway from eastern side of the plaza*
*Below: metal ramp from south side of the plaza*

## The elevator

Finally, we have the elevator. In Budolfi Square, it is located on the eastern side, next to the parking garage entrance. As an architectural element, the elevator strongly depends on electric technologies. It is a radically different sensory input and has different movement requirements compared to the stair or ramp. The human body does not move by itself but is transported mechanically in a vertical direction. This experience is in stark contrast to the slower, horizontal walking required with a ramp, pathway, or the rhythmic climbing of stairs. Simultaneously, the elevator, with a small enclosed interior space, often contains odors which can trigger a series of safety concerns around the risk of being trapped inside a small, dim space. If you feel you *need* to use the elevator because you are not able — or comfortable — with climbing the stairs or walking the ramps, you are excluded from the essential sociocultural interactions defining Budolfi Square. Your opportunities for participating in social rituals, like strolling through the labyrinth landscape admiring the varied vegetation, are restricted. This robs individuals of

engaging in equitable social interactions. The placement, form, and materiality of the stairs, ramps, and elevator all contribute to this spatial segregation. This urban environment favors people with a "normalized" body.

Below, we outline three key findings on the background of our theoretical exploration and analysis, advocating for change in future research and design practice.


**Figure 4** *The elevator, parking house, and stair in the eastern side of the plaza*

## Key Findings

### Challenge 1: Greater Awareness to Motion and Emotion

This theoretical framework suggests as we move, we are simultaneously moved by emotion. The emotional process is not restricted to specific "beautiful" environments. It is an ordinary, everyday state of being which is continually evolving (Damasio, 2010, 2021). Emotions can be both positive and unsettling. They are triggered by perceiving external seemingly mundane events,

or by simply the thought of past experiences. Each interaction and encounter are associated and interpreted according to our levels of attention and awareness, providing distinctly personal meanings. Due to stairs', ramps', and elevators' distinct sensorimotor dynamics, they induce distinct emotions, feeling, and behaviors through action-perception loops.

The subtle difference between *attention* and *awareness* should be noted. How we individually alter our movements are moment by moment, not an automatic, general response. Rather, this process is a dynamic and ongoing attunement to the series of situated events. Sarah Goldhagen poetically refers to this *situatedness*: "the stories and narratives we develop [...] are the ones that we write and rewrite all our lives; they are the stories of what we have seen and done and been, when we were in the places and spaces and buildings of the world" (2017, p. 202). The experiential richness of existence is mediated by the built environment, always relating to shifting perspectives of embodied movement and mobility. Our spatial perception and experience are linked to the contextual cultural and social settings we engage in. In hindsight, the grandparents' actions and behaviors became *co-created* based on their emotional states of being and preconceptions/expectations of the situations unfolding around them rather than from a sensory stimulus-response relationship suggested by contemporary design practice. This dynamic is a narration of the "what was," "what is," and "what if."

Additionally, the stairs, ramps, and elevator have three different physical locations in relation to the center of the urban plaza. They differ in materiality and possess fundamentally different architectural *gestures*, each affording a variety of body postures and actions — including vertical and horizontal movements coming from the front, back, or sides. This is positive in the sense it allows different modes of mobility and differentiated experiences, inviting inhabitants to use the stair for a central positioning or the ramp and elevator for a partly hidden overlook. However, we conclude the setting, through the different movements and emotions connected with the stairs, ramps, and elevator, *directly* and *indirectly*, excludes persons with specific body abilities.

**Challenge 2: From Human Body to Human Spectrum**

Most urban spaces are designed according to international standards — based on the statistics of an average able-body and accompanied by a series of strict technical considerations on accessibility. For the three urban architectural elements analyzed, most people are unaware of the urban qualities that shape each architectural element. The awareness of urban qualities arrives from the implications on their individual bodies and perceived abilities. This understanding highlights how crucial are the inner subjective experiences of people. It is a recognition of the *value* each subjective self holds. Thereby underlining the need for architects and urban planners to not only design for various body states, but to develop better ways to capture the *human spectrum* and understand how to translate this "data" in early design processes.

As emphasized by design researcher and professor in engineering Sara Hendren "disability is not a fixed or permanent label that belongs only to some people; it arrives for each of us. Short-term injury and long-term illness, changes in our perception and mobility" (2020, p. 1). "Every day, every body is at odds with the built environment [...] How we meet the built environment depends on both bodies *and* worlds" (p. 31: original italics). Looking back at the family episode in Budolfi Square, it is revealed how every person is on a spectrum of unique body states, and various motor and sensory abilities.

With the above theoretical and analytical insights, it becomes clear how much we take for granted in the subtle act of evaluating distances, negotiating street spaces, and adjusting walking paces. Furthermore, how we use different architectural elements in our everyday surroundings

to help orientate, navigate, and reconsider our movements and directions. As human beings, we continually act, react, and adapt to our environment. Simultaneously, our bodies and brains are continuously changing throughout life. Yet, the question of how to consider body diversity as urban designers and architects is seldom discussed in scholarly circles or in discussions around capturing and measuring different bodily experiences and varying emotions. Throughout education, students of architecture, urban design, and engineering make many assumptions about how people (of a certain able bodily statue) act and behave. Thinking about human bodily diversity and individuals with different temporary or permeant abilities is often seen as extra demanding, only to be addressed with a specialist approach (Tvedebrink & Jelić, 2021). For years this caused a design perspective favoring the legacy of standards and habitual statistical thinking, broadly applied to perspectives on human bodies and their abilities.

Designing for a *spectrum* of human bodily experiences and emotions means paying greater attention to diversity and body movements. As urban and architectural design thinkers, this does not mean removing all obstacles and constraints, but instead considering a democratic orchestration of spaces. This approach allows for a greater spectrum of human body diversities. Additionally, we should consider what the urban settings *do* and *invite for* (in other words, what affective and motor affordances we design), second to how spaces visually look and brand themselves. The lived-living experience of an urban environment is an assemblage of various social practices, interactions, and behaviors. The notion of assemblage is commonly acknowledged in urban theory and practice; however, we are arguing for more attention to the actual movement to better engage distinct types of movement, enhancing the multisensory focus. Simply, urban- and architectural spaces that are designed with great inclusivity will omit disturbing and discomforting emotions, because inhabitants will not *feel* excluded or in conflict with sociocultural norms.

**Challenge 3: Advancing Research Methods and Design Vocabulary**

The plea for a broader understanding of the *multisensory* perspective invites greater attention to the aspects of movement beyond orientation, navigation, and kinesthetic skills. As urban and architectural design researchers, practitioners, and educators, we need to move beyond the common misunderstanding that spatial perception happen to us as a direct result of five basic sensations. We need to understand spatial perception as a dynamic experience continuously co-created. This understanding is based upon concepts like *affordances*, *atmospheres*, and *emotions*, which support the plea for greater awareness of architecture and urban design's sociocultural impact. Thereby, prioritizing a broad spectrum of experience, instead of simplifying the human experience to binaries like able/disabled bodies.

One of the most complicated challenges of existing research methods is capturing and documenting the lived-living and embodied experiences while moving through an urban setting and distinguishing between the levels of consciousness (i.e., attention and awareness, nonconscious behaviors versus conscious acts). Existing design tools help move research findings and data on lived-living experiences into the development of future design solutions and the creative act of formgiving. From a research point of view, it would be ideal to capture the human bodily interaction with built environment from a first-person perspective. Nevertheless, as argued for by Shusterman (2012a), the spatial atmosphere is experienced (and felt) as an intangible and temporary bodily feeling: a given quality in a specific situation. From a research-oriented perspective, the biggest challenge is that bodily feelings are experienced somatically and beneath full consciousness. So, at present, with the technologies and methodologies available,

it still seems impossible to do so. In asking people to pay attention to their own movements, we trigger conscious attention, bringing subject matter to the foreground.

With the above insights, we want to conceptualize a new way of design thinking by adjusting the urban design vocabulary and theoretical framework, which guide the principles for how we plan and design cities. Lastly, this analysis highlights our need to develop research methods necessary in capturing and documenting the theories we speculate.

## Concluding Remarks

In conclusion, we analyzed somaesthetic theory within the neuro-architectural framework to help advance our understanding of human bodily interactions with the built urban environment. We took a point of departure in the interpretation and redefinition of existing architectural and urban design conceptualization using somaesthetic theories and neuroscientific research insights. We focused on the body itself and the effort associated with its *movement through space* as the locus of the *emotional experience* in the context of urban environments. The aim is to develop preliminary steps towards an advanced theoretical framework or design vocabulary, putting experience and emotions at the forefront to inform future design practices.

As established with the existing urban theory and mobilities turn, contemporary cities are constantly transformed, rearranged, and reassembled in different urban patterns. We need a more dynamic perspective to contrast the current static understanding and sedentary approach. What we further learn from the theoretical framework and analyzation of Budolfi Square is to move beyond the established design understanding of the human body as a fixed entity. The body is an everchanging, adaptive, and responsive living organism — and diverse by nature. We should be intimately familiar with the human experience, acknowledging the multiple, parallel lived-living realities.

Although many scholars study the body and its interaction with the built environment, perhaps we should focus on the *mobile* body to understand how *body diversities within the human spectrum impact perception*. Ultimately, moving beyond established strategies of average bodies, generalization, and standardized measurements into weaving diverse, contradictory narratives and perspectives together. This suggestion indicates a fundamental shift in urban and architectural thinking to embrace a broader and more dynamic view on human bodies. It emphasizes a shift from thinking about people as disabled, to understanding existing *disabling environments*. Thereby unfolding a set of ideas and concepts to develop a nuanced, interdisciplinary design toolbox and relevant design taxonomy.

With that said, we would like to end with the words of the Danish architectural thinker, practitioner, and educator, Steen Eiler Rasmussen:

> If we believe that the object of architecture is to provide a framework for people's lives, then the rooms in our houses, and the relation between them, must be determined by the way we will live in them and move through them [...] The design of buildings, which must be stationary, should be based in the movement that will flow *through* them (*1959, pp. 136, 150: original italics).*

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# Aesthetic, Somatic, and Somaesthetic Experience of the City

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***Abstract:*** *The paper will deal with the notion of the experience (as a crucial term of aesthetic theory) of the city, especially the aesthetic, somatic, and somaesthetic experience. The understanding of experience will be based on John Dewey (1980), Richard Shusterman (1999), Maria Bukdahl (2012), Virgil C. Aldrich (1963), and Walter Benjamin (1935 [1969]). In dialogue with Richard Shusterman, we will illustrate two levels of experience: a) the somatic (almost biological) level of experience and b) a second level of experience that requires some intellectual evaluation: interpretation.*

## Introduction

It may sound paradoxical considering the expansion of a somaesthetics (based on experience) and the fact that aesthetic experience is a central notion of everyday aesthetics (in contrast to aesthetic of art); considering the position of aesthetic experience in general, but the notion of aesthetic experience was intensely challenged in previous decades. Th past two years were, from the theoretical point of view, so extreme that they even questioned the very need (or even necessity[1]) of aesthetic experience and required some sort of revision.[2] If we accept[3] aesthetic experience as a crucial term of aesthetics theory, and at the same time, the most common tool for aesthetic appreciation, and any aesthetic evaluation of the human environment, fine art, everyday realities or the human body... the weakening of it is something that we need to be wary of. Nevertheless, the new situation of the human environment that took shape over almost two years was, in the absence of possibilities and obvious aesthetic stimuli, theoretically interesting.

1 From Welschian's (1990) point of view, there can be the counter-argument that it was not the existence of aesthetic experience that was in danger, but we all grew ignorant, or overwhelmed by aesthetic impulses and stimuli, but in fact, the situation was different, because our reality changed and the aesthetic impulses have weakened or reduced in number, not by our own doing.

2 This need for revision was caused by the isolation (physical, aesthetic, personal…) of recipients and the absence of obvious aesthetic stimuli. I use the past tense because this need has appeared during the last two years, but it was never fulfilled, and the need to review, re-examine, and reformulate aesthetic experience is, in my opinion, still valid. We cannot deny that some structures and mechanisms of our everyday life and reality (including aesthetic experience) changed drastically.

3 A great part of the present paper could discuss the relevance and importance of aesthetic experience, but this sceptical approach would not be productive in any sense or way, and it would broaden the paper. If anybody (excluding John Dewey as an obvious, but not contemporary, choice) needs to be mentioned, in the recent but systematic analysis of aesthetic experience, it is N. Caroll (2002, 2012), A. H. Goldman (2013), G. Iseminger (2013), and R. Shusterman (1997). Caroll, Goldman, and Shusterman tried to redefine aesthetic experience and define the nature of aesthetic experience, but at the same time challenged the criticism of the given notion. For all the valid criticism, please see all of them.

The most potent environment (at any time) that offer many possible aesthetic situations and objects (including fine art, which cannot be excluded), can be understood as a complex aesthetic phenomenon and is capable of stimulating the revision of aesthetic experience in any sense or form is the main issue of this paper: the city as a special environment; world in itself. However, even this kind of environment, or perception of this environment, has been challenged during the past two years.[4]

The city will be, in this paper, understood in the most general sense as an urban space inhabited by its dwellers (this is one of the most important aspects of understanding the city as an object of somaesthetic interaction and somaesthetic examination). Composed of streets, alleys, squares, roads, different kinds of nature, etc., but especially of different architectural forms. Architecture is a defining aspect of the shape and understanding of the city, a structure[5]/ skeleton of the city: the most important aspect, layer, dimension… of the city. Architecture as a representation of space (Zervan, 2022)[6] creates the space of the city and creates visible boundaries of the urban environment. If we experience the city, we most often establish our experience on the reception of the buildings, and architectural objects, on their relation, connection, harmony, inconsistency or their urban placement and so on (structure and position in general). Architecture gives us the frame for the experience (see Shusterman, 2012b) and at the same time determines the urban situation that we are experiencing, because when we experience the city, we experience this situation that we are part of. Urban situation is, therefore, a complex situation containing many processes when the aesthetic subject is no longer a distanced, nonparticipative recipient of the city, but becomes a part of the city, that he/she experiences by himself. He/she is not a passive element anymore, but becomes an active agent of the city. The issue of the recipient of the city, and dweller or inhabitant of the city, will be explored as an imperative part of the forthcoming analysis, because the participation of the recipient on a phenomenon or its distance is still an issue of discussion. What is crucial is that the somaesthetic and aesthetic aspects of the city (aspects that are dependent on a special type of attitude towards the objects) determines the character of the experience, and also modulates and specifies our perception of the urban situation.

The understanding of experience will be based on John Dewey (1980), Richard Shusterman (1999), Maria Bukdahl (2012), Virgil C. Aldrich (1963), and Walter Benjamin (1935 [1969]), but in opposition to Shusterman's understanding of experience as something more dominant, relevant, and important than interpretation. The position of interpretation will be more important, or at least equal to experience. Although Shusterman's main goal was to "resurrect" interest in the body as a somatic tool of experience and, therefore, deny everything that can undermine a bodily interaction with aesthetic facts (see Shusterman 1998, 2000, 2012), this

4 The way of experiencing the city and the human environment was also influenced. There was a time when the dwellers were afraid to walk freely in the street, and some paranoia from this period surely influenced our habits of experience in the city. John Dewey (1980, p. 4) states that the city can be aesthetically interesting only in its relationship to the recipient, only if the city "*becomes an experience for [a] human being*". However, what happens when there is no inhabitant in the city? It may sound like some scene from a post-apocalyptic sci-fi movie, but we have all experienced this kind of situation at least once in the last two years. We were maybe living in a city where there was a lockdown or saw some images of these kinds of cities. However, first of all, the space that we were living in is also the part of environment. It was still our flat/ house, but at the same time, it was something very different. We were living in a space that resembled a prison and this claustrophobia of space began to influence our experience: urban, aesthetic, somaesthetic… At the same time, the existing place became a background or a "cover" for virtual reality, a virtual environment that we used to live in. The virtual environment even become more real than the real one and for some people it was difficult to distinguish between different realities, because they could, or must, access the theatre, work, shops… from their home: from the same spot sitting behind a computer.

5 Structure is understood here in the structuralistic sense as something that has its layers in some structured manner, as something that is in constant dialectical relationship and every element is, in a dynamical sense, approaching other elements. In the case of architecture and the city, and its perception, this is a dynamic part of the experience (see for example: Mukařovský, 1966; Sériot, 2014)

6 R. Shusterman (2012b) speaks about architecture as an articulation of the space.

effort was motivated by the defense of popular art (suitable area for somaesthetic research), and his argumentation is defined by this motivation. Shusterman based his advocacy on bodily experience that is, in his opinion, not something inferior to aesthetic experience of art, but something totally different, because the rationality (base for interpretation) is excluded from this intensive, somatic experience. In dialogue with Shusterman, we can state a hypothesis which will be illustrated in the paper; there are always two levels[7] of experience: a) a somatic (almost biological) level of experience and b) a second level of experience that requires some intellectual evaluation.[8] It is necessary to note that these levels of experience are not something that distinguish the quality of experience nor something that can be hierarchized in any sense. Yuriko Saito (2017) indicates that even the (b) "second level of experience" could be something inferior to the (a) "somatic level" in the case of intensity.

The paper will deal with the notion of aesthetic, somatic, and somaesthetic experience of the city. All three experiences will not be understood as something different or hierarchized, but rather as different forms or concretizations of experience that are not in contradiction and even share some common ground (somatic level). Even if their relation and connection will not be explained further in detail,[9] we need to note that all of them are connected. Somatic experience as a base for every experience (the body as an original receptor) can result in aesthetic, or somaesthetic experience. At the same time, it is a part of them both, because there is no experience without the body, and can dispose of aesthetic aspects. Somatic experience is always the base, and aesthetic and somaesthetic experience are its complex extensions. Urban experience, as a more general notion and more wholesome phenomena, will be understood as a complex experience of the city: an unspecified experience of the urban situation that includes all the other types and kinds of experiences specific for the city.

The paper will be divided into three main parts. In the first chapter, the notion of (aesthetic) experience will be discussed in general, although we will use some "unorthodox" authors (as stated above), therefore the understanding of the nature of experience will slightly differ from the widespread understanding of experience.[10] The dominant and central understanding of experience in this paper can be defined by categories of particularity, interaction, activity, and originality, with the emphasis on experiencing either the aesthetic or the somaesthetic level of reality. The second part of the paper will focus on the recipient/dweller of the city as a necessary condition for any kind of experience, and, at the same time, almost an ontological condition for the existence of the city as an environment. The question raised by our participation in city life: "when does the experience of the city start" will be the leitmotif for this analysis. Even if we quite often use the notion of recipient as a typical notion of aesthetic theory, we need to emphasize that his/her participation and activity in the life of the city are necessary for the existence of any possible experience. If we are only perceiving something, we are not a part of the city, and we cannot experience it. The last part will review the specifics of urban experience (with the focus on aesthetic, somatic, and somaesthetic experience). Therefore, the paper will claim that

7 I would like to speak about levels, or layers, because this levelling is applicable for different kinds of experience. Yuriko Saito (2017) speaks in a similar way about the degrees of aesthetic sensibility and argues that aesthetic experience is not only the experience that has the most aesthetic influence. Even the less visible, or appreciative, aesthetic experience is good enough to be called aesthetic experience. Therefore, aesthetic experience is not something that is related only to fine art, or to the most visible experience, or to the experience with the strongest effect.

8 At the conference *The Promise of Pragmatist Aesthetics: Looking Forward after 30 Years,* which took place on 25-28 May 2022 in Budapest, R. Shusterman stressed, in the discussion, that his own theory was always based on the assumption of the existence of two types of meaning: the articulable and the inarticulable

9 I challenged this distinction in the paper *The Soma and the City: A Critical Approach* (Makky, 2021).

10 For a contemporary viewpoint on aesthetic experience and for a different approach towards the nature of experience, see Caroll, 2002.

the quality and intensity of urban (including aesthetic, somatic, and somaesthetic) experience, as an experience of the city depends on the activity and participation of the city dweller and is modified by the information that we have at our disposal, and can be changed due to the interpretation and evaluation of the experience itself.

## 1. (Aesthetic) Experience: general understanding as a theoretical background

John Dewey (1980, p. 35) is convinced that: "*Experience occurs continuously, because the interaction of live creature and environing conditions is involved in the very process of living.*" Every day, every moment, we are in the constant process of experiencing something, even if we do not realize it. This experience does not need to be really intense or aesthetic all the time (the possibility of aesthetic experience is enough: see Mukařovsky, 1966 for Eng. translation see Mukařovský, 2015), but it is constantly present, and it offers a methodological frame for the examination of every aesthetic fact, object, or phenomenon. We acquire[11] most of the information about the world through experience, and only because of it. We, as recipients do not choose to experience something; we are experiencing it. This constant process of experiencing could be understood as a place for a critique, because in its banality it does not distinguish anything, but at the same time it shows the range of perceptive abilities of man. Naturally, we can ignore some aspect of our everyday life, and shift our focus onto something else, but if we decide so after gaining some information (after the interaction with phenomena that we choose to avoid), or, after first impressions, we cannot any longer ignore it as something that is not a part of our experience. If we already perceive something, it is part of our everydayness and our experience; we cannot delete it. Another crucial fact is that even if the experience is a really broad and indistinguishable notion as such, we can identify practical, urban, every day, aesthetic, somatic, scientific… experience. Therefore, all of them are still a kind of experience, but they have different characteristics, nature, and focus.[12] The city is, from this point of view, nothing extraordinary, because as a dweller of a city, we experience it constantly, and even if we are just a visitor to another city, we cannot stop experiencing this new situation. However, at the same time, it does not matter if we experience something trivial, or something new. We experience even the city that we live in, and although we know it so well, the experience could or should be different every time. It is a never-ending loop of experience, even when the intensity and degree of experience fluctuate a lot.

Any experience is based on the interaction of a subject (recipient, participator, dweller) and the object, or environment that they perceive. Richard Shusterman (2007) emphasizes the somatic aspect (somatic naturalism) of this interaction, anticipated already by Dewey (1980), and his methodology and approach resulted in somaesthetics. He put aesthetic experience and the human body, which serves as a mediator of all perception, action, and cognition in the center of his own theory, and he even puts the body, experience, and environment in direct connection. Somaesthetics can also be, in this context, defined as "*the critical* […] *study of the experience and the use of one´s body as a locus of sensory-aesthetic appreciation* […]" (Shusterman, 1999, p. 302).

Shusterman (2006) is convinced that we are actively undergoing aesthetic experience and accepting the situation as it influences us. He criticized the understanding and position of

11 I would like to emphasise the words: "to acquire" and "most of the information". If we speak about experience, we acquire the information, but the understanding and critical evaluation of this information is not automatically a part of experience. Therefore, if we need something more than information, we need to interpret it, to understand it, not just to experience it, and even if this experience can be aesthetically pregnant, we need some kind of evaluation.

12 The approach that we choose to take is the answer to how to distinguish between different kinds of experience (see: Mukařovský, 1966).

aesthetic experience in the field of art, especially the most common conception of aesthetic experience as a valued experience. Therefore, when somebody describes aesthetic experience (according to him) he basically suggested "*that it is very likely to be valuable*" (Shusterman, 2006, p. 219). However, everyday aesthetics had shown us a couple of times that the aesthetic experience is not a guarantee of a real influential or significant value, but rather a revelation about the possibility of valuable aesthetic phenomena. Shusterman (2000) criticized the notion of aesthetic experience as "value", because it was in direct contradiction to his appreciation of popular art based on experience, and it was partially responsible for the distinction of the categories of high and low art. Therefore, he denies this axiological understanding of experience as its main characteristic and only "admits" its not-dominant existence.

An important element of Shusterman's and even Dewey's thinking is the distinction and relationship between experience and interpretation. Shusterman (1990) has consistently (even to the present day: see footnote 8) held the opinion that interpretation and understanding differ, or rather: are not the same. He searched for his answers in the field of everyday life, where the constant process of interpretation cannot exist, and some evaluations of the circumstances in which we find ourselves take place almost "instantaneously" and automatically (without any need for interpretation). Even when we (according to him) do not interpret, we can reach understanding. It is this preference for understanding and knowledge that Shusterman has a problem with, for as he argues (when criticizing the interpretation), "*the goal of interpretation is not aesthetic richness per se, but truth or correctness…*" (Shusterman, 1988, p. 148). This demand of the truth or truth-like claims, building on a correspondence theory of truth and knowledge, is the source of Shusterman's critique of interpretation. Interpretation, as a tool for revealing truth, is problematic for him, since he is convinced of the existence of non-articulative contents, or non-discursive knowledge, which the recipient attains quite often. (see Shusterman 1998, 2000, 2012). Shusterman's critique of the interpretation is therefore based on different reasons: a) advocacy of popular art focused on the aesthetic experience, b) existence of non-discursive knowledge, c) prioritizing aesthetic analysis over aesthetic interpretation.

At the same time, Shusterman (2012a, p. 275) mentioned that experience and interpretation "should work together", and we can strongly agree, because recent years have shown us how irreplaceable the interpretation is in the evaluation/understanding of aesthetic experience. The Czech pragmatist theoretician Zděnka Kalnická (2018) reminds us that pragmatism has arisen from the issue of interpretation, and, in a broader sense, we see that Shusterman understands this fact. He accepted the meaning and justification of the interpretation, but at the same time, he needed to undermine the position of interpretation in order to defend popular art, and somatic based experience, that understand interpretation as something unnecessary. Elsewhere, Maria Bukdahl (2012), in reaction to Richard Shusterman, made a valid remark: "*The aesthetic experience is never passive; thus, an artwork is not complete until the viewer has experienced and interpreted its particular qualities*." As we can see, the interpretation is understood as an integral part of experience. It is not necessary for experience to happen, but it is necessary to understand it. Even if Shusterman disagrees with this statement, we can find in his conclusions the need for interpretation if the process of aesthetic experience wants to be completed.

Virgil C. Aldrich (1983) thought that aesthetic experience is a specific aesthetic sort of experience that occurs when man interacts with aesthetic objects, phenomena, or activities and therefore it is not something that could be mistaken for something else. It is something original that cannot be repeated. In this regard, we could discuss the possibility of auratic, in the sense of Walter Benjamin's theory (1969), value of aesthetic experience: something that is defined by its

time and space. Aura as a notion of the criticism of reproductive art is bound to tradition but is defined by its creation on a specific time, on a specific moment, that is ephemeral, and eternal at the same time. The time of the creation of some artefact will never change, not even with the creation of a copy, because the copy has a different "time stamp". The same logic is applied to a spatial aspect: not even the place (with its time relation and layers of meanings) cannot be recreated. All of this is also valid in the case of experience.

The originality, non-repeatability, uniqueness of experience inclines to a special kind of aesthetic experience more typical for experiencing fine art, but according to the notion of aura conceived by Benjamin, besides man-made artefacts, it could also be "*illustrated with reference to* […] *natural objects* " (Benjamin, 1969, p. 5). Any kind of experience of the urban situation is defined by these two conditions: time and space; the same exact experience cannot be repeated; therefore, any experience is an original. Furthermore, experience is not a foreign concept to Benjamin. In the critique of reproductive art, he analyzes the concept of aura in the context of tradition (method of the preservation of aura) and cult (the original way of concretization of aura in our world) the base line of which is the experience and participation of a recipient: in other words, no cult rite, can exist without the participation of its participants (active recipients). It almost seems as if aura could be understood as an ontological and perceptive (based on the experience of the subject) notion, or that the ontology of the object of aura could be based on the experience that takes on the characteristics of time and space.

According to the above-mentioned approaches, we can distinguish between the following features of aesthetic experience:

1) **particularity**[13]**:** aesthetic experience differs from all other forms of experience with something unspecific[14].

2) **interaction:** experience of the aesthetic object is dependent on the interaction between recipient and object.

3) **activity:** if the recipient experiences aesthetic experience and is the participant in an aesthetic situation, at that moment he/she is aware of it and actively participates in the experience, activity or event which can later initiate aesthetic interpretation.

4) **originality:** aesthetic experience is always in some sense original, not-repeatable, and auratic, because we cannot experience the same aesthetic experience again. To participate in an aesthetic experience means to be part of a transformative process, not to be part of something static and permanent.

The city with all its alleys, streets, trees, buildings, and parks is a complex environment that requires active recipients; therefore, the dwellers, to interact with it. Every day they experience the city, but they always experience something different because the city is in a constant process of changing and the experience is therefore always original: this is realization of the auratic

13 "Particularity" is a little bit problematic. According to Aldrich (1968), the aesthetic experience differs from all other kinds of experience, but according to Dewey (1980), Arnold Berleant (1986), and Nathalie Blanc (2013), we should not think in relation of opposition and difference but we should speak about general experience. It looks like we are contradicting each other, but in reality, this conclusion does not create any discrepancy, because we can declare that the aesthetic experience is something special that cannot be replaced by any other kind of experience, maybe with the exception of somaesthetic experience. Anyway, this claim does not mean that the other types or kinds of experience are in some way inferior.

14 Vlastimil Zuska (2002) also declared this position when he spoke about aesthetic distance.

aspect of the experience. They interact with the evanescent aura that proves the originality of the experience because it cannot be replicated, and even if all the stimuli of the city were the same, the mood or psychological state of the recipient would be different, and it will influence or determine the experience as such. The city or its structure cannot be ignored, because if it is, the dweller would be not able to perceive the environment that he/she is living in, he/she is therefore an active agent of the urban experience. All these characteristics of aesthetic experience will be looked at from a different point of view in the next part: the recipient/participant (dweller) as a crucial element of the city will be analysed.

## 2. The place of the (participative/nonparticipative) recipient in the city: the issue of city dweller

A specific aspect of urban aesthetics is the very fact that a recipient is not only an impartial observer but participates in the life of the city themselves: he/she is a part (or one of the aspects) of the city. He/she cannot separate themself from the city or the urban situation that is known to him/her. Every action that he/she takes in the city becomes a piece of the city itself, because recipient creates the city at the same time he/she is experiencing it. If you take a photo, take out the trash, smell or plant a flower, walk through the street, socialize with people… you perceive and partly create the city. Imagine that you are doing your laundry, and you let it dry on the balcony. With this simple act, which is really banal, mundane, and, from the perspective of the recipient, really irrelevant, you can change the aesthetic effect of the building that you are living in. With this act, the facade of the building will change its colours and some alternation (even short-term) to the city would be made. However, this example does not end here, because if nobody sees your colourful laundry, the alternation of the visual aspect of your buildings is not recognised and, in this case, irrelevant, therefore imagine that some dweller (at this point a valid recipient) is passing by your building and sees the laundry. Maybe they just disliked your building, but for some reason, and they do not know why, they feel different today. It is possible that the colourful clothes that you chose to put on the balcony changed everything, because they liked this change, without even knowing it. Any aesthetic experience and subsequent aesthetic reflection of the city struggles with this participation (co-creation) on analysed phenomena (creating or perceiving one's favourite music in the street, pretty colours on the building, nice flowers beside the street, intriguing smells of food/perfume in front of the building) and inability to take the aesthetic distance that is, to some extent, necessary in formulating any rational conclusions (Zuska, 2002) or interpretation. On the other hand, with this kind of situation, aesthetic interest and enthusiasm as such arise, which can bring a more intense aesthetic experience (Elkins, 2001), and raises the argument of a disinterested approach towards aesthetic objects.

According to James Elkins, the more critically you approach some aesthetic object (in his analysis, he was speaking about fine art, particularly paintings), the more you lose the authentic and emotional value in the experience. In other words, if you encounter any aesthetic object with some "reservation" or distance towards it, you may not be able to appreciate the object adequately. At the end of Elkins' book *Pictures and Tears: A History of People Who Have Cried in Front of Paintings* (2001) the reader is not really certain if the "ability to cry" in front of a painting (to show some disturbing and extreme emotions) is something that we should strive for, or not. In this line of thinking, Elkins does not give us any explicit clues for aesthetically experiencing the city because he distinguishes between people that are able to cry in front of paintings and those that are not, therefore he focuses on the art. He makes the difference

between art critics/theoreticians and "common" recipients, and in some sense, he mourns for the times when he was able to (maybe just metaphorically speaking) cry in front of a painting. It is maybe something that is no longer approachable for theorists. Having said that, his approach is not totally inapplicable to our issue (otherwise we would not mention it). This distinction of recipients that are able to experience everything in an intense emotional state (tendency towards somaesthetic) and (not always) theoreticians that tend to use "cold" "calculating" intellect is universal in every field of aesthetics. There is a difference between somebody who can look at the streets, on the wall of some old building and feel (not just experience, but feel) something, and somebody who just sees architectural, and historical facts carved in stone.

From another methodological point of view, "we can ask" Theodor W. Adorno (1998), what to do. He also spoke about the situation when empirical experience and knowledge enter into a relationship with artistic/aesthetic experience. He concludes that too much information and empirical knowledge disturbs our aesthetic experience of fine art and the same can be said in application to architecture and the city. What happens if somebody is experiencing a renaissance building in the centre of a modern city? Probably he/she will sooner or later ask themself why is there only one historical building and will confront the visible reality or maybe question the age of the building, because either the building is the only survivor of the old city (what is almost unbelievable), therefore something must have happened with the city in the past, or this building is a copy, or some modern, pseudo-historical monument. In this situation, we can appreciate the building, the structure of it, the colour, some ornaments, etc., but our understanding, and maybe the intensity of our experience will be different. In the first case, we implement the information in the experience of the city, and the understanding of the building as a monument of the past (the last survivor), will change our view on the whole city, its atmosphere and it will modulate our experience to be more sentimental. In the second case, we just understand and experience the building as a beautiful piece of architecture, in a modern city that stands up. These two possibilities show us the difference between valuable experiencing of a building, and therefore the city, and between experiencing some ordinary aspects of the building that gives us some aesthetic satisfaction.

From both examples, we can read a theoretical tendency, or need to choose between subjective and objective positions, and maybe the dilemma if we need to take a distance from the object of our experience. However, this problem lies maybe in a wrong understanding of the notion of aesthetic distance. Vlastimil Zuska (2002) pointed out that even if we need distance to some extent and for some reason, in the process of aesthetic distance, we are distancing ourselves from something. That means that we decide what the subject of that distance will be, and what not, or what will the object of our aesthetic apperception be, and what not. In short, aesthetic distance (in extreme circumstances) is not a tool for being objective, and scientifically clear but it is another misleading way of making aesthetic interaction more complicated and less complex. Aleksandra Lukaszewicz Alcaraz (2017, p. 3) speaks in similar way in her analysis of Arnold Berleant's approach. She explains that our involvement and participation is "*always an involvement in a certain environment*" with which we are in constant connection. To sum up, every time we need to decide something from some point of view, we are bound to this position, to this point, and our decision is made according to it. This is the limit of every interaction, experience, and every examination and it does not matter if we are personally involved in the experienced process or not. It is logical to participate, or to be involved in the city that we are living in. To borrow a part of R. Shusterman´s (2000) conclusions of defending popular art; what is wrong with the aesthetic phenomena that give us so much pleasure? If we like a building, and

in response, also the whole street or city, just because a building is in our favourite colour, or because it is from our favourite historical period or artistic style, why should we take a distance in our experience. It is likely that we have good reasons to like this concrete building, or artistic style. Moreover, if we accept the comments of Elkins and Adorno, we can implement the right amount of information in this kind of participatory experience, and set up our distance, and vice versa. If we combine the right amount of information, with our personal feelings or preferences, it will make the interpretation of experience more valid, and more complex. However, partial conclusions will sound more valid after Arnold Berleant's (1986, 2017) comments on the notion of disinterestedness.

## 3. (Aesthetic and Somaesthetic) Experience and the City

Arnold Berleant (1986) expressed, in the paper, *Cultivating and Urban Aestehtics*, two crucial facts about urban aesthetic: 1) we need to analyse the experience of the city; in detail, all the aspects that the subject can identify and experience and knowingly define from the interaction with the city, and 2) the position or significance of the human body ("bodily consciousness"[15]) in such an experience. Berleant did not exclude personal feelings, or any kind of intimate interaction with the city, from his research, because he was aware that even this kind of interaction is a part of the urban experience. He latter evaluated it in the concept of disinterestedness when he argues that it does not mean a lack of interest but "*rather not having appreciation distracted by outside interests*" (Berleant, 2017, p. 10). The common notion of the opposition of disinterestedness and involvement/interestedness is not valid, and the dialectical relationship between those two notions is not really that simple. The recipient can experience some aesthetic phenomena either in engagement with the phenomena or in a disinterested state of mind, where he is focused only on the aesthetic phenomena or object. Thomas Leddy argues that disinterestedness can open "one to new perspective[s]". He even discusses the possibility that "*[a] disinterested perception can contribute to engagement with an aesthetic object*" (Leddy, 2017, p. 74).

Berleant introduced, in this regard, the concept of aesthetic engagement. An alternative to aesthetic disinterestedness, that originated in the notion "to engage" (in the aesthetic sense) with something, and not just research or observe something. This engagement is in some sense more personal and intimate. "*To be engaged in a relation of resonance means to feel addressed* (angesprochen) *by something valuable that affects me and to respond to it by acting adequately*" (Diaconu, 2017, p. 43). Aesthetic engagement rejects the dualism of subject and object, where aesthetic experience is understood as the subjective appreciation of an object and rather underlines the "*contextual character of aesthetic appreciation*" (Berleant, 2013). Berleant solves the theoretical issue when he suggests that the object and subject of aesthetic interaction do not have to be separated and introduced the theory of aesthetical field(s) (Diaconu, 2017), based on four principal components: appreciator, the object, activity or event, and factor that activates the field of situation (Berleant, 2017).[16] To be able to experience the city, we need to be part of this (urban) situation and engage with the city, and at the same time, we need to experience the city in a context, which means that we implement gained information in the experience and another interpretation at the same time. The contextualization of the information that is needed for a more valid and complex experience is necessary and this combination of experience, interpretation of them, and implementing them to another experience is a never-ending loop.

15 He explain this bodily consciousness as "thoughtful, perceiving organism" (Berleant, 1986).

16 In the aesthetic field, "there is no separation between the components, but a continuous exchange in which they act on each other" (Berleant, 2017, p. 10).

The other aspect of Berlant's understanding of urban aesthetics, human body, is from the somaesthetic point of view, explained as a receptive tool that helps us gain any information about our environment, our reality that we need even if something needs to be done with this information. R. Shusterman (2012b, p. 223) even understands the body (soma) as a "*composite structure through which we live.*" Berleant (1986) was convinced that in the process of experiencing the city, cultural and historical meaning, and data of sensory awareness fuse together in a "medium of sensibility". In this notion of sensibility, he tries to combine senses and meaning (Berleant, 1986), so in the analysing of urban aesthetics he demands a part of experience based on bodily interaction, and another part that can only be the outcome of an interpretation. In his understanding of urban experience, we can see the connection with the soma, because the body is at the centre of it all. All the senses that we usually use can increase our sensitivity of all the aspects of the city, and strengthen our interaction and connection with the environment that we are living in. In this kind of understanding, we can agree with Mirza Turšič's (2019) thoughts about the engagement of individuals in a "particular sort of imaginative play" when the past, "latent reality", and perceived reality combine. This combination and also cooperation of past and present are crucial for any kind of experience and interpretation.

From the somaesthetic point of view, in agreement with Berleant, we understand bodily reactions as natural components of our existence. We cannot interact with the city without our body and biological receptors: we can experience only what we see, what we smell, what we touch, and what we hear. Therefore, everything is bound to our senses. It is clear that, in somaesthetic experience, the body is a source, and also, central tool of sensory examination of the realities and had its dominant position, but we cannot deny that a similar significance and emphasis also lies on the body in aesthetic experience, especially in the issue of urban aesthetics: the body is important for aesthetic and for somaesthetic experience to the same extent. If the body is a tool to gain information about our environment, it cannot be bound only to one kind of experience, or only to urban experience as a complex kind of experience. The somatic experience, as a first level of experience, is, therefore, a general level of every experience. We gain the necessary perceptive information through our senses and because of our body, only one thing that changes (from this perspective) is the focus, motivation, and approach that we choose in the realisation of the second level of experience. In the dialogue between Berleant and Shusterman, we need to make one statement: interpretation and experience is not something different, but a practice that needs to cooperate, or fuse together to create a complex experience: an urban experience *per se*. Interpretation helps us to understand all the implications and nuances of our experience, and experience gives us new opportunities to interpret more. Let's imagine that we are walking on the streets of a city from the Middle Ages, and we are used to seeing, in this type of city, some castle or fortress. The most basic impulse of a recipient is to look up and try to find this kind of building or monument on a hill. Our experience of the city is limited by this movement of our body and with this kind of focus, because our experience cannot be free until find this fortress. We can miss a lot of the city, until we find the castle. Afterwards, we can experience this kind of city as a typical medieval city and we will maybe come to the belief that this building has been a monument in this city for centuries. Our movement and experiencing of the city will be defined by this one crucial reality, and it will frame our experience and understanding of the city Although what will happen with the experience of the city if we discovered that the appearance of the city is not a matter of centuries, but just relatively recent changes or urban structure? The city of Malaga (Spain) is this kind of city, the kind of city that gives you the impression that you are visiting another medieval city in Andalusia. Everything is there: narrow streets, alleys, trees,

a castle (Alcazaba, Figure 1) and even a fortress (Gibralfaro), but the experience changes when you realize that Alcazaba was, nearly seventy years ago, full of low-class houses and did not look like a castle (Figure 2) even if it is a medieval castle. You cannot experience this information, you can only implement it into the experience, but you need to interpret it, and evaluate what does it mean for your experience and for the city. The current appearance of the city is bound to this reconstruction motivated by the effort to create an authentic Andalusian city. When we focus our experience on this one fact, we can miss other aspects of the city that are present in the experience like the smell of salt from the sea, the breeze, the sound of the sidewalks when we are walking on them, and so on. Therefore, our experience of the city radically changes when we implement all the necessary information and interpret the whole situation. We can ignore the information, and just enjoy the city as we see, smell, and touch it, and we can also include the information, and the interpretation of them into the experience and experience our emotions and information in a symbiosis. Both approaches give us a different experience, but neither one of them is better or worse. However, we will definitely experience a different city without this gained information, which needs to be interpreted and implemented into the experience process.

**Figure 1** *Alcazaba, Malaga, Spain (author of photography: Lukáš Makky)*

**Figure 2** *Alcazaba in year 1910, Malaga, Spain.*
*Source: https://www.malaga.us/attractions/alcazaba-malaga/*

## Conclusion

The aim of this paper was not to analyse the difference between somatic, somaesthetic, and aesthetic experience, but merely to comment on all three of them in the context of the city, as the main form of urban experience. The focus of the analysis was on aesthetic aspects of experience and the emphasis was on the fact that even the somatic, and somaesthetic experience has, or can have, aesthetic nature. The analysis of the experience was based on the theory of John Dewey (1980), Richard Shusterman (1999), Maria Bukdahl (2012), Virgil C. Aldrich (1963), and Walter Benjamin (1969) resulting in the distinguishing of the four features of aesthetic experience: particularity (aesthetic experience differs from all other forms of experience), interaction (experience of aesthetic object is dependent on the interaction between recipient and object), activity (recipient is aware of the participation on aesthetic experience) and originality (aesthetic experience is always in some sense original).

The emphasis of the paper was made on the need for interpretation of the experience: experience is not enough for appreciation of the city because we need to implement (not ignore) the contextual information that we gain about the city, or the concreate aesthetic situation which we experience. The need for interpretation is most visible in the distinction of experience on two levels: a) somatic level of experience and b) a second level of experience. The first level is not typical only for the somaesthetic experience, as everybody might think, but for every kind of experience, because the body is the main and dominant tool for gaining any information about our daily lives. Interpretation, as a process of evaluating the gained information is necessary, because it can change the quality of our experience, but this relationship between experience

and interpretation is a continuing, or cyclic relationship. Every experience can improve our ability and touch for interpretation, and every interpretation can improve our sensibility for experience. It is not about dominance, or supremacy, but about the combination and cooperation of experience and interpretation.

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# Somaesthetics of Discomfort and Wayfinding: Encouraging Inclusive Architectural Design

*Mark Tschaepe*

***Abstract:*** *Somaesthetics of discomfort facilitates intentionally inclusive designed spaces for wayfinding by accounting for individuals' distinct navigational experiences. Following the work of Richard Shusterman, somaesthetics of discomfort is a combination of somatic awareness and somaesthetic reflection centered around feeling ill-at-ease or out of place. The increased awareness of discomfort and reciprocal reflection upon feelings of discomfort enhances how activities and places are experienced, recognized, and categorized. How people experience difficult wayfinding is an element that is often missing from architectural planning and development. Considering uncomfortable somatic experiences of navigation would provide designers with tools to conceptualize and create wayfinding affordances within various spaces. Discomfort may be understood as a somatic affordance during wayfinding because it indicates that there is something problematic about the intersection of soma and environment. This paper describes wayfinding and somaesthetics as they pertain to architectural design. By using the examples of hospitals and parking garages, somaesthetics of discomfort is introduced as a tool that uses somatic appreciation and individual reflection about wayfinding experiences for improving how spaces are designed.*

## 1. Introduction

In his classic work, *The Image of the City*, Kevin Lynch wrote (Lynch 1964, 5):

> *To become completely lost is perhaps a rather rare experience for most people in the modern city. We are supported by the presence of others and by special way-finding devices: maps, street markers, route signs, bus placards. But let the mishap of disorientation once occur, and the sense of anxiety and even terror that accompanies it reveals to us how closely it is linked to our sense of balance and well-being.*

Perhaps now more than ever, because of GPS tracking systems, search engines, and social media platforms, one might think that the anxiety and terror of being lost has waned to the point of vanishing, but this is not the case. If we examine architectural spaces within the city,

such as hospitals and parking garages, we might note a heightened sense of anxiety and terror, in part, because most people have become dependent upon way-finding devices that tend not to work well or at all within those spaces. Often, structures are designed with wayfinding as an afterthought, and the tools that apply within one type of space prove insufficient or even confounding in other types of spaces. For instance, when traveling into a tunnel, satellite signals that provide directions are often lost instantly, creating a suddenly harrowing experience for navigators. Structural design seldom accounts for persons' anxiety or terror or their differences from one another as they attempt to navigate. How people experience difficult wayfinding is an element that is missing from planning and development of spaces that require people to find their way. Following Richard Shusterman's observation that "the soma is the crucial medium through which architecture is experienced and created," the design and improvement of wayfinding spaces benefits from tools that include somaesthetics (2012a, 227).

I argue that somaesthetics of discomfort facilitates accounting for experiences of disorientation and anxiety and is a useful tool for contributing to better designed spaces for wayfinding. First, I describe wayfinding as it pertains to architectural design. Second, I provide a brief overview of somaesthetics and discuss its application to navigation. Third, I explain somaesthetics regarding discomfort and how discomfort may be understood as a type of affordance for navigation. Finally, I consider somaesthetics of discomfort for improving how spaces are designed. To elucidate this point, I consider hospitals and parking garages as traditionally problematic types of spaces for wayfinding that tend to neglect individuals' somatic differences.

## 2. Wayfinding

When Lynch wrote *The Image of the City*, he defined wayfinding as "a consistent use and organization of definite sensory cues from the external environment" (Lynch 1964, 3). For Lynch, individuals use what he called an environmental image— "the generalized mental picture of the external physical world"—as a strategic tool for wayfinding. "This image is the product both of immediate sensation and of the memory of past experience, and it is used to interpret information and to guide action" (4). Since the time of Lynch's book, wayfinding has been specified as an epistemological process that involves identifying one's location and knowing the quickest and most effortless way to reach one's destination. According to Farr et al., there are three interrelated processes that comprise wayfinding: decision-making, decision-execution, and information-processing (Farr et al. 2012, 716). Wayfinding may be undirected or directed.[1] In directed wayfinding, which is the focus here, an individual aims at reaching a particular goal (Wiener, Büchner, and Hölscher 2009). Two of the key elements to wayfinding are locomotion (e.g., steering) and spatial orientation (e.g., establishing one's position in relation to direction). Notably, much of the literature pertaining to wayfinding focuses on cognitive mapping, which often entails a dualistic perspective that splits the mind of the wayfinder from their environment (Jamshidi and Pati 2021). However, as James Gibson noted, wayfinding entails no cognitive map separate from one's environment. Rather, perception, recalling, and knowing are active elements of the environment of which the individual is a part. These activities occur in real-time with movement and are inseparable from the experience of wayfinding (O'Connor 2019, 17). Inspired by pragmatism, Gibson's concept of wayfinding collapses the false division between individual and environment and highlights the body's embeddedness within the navigational context. The

1 The phrase undirected wayfinding may seem like an oxymoron, but this is the type of wayfinding wherein one wanders without a predetermined course. Examples include unplanned hikes in which the destination is what one happens upon without planning or the French Situationist concept of *dérive*, in which a person or group wanders or drifts aimlessly.

body's role as an active part of the environment is key to understanding how somaesthetics is a tool that suits questions concerning wayfinding. Gibson's ecological psychology has contributed substantially to understanding wayfinding and design and provides a useful bridge between studies of wayfinding and how somaesthetics of discomfort benefits the subject.

Ecological psychology follows the pragmatist rejection of the idea of the individual as a knower separated from environment. The individual is always already part of the context they are experiencing. As William James puts it, the person is "in the game, and not a looker on" (James 1878, 17). M.R. O'Connor reiterates this point nicely when discussing the work of Tim Ingold, who was inspired by Gibson. "We are not self-contained individuals confronting a world out there, but developing organisms in an environment, enmeshed in tangled relationships" (O'Connor 2019, 212). Harry Heft, a student of Gibson, highlights the relationship between wayfinding and the enmeshed nature of individuals. "Perceivers cease to be viewed as stationary spectators of a world spread before them ("out there") and instead are recognized to be actors who explore the environment and discover what it affords" (Heft 2013, 164). As individuals navigate, they utilize previously acquired spatial skills with currently available tools within the environment to enhance their knowledge and, in cases of directed wayfinding, reach their destination. One of the most important concepts to this process that has developed in ecological psychology is that of *affordances*.

The concept of affordances has been used widely with various—sometimes contradictory—meanings across disciplines. Affordances are considered values, aspects, or properties of one's environment that provide or limit an individual's actions (Crippen 2020; Heft 2013). Gibson provides a general definition that captures how affordances may be beneficial or detrimental. "The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill" (Gibson 1979, 127). When wayfinding in undesigned environments, such as snow-covered landscapes of the Arctic, affordances may include specific types of snow drifts that are shaped by the wind in a particular way, which assists in navigation to persons versed in values of the snow and wind in that region (O'Connor 2019). In a forest, wayfinding affordances may include patterns of foliage, rock formations, bodies of water, and other aspects of the environment that help or hinder an individual's navigation. Designed spaces usually include intentional affordances, such as signage, windows, and other indicators, to assist persons in wayfinding. These spaces also include unintentional affordances that may confuse navigators. For instance, dead ends, confusing signage or lack of signage, and unintuitive floor plans, can function as problematic affordances. Some signage may operate as a beneficial affordance within some cultures, but as a confusing affordance for others. Devlin uses the example of a teddy bear with a cross on its midsection as a symbol for the pediatric department in hospitals. Although this symbol proves beneficial to many familiar with hospital symbols within North America, outside of the continent, the symbol lacks the same meaning (Devlin 2014, 431). The design of spaces often depends heavily on signage as affordance, but neglects somatic experiences of navigators. This is especially true of feelings of discomfort within spaces like hospitals and parking garages. Both types of spaces, among others, contribute to disorientation and anxiety for navigators, and somaesthetics supplies affordances from our somatic experiences to learn from these feelings and contribute to the architectural design of spaces in ways that diminish such discomfort.

## 3. Somaesthetics

According to Richard Shusterman, somaesthetics constitutes a broad framework of inquiry that is "concerned with the critical study and melioristic cultivation of how we experience and use the living body (or soma) as a site of sensory appreciation (aesthesis) and creative self-fashioning" (Shusterman 2008, 1). Somaesthetics is an extension of pragmatic aesthetics and the idea of philosophy as an embodied art of living (Shusterman 2015, 181). Following the pragmatic tradition, somaesthetics collapses the false dichotomy between body and mind, and it highlights somatic experience as the root of understanding the world. Somaesthetics also moves beyond the strictures of phenomenology by including pragmatic reflection upon the soma and its habits that is oriented toward improving experience (Shusterman 2008, 75).[2] Combining theory and practice, pragmatic somaesthetics facilitates cultivating and enhancing experience by recognizing the soma and somatic practices. These practices include the representational (e.g., tattoos), the experiential (e.g., posture), and the performative (e.g., dance) (Shusterman 2000, 142-143). These types of practices often overlap, depending upon the activities considered (Mullis 2006). Within this paper, wayfinding is considered primarily as an experiential somaesthetic practice applied to architectural design. By focusing on the everyday functioning of the body within designed spaces and paying special attention to discomfort experienced within those spaces, I am pursuing a way to improve upon how problematic spaces are designed by including somaesthetic reflection.[3]

Recognition of soma as an acting, perceiving, and reflecting intentional agency provides ways of considering somatic experiences that shifts attention from the immediacy of feeling to reflection upon feeling that enhances the ability to discern feelings from one another and shift somatic habits to alter those feelings. Additionally, somaesthetic reflection provides critical awareness to engagement with one's environment, including how the environment and one's soma fit or misfit, what is valued and valuable within the environment given different somatic experiences and habits, and how somatic transactions within a context affect and are affected by elements of experience, such as the soma and affordances within the environment. As Shusterman states, "If the body is our primordial instrument in grasping the world, then we can learn more of the world by improving the conditions and use of this instrument" (Shusterman 2008, 19). Somaesthetics helps us focus on how we engage with our environments as lived experience. Regarding designed spaces, Shusterman notes that the "soma is thus what enables us to appreciate not only the visual effects and structural design features that rely on perceiving distance and depth, but also the multisensorial feelings of moving through space (with their kinaesthetic, tactile, proprioceptive qualities) that are crucial to the experience of living with, in, and through architecture" (Shusterman 2012a, 224). A significant aspect of somatic engagement with architecture involves how we navigate through the variety of contexts in which we are positioned and how we feel while navigating these spaces.

Our soma is a primordial point that acts as our center and supplies direction and volume to space. As Shusterman notes, most instances of navigation constitute basic modes of implicit memory and habit that involve utilizing unreflective perceptions of space (Shusterman 2011). Directional wayfinding is a somatic process of moving intentionally through space to reach a particular aim or goal. When we move through space, our experience of the environment is

2 Somaesthetics includes the concepts of *Körper* and *Leib* as elements of the soma, thereby recognizing appearances and effects within the environment, not simply subjective feeling and perception (Shusterman 2020).

3 Somaesthetics of discomfort fits well with established somatic practices, such as the Feldenkrais Method and the Alexander Technique.

modulated through our feelings. How we emotionally, aesthetically, and ethically encounter a space affects the way we perceive, cognize, and move through that space (Crippen and Klement 2020, 469). Because we tend not to engage in somaesthetic reflection about wayfinding, often our habits are rife with what Shusterman calls *everyday somaesthetic pathologies* that remain unrecognized. Although navigating is colored with tones of emotion and meaning, we do not recognize that these may be addressed when problematic (Shusterman 2011). Pathological reactions to wayfinding through certain environments and situations may entail undue stress and anxiety, but without somaesthetic reflection, there is often little we can do to identify and address the factors that lead to discomfort. Regarding most wayfinding experiences within designed spaces, a generally accepted attitude follows an insight of Bálint Veres: many experiences with architecture are considered non-aesthetic. Veres explains frequent neglect of aesthetic engagement within these spaces. "Within the unconscious, dull, and fragmented everyday experience, architecture offers impulses for physical and mental collectedness, stimulates consciousness, and provides intensity. In the next moment, however, all these could lapse into habituation and everyday familiarity" (Veres 2018, 95-96). Being open to somaesthetic reflection about experiences with wayfinding entails recognizing Dewey's insight from which somaesthetics develops: there is continuity between aesthetic experience and everyday experience (Dewey 2005). The familiar, mundane, and quotidian are potentially rich somaesthetic experiences if we are receptive to them.

Somaesthetics supplies a dimension to wayfinding wherein we reflect upon our somatic practices in relation to how we navigate through space and how it feels to navigate the space. We account for the lived experience of space as quality or *atmosphere* that affects how we engage within the space as we contribute to its meanings and values. (Shusterman 2012a, 232-234). Spaces may be open, confining, relaxing, freeing, tense, harrowing, dizzying, or a number of other qualities that constitute how the space feels to us. When somaesthetics is applied to wayfinding specifically, reflection includes sensory appreciation of the experience of decision-making, decision-executing, and information-processing regarding locomotion and spatial orientation. We do not simply reflect on where we are going, but how past experiences, feelings, thoughts, and values that accompany and moderate that process are embedded in our somatic habits and experiences associated with the environment. We recognize types of spaces, memories of similar spaces, how we feel about such spaces and how those spaces make us feel, and what those spaces mean to us.

Wayfinding becomes an object of transactional experiential inquiry. As Shusterman explains, this type of inquiry is double-barreled in the sense that William James described experience. It entails *what* is experienced and *how* it is experienced (Shusterman 2015, 181-182). We reflect on what we are doing and how it feels while doing it. Inquiring into wayfinding in this way incorporates the practice of everyday navigation, involves the way that the environment is experienced, and transgresses the traditional separation of spatial design and somatic experience. The inquiry concerns what Peirce called the *deliberative formation of habits of feelings* (CP.1.574). We not only question what navigation is, but how wayfinding is experienced and may be improved upon. In other words, we critically engage in assessing the feelings of wayfinding within spaces and situations as objects of thought. Somatic perception—the unreflective feeling of wayfinding—is re-considered as an object of somaesthetic reflection. Through the process of somaesthetic reflection, we enhance our ability to deliberate about our habits of wayfinding in ways that contribute to improving those habits. This falls within the domain of experiential somaesthetics.

Moving beyond self-improvement to architectural design, somaesthetics provides tools for considering how spaces are designed to improve wayfinding experiences. Somaesthetic reflection entails the contexts and situations we experience, including kinesthetic and proprioceptive qualities of spaces in which we move (Lee, Youn-kyung, and Shusterman 2014). Following Kristin Höök's use of *somaesthetic appreciation* as a strong concept that may be used to generate new or alternative designs, wayfinding may be considered as a somaesthetic practice that includes first-person experiences of specific spaces for the sake of design considerations (Höök et al. 2016; Höök et al. 2018; Höök 2018). By slowing down and intentionally engaging with wayfinding as a somatic practice, we are better able to re-cognize ourselves as both *Körper* and *Leib* while navigating. We are objective bodies navigating through space that are subjective, active, and intentional. Somaesthetic reflection supplies the ability to discern movements, emotions, and linkages between the different parts of an experience of wayfinding (Höök et al. 2018, 17). First-person, somaesthetic perspectives are not only useful for somatic self-cultivation, but also provide insights about how a space may be improved for better wayfinding. Specifically, discomfort experienced during wayfinding may function as an affordance that indicates how elements of a designed space detract from one's ability to navigate successfully.[4] Somaesthetics of discomfort provides tools for remedying detriments within architectural spaces that may be addressed by considering first-person perspectives.

## 4. Discomfort

Somaesthetics of discomfort focuses on somatic experiences wherein we feel ill-at-ease or discontented. The aim of experience and reflection is of being at-odds-with the immediate environment and honing our awareness to feel what about our engagement with the environment is disruptive to our ease or contentment. In this sense, discomfort is a tool for scrutinizing engagement of our bodies with the environment to discern what is stress-inducing. Feelings of discomfort become affordances for understanding what is problematic. By focusing on somatic experiences of discomfort, we develop the ability to identify and reflect on fine-grain feelings and understand how aspects of the environment are disruptive (Tschaepe 2021). An example of discomfort is indigestion. Initially, discomfort is only a tone of experience. In its immediacy, it overwhelms experience without being differentiated into specific feelings. Without somaesthetic reflection, we may feel the pangs of indigestion but not the specificity of the feelings or how they relate to the way we have engaged with our environment. We may be cognizant of what we have consumed, but not how we have consumed it or how these feelings relate to other feelings. Such feelings might slip into habituation when we are unreflective. We simply experience indigestion as a general feeling. Through somaesthetic reflection, we may scrutinize a case of indigestion as a certain type with a specific tone, discern our feelings as akin to those we feel during moments of intense stress or fear, or we may note that these feelings align with feelings we have had previously after consuming a similar dish. Alternatively, we may recognize that the feelings correspond to eating in haste or not masticating adequately. Focusing on how the feeling relates to our context, we may discover that we tend to experience a particular type of indigestion when we are in a certain situation or environment. In each case, our discomfort is transformed from a mere feeling into an affordance for understanding our engagement with the environment. When

4 María Auxiliadora Gálvez Pérez has developed similar tools with Somatic Architecture (SA), where she considers somatic perspectives related to spatial navigation (Anderwald, Grond, and Pérez 2021, 61; Gálvez 2019). As somaesthetics of discomfort continues to develop, I imagine that it will utilize the work emerging from SA. The "Platform of Somatics for Architecture and Landscape" (PSAAP) provides photographs, sketches, and writings related to projects in SA (http://psaap.com/en/).

we understand discomfort through somaesthetic reflection, we enhance our bodily awareness of discomfort and improve our ability to inquire about the feelings and causes of discomfort. Optimally, we gain tools for preventing or curtailing similar discomforts in the future. What we gain from somaesthetics of discomfort is not only applicable to our own abilities to feel and understand our experiences of discomfort but is also applicable to improving upon designing spaces that tend to pose problems for wayfinding.

Shusterman argues that "heightening somatic consciousness could improve our architectural experience, both by improving the architect's ability to design and by improving the people's capacity to make informed judgments about architectural designs meant to serve them" (Shusterman 2012b, 14). How a space allows or disallows wayfinding is an element of architectural design that benefits from heightening somatic consciousness. Detection and reflection upon moments of discomfort during wayfinding are tools that are enhanced through somaesthetics and apply to architectural design. By coupling what Höök calls *somatic connoisseurship*—expertise concerning somatic self-awareness, including the ability to observe, discern, analyze, synthesize, empathize, and focus—with first-person perspectives concerning discomfort during wayfinding, I propose developing a practical somaesthetic practice that is applicable to architectural design (Höök et al. 2018, 18). Somaesthetic appreciation and connoisseurship that Höök and others have used successfully in designing objects, such as the soma mat and breathing light, are tools that architects may use to design better spaces for wayfinding (Ståhl et al. 2022; Ståhl et al. 2016). As María Auxiliadora Gálvez Pérez indicates, "disorientating spatial structures can be used as a tool to include bodies with different capacities as agents of design. In this manner, we challenge the everyday present conventions of ableism" (Anderwald, Grond, and Pérez 2021, 62). Somaesthetics of discomfort relates directly to soma design, architecture, and wayfinding because it helps indicate elements of design that are problematic to various persons' navigational experiences but may not be detectible unless navigators have the somatic connoisseurship and tools necessary to share those experiences and architects are receptive to them while also having somatic tools to understand and implement those experiences into designs.

## 5. Hospital Design

Wayfinding is often an afterthought in architectural design (Devlin 2014). When navigation is considered and incorporated into design, the focus tends to be on signage (Mollerup 2009). Structures and signs meant to assist in wayfinding usually are designed in tandem with a variety of considerations, including pedestrian and vehicular traffic flows, pedestrian patterns and needs, and operational requirements of a space. These may be developed following interviews, focus-group meetings, and site surveys. Given the type of space and the persons for whom the space is being designed, environmental considerations regarding wayfinding vary. For most spaces, pathways and decision points are the key elements that determine what wayfinding affordances are included intentionally in the design process (Gibson 2009). Even when these factors are regarded as part of the design process, specific spaces tend to trigger stress and anxiety during wayfinding. Although carefully planned signage is developed and implemented in these spaces, they remain sources of navigational discomfort for many users and rarely account for the various capacities of different bodies. Two of the common culprits that I consider are hospitals and parking garages. Somaesthetics of discomfort provides tools that assist in the design to benefit wayfinding for differently abled persons in each space.

Hospitals are multilevel buildings that pose challenges for wayfinding, especially for those

persons who are unaccustomed to navigating the space, including patients, visitors, staff, and suppliers. Navigational confusion within hospitals accounts for significant losses of material resources and time devoted to care (Devlin 2014; Mollerup 2009; Rooke 2013). Each hospital has a unique floorplan, organization of decision points, and signage. Per Mollerup lists the following reasons people have problems wayfinding in hospitals: complicated floorplans; lack of familiarity with the space, including changes in the space between visits; epistemic challenges regarding unit names on signage; reduced capacities for navigation (e.g., illness; exhaustion; visual impairment); anxiety associated with the space (Mollerup 2009). These issues are often complicated by complexities within the environment, such as number of rotations within stairways, confusing alterations between floor numbers (vertical incongruence of floors), arrangement of complex decision points and linking paths, and few affordances related to landmarks (Hölscher et al. 2006). Accessibility due to permissions or status is also a challenge to patients, visitors, and even staff: restricted areas are often confusing due to where they are placed within the structure. Being forbidden from an area is often unclear until a person who is not permitted access accidentally wanders into a restricted space.[5] This possibility contributes to stressful experiences of wayfinding in hospitals. Although variables such as decision points, linking paths, availability of help desks, and signage may play a role in the design of hospitals, somatic experiences that contribute to navigational discomfort are neglected.

There are tools, such as *MyWay*, that provide audio and visual assistance with navigation, but these do not enhance the structural design of hospitals to curtail wayfinding problems. Rather, these assist users *despite* design flaws. As Devlin explains, "MyWay is a mobile application produced by Meridian to access hospital maps and locate the user within the facility through GPS via smartphones, with turn-by-turn steps" (Devlin 2014, 428). I do not mean to suggest that tools like *MyWay* are not useful. In fact, they are beneficial to users during moments of navigation, but they neglect to address overarching issues with hospital design that require somaesthetic reflection about discomforts that limit the ability for users to wayfind. User-centered design, which utilizes user sensing evaluation and works with wayfinders to help gather information about needs and limitations that is often unfamiliar to designers, is a methodology that could easily accommodate somaesthetic discomfort as a tool (de Aboim Borges and da Silva 2015). For instance, sensors that collect haptic foot texture information and integration with visual orientation are being used to assist hospital visitors with wayfinding (de Aboim Borges 2019; 2020). Collecting sensory data from navigators is an initial step that opens the way for further somatic tool development. Somatic education principles and techniques, such as somatic ethnography, should be coupled with tools already used in ergonomics and soma design to assist in improving upon architectural design (Anderwald, Grond, and Pérez 2021). Were somaesthetic feedback available to architects, it may not only contribute to developing better navigational tools for users, but also to designing less problematic hospital spaces.

Because the soma is our primordial point of navigation, wayfinding issues within hospitals are somatic. Additionally, the problems posed by architectural design to wayfinding in hospitals is rooted in feelings of discomfort. Somaesthetics of discomfort addresses what the feelings of discomfort are and how individuals feel within the contexts of hospital navigation. Such reflection accounts for environmental features, such as position and design of stairways, signage, and decision points, while adding somatic first-person perspectives to wayfinding experiences that entail these features. Somaesthetic reflection includes discomfort that tends to adversely

5 This is an experience I have in medical spaces frequently. Because of the labyrinth design of such spaces, I have suddenly found myself in rooms or wings in which I was not to be permitted but had accidentally wandered.

affect patients and visitors generally, such as exhaustion, symptoms of illness, and anxiety. By using somatic techniques that focus on feelings of discomfort during wayfinding, architects may utilize these perspectives to provide insight into how to design hospitals. Tools like somatic ethnography provide individualized experiences that are important for designing hospital spaces that are inclusive.

## 6. Parking Garage Design

Parking garages are another type of designed space notorious for posing wayfinding difficulties. Wayfinding within parking garages is somatic in two distinct ways that are rooted in what Shusterman calls performative or procedural memory, but that require focus and intentionality because of the difficulties presented by the space (Shusterman 2011). First, drivers are required to navigate into, within, and out of parking garages with their vehicles, which act as mechanical extensions of their bodies. This introduces one set of somatic experiences for persons as drivers. Second, drivers and passengers are required to navigate into, within, and out of parking garages as pedestrians. This introduces another set of somatic experiences for persons separate from their status as driver or passenger. Each set of experiences supplies its own discomforts that provide insight into structural issues built into garages that are problematic for different users. Although architects of parking garages account for wayfinding, the primary considerations are visibility, size of floor areas and number of floors, ramping and traffic circulation systems, and signage (Rebora and Monahah 2000). Factors that pertain to pedestrian wayfinding directly include pedestrian-vehicular coordination and separation, walkway widths, ramps, stairways, escalators, moving walkways, and elevators, as well as lighting and signage (Weant and Levinson 1990). All these considerations are factors that contribute to drivers' and pedestrians' comfort and discomfort with navigating the space, but they stop short of somaesthetic discomfort wherein individual drivers and pedestrians with diverse needs, capabilities, and capacities are encouraged to reflect upon and share their somatic experiences to enhance wayfinding within parking garages. Present considerations within parking garage design do not capture what people experience and how they experience moving within, as well as to and from vehicles in parking garages.[6]

Historically, differences between drivers were considered as parking garages first developed. Initially, navigating in parking garages was believed to require a certain expertise that only attendants possessed, providing them with a level of wayfinding comfort beyond that of car owners and passengers. As automobile design changed, garages were built to allow for easier entry and exit, ramps friendly to the size and height of newer automobiles, and more parking spaces. Eventually, most garages became self-parking, and their design distinguished between skilled and unskilled drivers, attempting to accommodate both.

Most aesthetic considerations regarding parking garages are restricted to their outward appearance and how they fit with the external environment (McDonald 2007; Rebora and Monahan 2000). In fact, this is a major theme for parking garage designers, whereas internal aesthetics are barely considered. Affordances for drivers and pedestrians are created solely for functionality, but with little concern for diversity and inclusion (Gregory 2009). Accessibility

6 Designers are aware of the disconnect between designed wayfinding paths and how pedestrians engage in wayfinding in parking garages. Weant and Levinson remark, "In most parking garages, pedestrian regulations are difficult to enforce. Pedestrians tend to walk in a path representing the shortest distance, and they have a basic resistance to changing grades or following a prescribed path that is obviously circuitous to an alternative travel route" (1990, 198). Somaesthetics of discomfort may help explain what and how pedestrians experience parking garages that motivates them to create their own alternative travel routes. This could contribute to altering designs of parking garages to accommodate the needs of the users.

guidelines that are used in the design of parking garages account for numbers and locations of parking spaces, sizes of accessible parking spaces, accessible routes, and detectable signage for those who are visually impaired, but these are general guidelines that do not gauge the somatic experiences of drivers, passengers, and pedestrians (Beebe and Lew 2000). By adding somaesthetics of discomfort to the tools used by architects who design wayfinding routes within parking garages, accessibility would be increased for a greater number of drivers, passengers, and pedestrians, while improving aesthetic factors that would constitute beneficial affordances for persons with diverse navigational experiences, capabilities, and resources. Somatic considerations that included experiences of driving, riding, and engaging as a pedestrian would contribute to increasing diversity, equity, and inclusion for the users of garages by becoming part of the design.

The use of somaesthetics of discomfort should not be limited to designing hospitals and parking garages. I have used these two types of wayfinding spaces because they tend to present somatic challenges for me, and I have discovered through discussions with others that I am not alone in feeling discomfort within these types of spaces.[7] Other spaces that contribute to somatic discomfort during wayfinding include airports, public transit stations, educational facilities, and government buildings, to name some of the most notorious.[8] I imagine that the design of any wayfinding space benefits from somaesthetic considerations, including what discomforts people experience and how they experience those discomforts while navigating the space.

## 7. Conclusion

Wayfinding is a somatic activity. Our center is our soma, which intentionally and purposefully engages in attempting to find its way. Within architecture, wayfinding is an essential process for those persons who will use the space, although often this activity has not been considered of primary importance during the design of most spaces. Considering somatic experiences of navigation would benefit architects by providing them with tools to conceptualize and create wayfinding affordances within various spaces. Discomfort may be understood as a somatic affordance during wayfinding because it indicates that there is something problematic about the intersection of soma and environment. We should develop and use somaesthetics of discomfort to understand what allows and disallows ease of movement within a space, as well as adjust how such space is designed to improve it.

One of the most important factors for including somaesthetics of discomfort when designing architectural spaces is how it contributes to overcoming exclusion and accommodating different experiences of wayfinding. Varieties of discomfort experienced while moving through a space may be utilized as affordances to facilitate improving upon the design of that space and future spaces that serve the same or similar functions. By developing somaesthetic tools and applying them to architectural considerations, spaces like hospitals and parking garages will become less harrowing for those who must navigate through them. Additionally, we will develop greater

7 When discussing these issues, I use the Texas Medical Center as exemplary because it captures somatic discomfort with wayfinding in both types of spaces. The medical campus spans over 2 square miles (more than 5 square km) in Houston, Texas, and consists of over 60 medical institutions. Not only are the parking garages harrowing because of limiting affordances (confusing pathways, tight curves, dead ends, private parking, multiple security gates to enter or exit certain areas), but the medical facilities are also discomforting because of confusing layouts, inaccessible areas, public skywalks that are unclearly distinguished from personnel-only skywalks, and lack of continuity between buildings (this is especially stressful during extreme heat and heavy rain, both of which occur in Houston frequently).

8 I have been on at least three university campuses in three different countries that included buildings that had floors that changed while one was moving horizontally without moving vertically (e.g., while walking North-South on the second floor, a person would be on the third floor suddenly and without warning). In all three cases, this caused somatic discomfort for conference attendees who were unfamiliar with wayfinding in the buildings. I have experienced similar design issues that affected wayfinding in government buildings.

somatic appreciation, connoisseurship, and empathy for our own and others' experiences, as well as for design.

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# Sensing the Virtual: Atmosphere and Somaesthetics in Virtual Reality

*Jessica Fiala*

***Abstract:*** *This article examines somaesthetics in virtual reality via the spatial lens of atmosphere, adapting theories of atmosphere to virtual environments and advocating for VR as a distinctive terrain for somaesthetics. Building on Gernot Böhme's analyses of atmosphere, this exploration unpacks ways that artists have engaged the body and space in VR, from creative interface design to multisensory storytelling, and projects that blend physical and virtual environments. Having mapped the confluence of somaesthetics, atmosphere, and immersive virtual space, the paper concludes considering the practical need for cultivating atmospheric competence in VR.*

***Keywords:*** *atmosphere, somaesthetics, virtual reality, embodiment, immersive technologies.*

*"To sense oneself bodily is to sense concurrently one's being in an environment, one's feelings in this place."*

– Gernot Böhme, *Atmospheric Architectures: The Aesthetics of Felt Spaces* (2017b, p. 21)

*"Our new media and technologies…are dematerializing the traditional heaviness of the life world, so that the previously invisible atmospheric dimension of our environments…now emerges as powerfully real and essential."*

– Richard Shusterman, Somaesthetics and Architecture: A Critical Option (2011, p. 294)

## 1. Introduction

Entwined with intersections of body and place, digital technologies present an ambivalent intimacy. Woven into daily life, they are carried, worn, and installed in spaces passed through and inhabited. They provide platforms for creativity and conflict. They rouse with alerts and prompts, tracking movements and actions, at times in the background, at times at the center of work and play. Yet these technologies do not merely enter into and inform everyday spaces

and routine habits. They also make possible immersive virtual worlds that one can step into, virtual environments where the body nevertheless remains a foundation for experience and performance.

Virtual reality (VR)[1] has been gaining attention in recent years, with headsets becoming more affordable and capable over the past decade and VR usage bolstered by COVID-19 lockdowns. Spending on VR headsets has increased globally, a variety of arts and cultural organizations have launched VR programming, and major corporations have announced significant investments in the metaverse.[2] Applications of VR already range from occupational training to gaming, architectural design, co-working environments, education, journalism and storytelling, mindfulness practices, arts and cultural programming, and more. Embodiment is an ongoing focus for VR research (Erkut & Dahl, 2019; Kilteni et al., 2012; Murray & Sixsmith, 1999; Shusterman, 2013b) and, despite barriers such as internet connectivity and the cost of hardware, speculations abound related to the future normalization of VR (Ovide, 2021).

While much remains to be seen regarding such predictions, as immersive virtual environments become more common, they present compelling areas of inquiry for researchers and practitioners examining both embodiment and spatial design. How can the body be fully engaged in the subtleties and sensations of (virtual) place, and yet simultaneously, be (physically) elsewhere? How can analyses of built environments enhance understandings of sensory and emotional experiences in virtual space? What distinctive layers of embodied awareness and practice can virtual environments make possible?

Advocating for the interdisciplinary field of somaesthetics, philosopher Richard Schusterman described its focus as "the critical study and meliorative cultivation of how we experience and use the living body (or soma) as a site of sensory appreciation (aesthesis) and creative self-fashioning." To this end, he underscored that somaesthetics encompasses "both theory and practice" (2011, p. 283), from activities and physical training directed at refining bodily awareness and abilities, to sociopolitical and physiological analyses (p. 285).[3] Connecting these approaches to the essential role of the body in architecture and spatial design, he described the body as a "point of origin" for experiencing, navigating, and interpreting the environments that surround us (2013a, p. 13).

Focusing on the centrality of the body within virtual environments, this paper draws on one spatial theory—atmosphere—to explore sensory and corporeal experiences of VR through the lens of somaesthetics. In so doing, I argue that VR offers rich ground for somaesthetics across dimensions of analysis and practice. Examples chosen highlight artistic projects that engage the body in VR through interface design, multisensory storytelling, and installations that span physical and virtual spaces. These examples skim the surface of a much larger arena of potential experimentation, providing touch points within a field of practice ripe for further examination.

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1 Immersive and virtual environments range from worlds navigable via web browsers to physical installations and spatial interventions relying on technologies such as sensors, projection mapping, live feeds, augmented reality apps, geolocation apps, and more. This paper focuses on virtual reality projects accessible via a head-mounted display.

2 Global spending on headsets, software, and services spanning VR and AR rose 50% in 2020, reaching $12 billion (Vardomatski, 2021). In the cultural arena, film festivals featuring immersive content, such as Tribeca and Sundance, have experimented with making VR projects available remotely. Facebook centered the metaverse in its 2021 name change to Meta and Microsoft announced investments in the metaverse in 2022.

3 Shusterman further proposed three dimensions of somaesthetics. Analytic somaesthetics encompasses embodied perception and the role of the body in "knowledge and construction of reality," including sociopolitical influences on behavior, interpretation, and practice, as well as analyses thereof (1999, p. 304). Pragmatic somaesthetics studies and compares methods of "somatic improvement" ranging from techniques of physical training to intentional habits and strategies for honing mindful awareness (pp. 304-5). Practical somaesthetics is the arena of praxis and action—the physical practice of "intelligently disciplined body work aimed at somatic self-improvement…Concerned not with saying but with *doing*" (p. 307).

**Figure 1** *Char Davies. Forest Stream, Ephémère (1998). Digital still captured in real-time through HMD (head-mounted display) during live performance of interactive immersive virtual environment, Ephémère.*

## 2. Embodied Approaches to Atmosphere

The ambiance of a place can be connected to physical qualities and characteristics, but it reaches beyond them as well, hovering in the air, felt in the body. This confluence of sensation, place, and meaning—atmosphere—is comprised of both emotional and physical impressions that convey mood and set the stage for action to unfold (Böhme, 2017a and 2017b; Griffero, 2020; Pallasmaa, 2014; Schmitz, 2016). Philosopher Gernot Böhme described atmosphere as "*tuned space*" (2017a, p. 2), underscoring its interstitial nature, mediating between "objective factors" found in an environment and "aesthetic feelings" rooted in the embodied experiences of individuals (p. 1).

As the body navigates space and absorbs the nuances of place, experiences of atmosphere are informed by a range of characteristics and sensations, both overt and subtle. Elements such as bright lights or dim shadows, echoes of emptiness or the sounds of bustling activity, freedom or restriction of movement, heat or cool mixed with stillness or breeze, designs of sharp angles or organic curves, all comingle to inform atmosphere in a given moment and over time.

While atmosphere can allude to clear identifiable or tangible components, it also relates to a constellation of factors that can be subjective, multilayered, invisible, and contextual, coalescing in what Shusterman described as an "experienced quality of a situation" (2011, p. 296). Interpersonal and social dynamics, cultural competence and facility (Pallasmaa, 2014, p. 231; Griffero, 2014, pp. 200-201), and degrees of welcome, scrutiny, or safety, intersecting with differing treatment based on race, gender, ethnicity, economic class, and ability further inform encounters with atmosphere among individuals and within communities. Given such a spectrum of experiences, even within a shared situation, atmosphere can elude straightforward interpretation. Furthermore, Shusterman noted that the ability to assess atmosphere is

compromised by a lack of embodied awareness and aptitude in recognizing sensations that inform perception, undergirding a need for somaesthetics (2011, p. 296).[4]

Noting the many ways in which designing atmosphere has become a common part of contemporary life, from political events to spectacles launching new consumer products, Böhme encouraged the development of "atmospheric competence." In-line with somaesthetics, he rooted such competence in "bodily presence" (2017b, p. 119). Böhme further noted dual prongs of production and reception, proposing learning how atmospheres are created—physically and through actions and comportment—as well as the ability to better perceive them. In addition to critical faculties vital for confronting attempted manipulation, he aligned atmospheric competence with notions of fulfillment also foregrounded in discourses on somaesthetics, describing atmospheric competence as "a prerequisite for the experience of pleasure in life and the discovery of one's body as a medium of being" (p. 121). In the context of VR, atmospheric competence can be interpreted as cultivating an understanding of the sensory, relational, sociopolitical, and design factors that inform experiences of virtual environments, as well as related skills of somatic awareness to better perceive atmospheres and develop critical capacity to analyze their impact. On the production side, atmospheric competence in VR goes beyond design, also implying a sense of responsibility for actions within interactive or communal environments.

Reflecting on the elements that make up atmosphere, rather than an inward-facing "essence," Böhme emphasized the ways an element "steps out of itself," referring to this extension outward as "the ecstasies of the thing" (2017b, p. 22). Of particular relevance for virtual atmospheres, he differentiated between *material*, "the stuff of which things are made" (2017a, p. 142) and *materiality*, "pure outward form" (p. 143). Using the example of particle board, Böhme elaborated on the discrepancy between "essence and appearance" (p. 144) in long-running practices of fabricating a surface illusion on objects made from cheaper materials, common in contexts ranging from architecture to jewelry making. The "ecstasies of the thing" do not therefore rely solely on structural composition, but also impressions, which Böhme noted can be physical as well as mediated through description or pictorial representation (2017b, p. 54).

Through mediation, atmosphere can extend into situations wherein particular objects are physically absent.[5] Literature provides one example, producing atmosphere through conjuring imaginary spaces, while media such as films and television series at times engage the body on a visceral level, observable in bodily responses to cinematic atmospheres of suspense, humor, or sorrow (Pallasmaa, 2004; Ryynänen, 2022).[6]

Atmosphere within VR can, however, be differentiated from the phenomena outlined above. It is distinct from both the physical experience of being in the world and from embodied reactions to screen-based media external to the viewer. In VR, the body is fully surrounded by a virtual environment that can play on combinations of sensations, from ambiances evoked

4 Numerous scholars have examined atmosphere through the lens of somaesthetics, from embodied analyses of architecture (Shusterman, 2011 and 2012) to architecture's relationship with art and aesthetics (Veres, 2018), perspectives on architectural design (Dhillon, 2015), the dynamics of urban life (Shusterman, 2019), and site-based dance performance (Fiala & Banerjee, 2020).

5 Böhme highlighted the common presence of atmospheres through the example of the theatrical stage set (2013), involving the production of an atmosphere received by an audience. VR and AR are already being used to convey a sense of place to architectural clients (Degen et al., 2017) and gather community feedback on preliminary designs (Winger-Bearskin, 2018). Such uses couple the process of assessing design decisions with the atmospheric feelings related to how a new construction can function in situ and for a community.

6 Max Ryynänen has proposed the category of somatic film to describe "films that base their effectiveness on strong bodily reactions" (2022, p. 8). While the visual is prominent, atmosphere also relies on timing and soundscapes, as evidenced in the influence of cinematic soundtracks on the way that film shapes emotion (p. 13). Of further relevance is Ryynänen's writing on media-generated atmosphere in the context of the emotional and physical layers of rasa theory (2020).

through landscapes to moods kindled through storytelling. Coexisting with the space one occupies, atmosphere in VR is both enveloping and also known to be an illusion, a particular convergence of body and spatial design.

**Figure 2** *Design I/O, Raw Space (2017). Created in collaboration with Beatie Wolfe and Nokia Bell Labs. Design by Design I/O and Joshua Goodrich, VR drawings by James Paterson. VR experience driven by openFrameworks software augmenting a 360-degree live video stream with generative 3D visuals. Image courtesy of Design I/O.*

## 3. Crafting Embodied Experiences of Virtual Environments

Making a case for the relevance of somaesthetics in spatial design, Shusterman emphasized:

> *If architecture is the articulation of space for the purposes of enhancing our living, dwelling, and experience, then the soma provides the most basic tool for all spatial articulation by constituting the point of origin from which space can be seen and articulated.* (2013a, p. 13)

He elaborated that, as the reference point for spatial orientation and navigation, the body is rooted in physical experience—the "multisensorial feelings of moving through space" (2013a, p. 13).

This phrasing foregrounds two aspects useful for scrutinizing atmosphere as it pertains to virtual reality—multisensorial stimuli, coupled with action. On the one hand, atmosphere bleeds over lines between self and environment. Atmosphere "washes over" an individual. It is "poured out into the surrounding space" (Griffero, 2014, p. 194) and has been interpreted as both "something 'out there'" as well as "something which can come over us, into which we are drawn, which takes possession of us like an alien power" (Böhme, 2013, p. 2). And yet, despite this all-consuming sense of being engulfed by an environment, atmosphere does not stop at

external elements imposed upon a passive receiver.[7] Atmosphere also involves choices and limitations, raising questions related to what one can do in a particular place—the role(s) one is invited to take on, the degree (or lack) of agency to roam or act, and the behaviors expected or forbidden (by law or social convention). These dual aspects of physical atmosphere—action and immersion—have clear parallels in discourses on virtual reality.

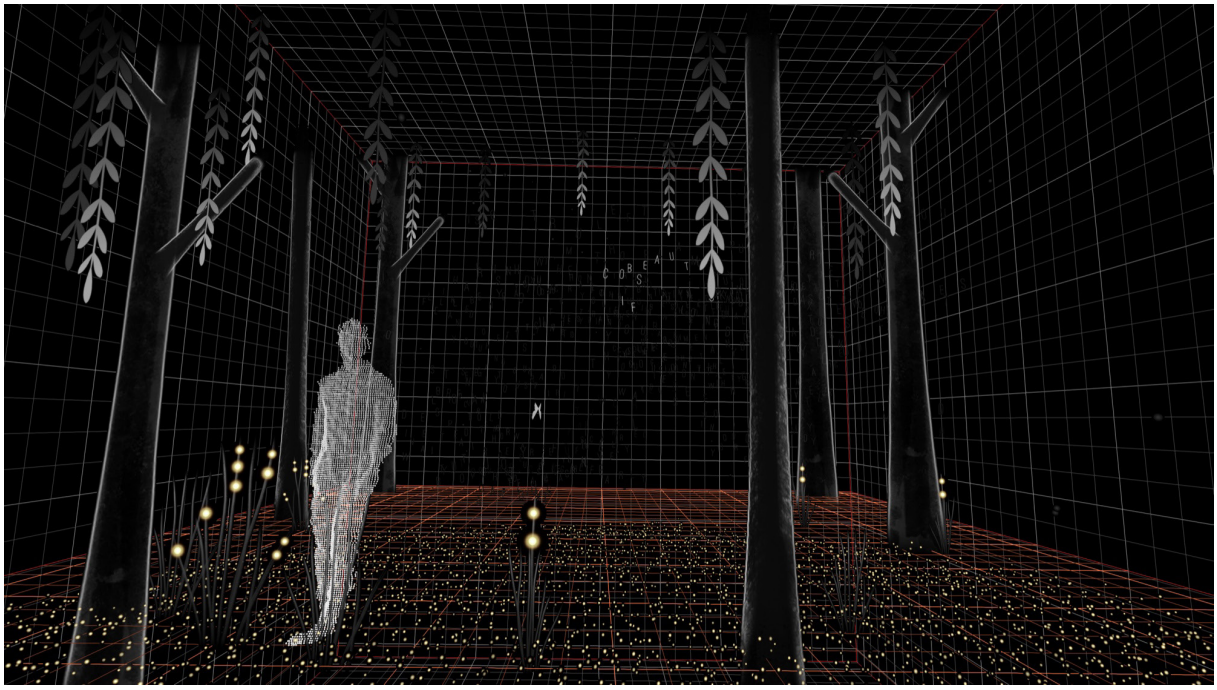

**Figure 3** *Design I/O, Raw Space (2017). Created in collaboration with Beatie Wolfe and Nokia Bell Labs. Design by Design I/O and Joshua Goodrich, VR drawings by James Paterson. VR experience driven by openFrameworks software augmenting a 360-degree live video stream with generative 3D visuals. Image courtesy of Design I/O.*

Donning a head-mounted display, the body becomes the "point of origin" for exploring virtual space. Common sensorimotor actions such as turning one's head to change perspective form key technical capabilities that contribute to the "place illusion" of "being there," the feeling of being believably immersed within a surrounding world, however fantastical.

But what does such an illusion entail—on technical, experiential, and somatic levels? Terms and interpretations remain an ongoing debate,[8] however, VR researcher Mel Slater (2003) has differentiated technical elements, such as displays and body tracking delivered by devices and technologies, from a feeling of "presence," the subjective response to immersion. He further distinguished between presence (form) and the degree to which one is engaged (content) (p.2). Dissecting experiences of VR within this framework, a person could lack interest in the content unfolding even when illusions are successfully achieved—for example, "place illusion" or "plausibility," where events occur within understandable cause and effect sequences (Slater et al., 2022, pp. 2-3). Analyzing virtual atmosphere can therefore take one down paths that diverge and merge, studying technical methods of generating virtual environments, the audience responses these provoke, and methods of encouraging deeper interest or involvement.

7 See Griffero (2014) for an extended analysis of the "authority" of atmospheres.

8 For discussions of key concepts and terminology, see Bye, 2015; Chalmers, 2017; Gigliotti, 1995; Lombard & Jones, 2015; Slater 2003; Slater et al., 2022; and Slater & Sanchez-Vivez, 2016.

Surrounded by illusions, the body provides localized orientation as well as the ground for both experience and action. Highly interactive projects relying on body tracking, haptic devices, or controllers allow one to impact or engage with an environment. Personal avatars offer a chosen representation, a platform for creative self-fashioning through the design and performance of a persona. Multi-person environments add social layers to representation, interactivity, and embodiment. In contrast, noninteractive scenarios may unfurl as if one is floating disembodied with a surrounding world, "virtually absent and proprioceptively present at the same time" (Popat, 2016, p. 371). Each use case presents different affordances, yet across this spectrum of possible activity, the soma remains a foundation for experiencing virtual space.[9]

Entering the virtual does not, however, erase personal history or larger sociocultural contexts. Writing on embodiment in VR, Craig Murray and Judith Sixsmith encouraged acknowledging "not simply that the experience of VR is an embodied one, but that it is simultaneously and inescapably a social, racial, ethnic, gendered, and cultural one" (1999, p. 322). Within the virtual, one remains informed by the legacies, constructs, and habits of the physical, which influence virtual spatial design as well as embodied performance and reception.[10]

Of relevance for both atmosphere and somaesthetics in VR, discussions of immersion play on dual connotations of the term itself. On the one hand, immersion suggests plunging into, a physical act or experience of all-surrounding sensation. On the other hand, immersion refers to "a mental state" the all-consuming experience of being engrossed in an activity (Ng, 2021, p. 110), which relates to both attention and emotional investment (Griffero, 2020, p. 128). Together somaesthetics and atmosphere therefore encompass physical stimuli, spatial design, and subjective response, each with corporeal layers of reception, interpretation, and action.

## 4. Creative Intersections of Somaesthetics and Atmosphere in VR

The artistic pallet behind virtual spaces that both surround the body and engage the soma ranges from designing virtual landscapes to establishing characters and methods of interaction. Although VR has developed within a common ocularcentrism that privileges both vision and hand-eye coordination (Davies, 2003; Dyson, 2009; Hillis, 1999; Murray & Sixsmith, 1999), artists are experimenting with alternative capabilities within the medium, producing projects of relevance for studies of both somaesthetics and atmosphere.

### Blurring body & environment in virtual space

Atmospheres permeate space, wrapping around objects and bodies, felt physically and emotionally. However, the frequently invisible or taken-for-granted qualities of atmospheres may imply emptiness, ignorable expanses in-between the prominent characteristics that anchor a place. They unfurl across space, but atmospheres are not merely "out there." They extend toward and meet the soma, with visceral textures that hover close and brush against the body.

Artist Char Davies stressed such a reorientation, explaining that: "I have never thought of virtual space as empty. Nor as airy atmosphere. I have always thought of it as full, and sensuously enveloping, like the liquidity of oceanic space, pressing upon one's skin."[11] This meeting at the

9 See Kilteni et al. (2012) for a detailed breakdown of the "Sense of Embodiment" in VR as it relates to self-location, sense of agency, and sense of body ownership.

10 In his discussion of body/media, Shusterman noted tendencies, even when using advanced technologies, to repeat existing tropes, hierarchies, and power imbalances, lamenting that "even when we seem freest to dispense with old body identities we seem intent on reproducing them" (1997, p. 26).

11 T. Das Neves (personal communication, September 13, 2022), noting comments from Char Davies.

surface of the skin brings to the fore the porous and interconnected relationship of self and external environment. Davies' project *Osmose* (1995) centered this somatic intimacy, providing a starting point for considering somaesthetic experience in VR in the context of an atmosphere that facilitates a reconnection with the body and a refocus of attention inward.

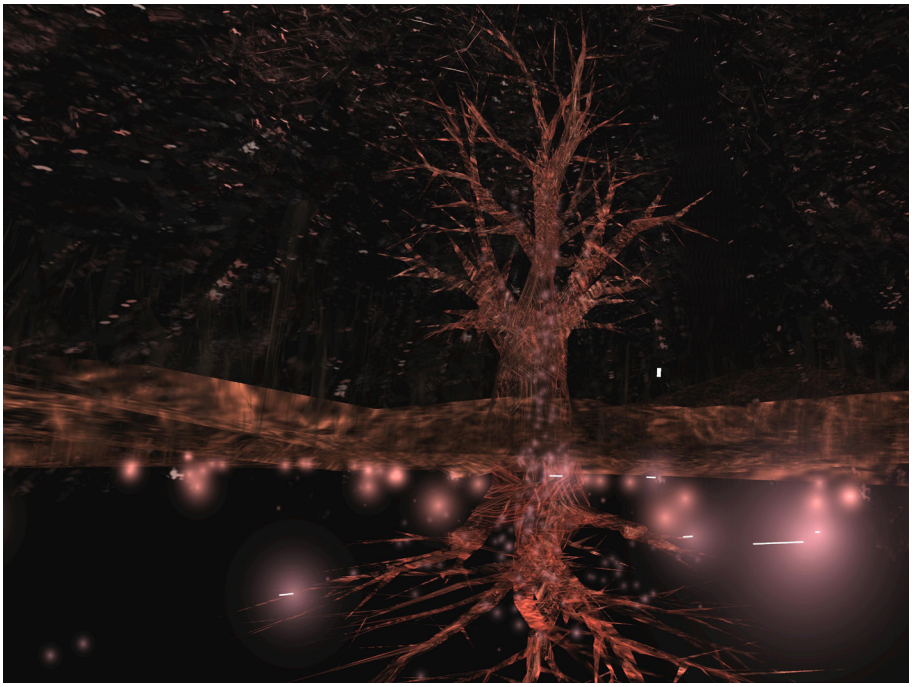

**Figure 4** *Char Davies. Tree Pond, Osmose (1995). Digital Still captured in real-time through HMD (head-mounted display) during live performance of interactive immersive virtual environment, Osmose.*

In *Osmose*, Davies and her creative team invited immersants[12] to explore a 360-degree spherical virtual environment using balance and breath, made possible by a specially designed user interface, a vest, in addition to a head-mounted display. Soft, translucent imagery evoking the natural world—clearing, forest, tree, leaf, cloud, pond, subterranean earth, and abyss—blended at its periphery into text related to technology, the body, and nature, as well as the underlying code for the project software. Inspired by methods of breath use in diving, immersants could rise or sink through intentional inhalation and exhalation, shifting weight and modulating breath to hover or travel throughout the virtual space. This movement correlated to spatial audio that adjusted with location, direction, and speed.[13]

Through both form and content, *Osmose* points toward a number of possible avenues for considering embodied relationships with virtual atmosphere, in part through undermining the dominance of the visual. The project's soft graphics contrasted with common efforts in the medium at photo-realism or imagery with sharp clarity. When higher resolution technologies became available, the project team intentionally blurred graphics. This aesthetic choice had a functional component, described by Davies as shifting awareness from a "habitual reliance on sight" to "a more interior sense of embodiment." The interface design, relying on subtle movements of the body's core and eliminating hand-eye based controllers, joysticks, and gloves

12 Davies coined this term in 1995 (Davies, 2003).

13 For extended discussions of Davies' work, see Davies, 1998 and 2003; Dyson, 2009; Grau, 2003; and McRobert, 2007.

further reflected a prioritization on experiential exploration rather than goal-oriented action. Within this shift from an emphasis on "'doing' to one of 'being,'" Davies also noted a somatic paradox—"*grounding the experience in the flesh body itself*" while inducing a sensation of floating through reliance on breath and balance.[14]


**Figures 5 and 6** *Char Davies. Left: Immersant wearing a stereoscopic HMD (head-mounted display) and breathing / balance interface vest (1995). Right: Roots, Rocks, and Particle Flow in the Under-Earth, Osmose (1995). Digital still captured in real-time through HMD during live performance of interactive immersive virtual environment Osmose.*

In addition to opening up questions regarding how VR might offer modes of combining somaesthetics and atmosphere to ground awareness in the body, *Osmose* also draws attention to the boundary of soma and atmosphere. Blurring lines between body and space, blending somaesthetics with atmosphere, provides a framework for delving into ways the "ecstasies of the thing"—such as designed imagery and audio—extend toward, meet, and mingle with immersants' bodies. Beyond aesthetic questions, focusing on meeting points of self and space offers practical questions for how these dynamics may be explored through mutually reinforcing designs of virtual environments and physical interfaces.

Examining interface design also reveals common modes of interacting with technologies, opening up opportunities for comparison and questions surrounding the design of alternatives. As Davies underscored:

> *The technology associated with this medium is not neutral—it has come out of the military/scientific/Western/industrial/patriarchal paradigm. And so, by default, the technology not only reflects but reinforces dominant values, unless deliberately subverted by the artist.* (McRobert, 2007, p. 14)

14 T. Das Neves (personal communication, September 13, 2022), noting comments from Char Davies.

Acknowledging the limitations and possibilities of different interfaces, and generating designs with varied affordances, opens the door for developing somaesthetic practices alongside such devices. Studying common practices and deviations within interface design further supports Böhme's atmospheric competence, aiding a critical view of what different designs make possible on the side of reception and encouraging creative production.

**Crossmodal storytelling in VR**

Taking a step back from the immediacy of breath and balance, analyses of atmosphere frequently foreground senses beyond the common five of sight, sound, taste, touch, and smell, in addition to stressing the synesthetic merging of sensations. Writing on atmosphere has drawn attention to proprioceptive, kinesthetic, and tactile senses (Shusterman, 2011, p. 297) while also highlighting elements such as orientation, balance, stability, duration, and scale (Pallasmaa, 2014, p. 231). While debates continue regarding what constitutes a "sense," current scientific research has identified up to 33 senses that contribute to perception, from sensations such as pain, balance, and temperature to nuanced abilities to distinguish details like light, color, and pressure on the skin (Fulkerson, 2014; Howes, 2013; and Macpherson, 2011). Even without consensus on a set of designated senses, the breadth of such sensations and stimuli adds layers to the embodied forms of awareness relevant to studies of both somaesthetics and atmosphere.

Drawing on research into the multiplicity of senses that comprise perception, as well as crossmodal studies of the ways in which senses cohere to inform experience, the multisensory immersive production studio The Feelies embarked on a 360 VR documentary, *Munduruku: The Fight to Defend the Heart of the Amazon* (2017). The project, a collaboration with the Indigenous Munduruku community based in the Amazon's Tapajós River basin in Brazil, as well as Greenpeace and Alchemy VR, told the story of the Munduruku's work to establish land rights and prevent local environmental destruction. Munduruku community members collaborated on the storyline and participated in filming, in addition to advising on sensory elements by sharing insights into the flora and fauna of the local ecosystem.

The final installation virtually transported audiences to the Amazon basin using specially designed modular pods along with VR headsets. Within each pod, controlled sensations of vibration, humidity, touch, temperature, and binaural audio added visceral components to the VR immersion. Scents created by perfumer Nadjib Achaibou established an olfactory storyline, adding to the feeling of being present within a multilayered biodiverse ecosystem while also, through contrast, conveying the stark difference between verdant forest and industrial threats.

Multisensory components can be interpreted as both a means of knowing—gathering and processing information about an environment—as well as an approach to forming connections with community and with place. Grace Boyle, founder and director of The Feelies, emphasized this communal orientation, with technologies engaging the senses serving as tools to "build bridges through sensory immersion between people in different places" (2017). Situated at the intersection of embodied knowledge and social bonds, this approach to multisensory VR storytelling merges the place illusion of "being there" with an emotional affinity of "being with." The Feelies' work to create stories not just consumed, but felt, through a holistic arc that weaves together narrative, sensory stimuli, a keen attention to place, and a deliberate excavation of the ways these components resonate with interpersonal and emotional layers, presents a number of avenues for analyzing the overlay of somaesthetics and atmosphere in VR.

**Figure 7** *Installation view of Munduruku: The Fight to Defend the Heart of the Amazon featuring multisensory immersive pods combining 360 VR film, binaural sound, scent, vibration, humidity, touch, and temperature changes. Image courtesy of The Feelies.*

Through a somaesthetic lens, the orchestration of sensory cues can be viewed as part of a larger interconnection between building embodied awareness and philosophy as an "art of living" (Shusterman, 1999). At the level of praxis, exposure to multisensory storytelling is one path for cultivating awareness of the many senses that inform perception, with deepened awareness opening up nuanced facets of experience and analysis. Going a step further, Böhme connected emotion with a receptiveness to the sensations of atmosphere:

> *To perceive atmospheres means to open oneself emotionally…Getting involved in atmospheres is tantamount to wanting to participate and to expose oneself to impressions—a prerequisite for the experience of pleasure in life and the discovery of one's body as a medium of being.* (2017b, 121)

Beyond the pleasure of appreciation, the interplay of the physical and emotional offers a foundation for the critical analysis of interrelations among physical sensations, designed environments, emotional experiences, and sociocultural dynamics.

In addition to being both physical and emotional, atmosphere is also durational. Comparing atmosphere to the swell of emotions incited by music, architect and scholar Juhani Pallasmaa characterized atmosphere as "a sustained being in a situation," an experience that builds and develops over time, "rather than a singular moment of perception" (2014, p. 235). The Feelies' multisensory storytelling in VR therefore reveals dual aspects of the medium: comingling layered sensory elements to produce immersive scenes and adjusting stimuli over time to form an intentional sensory arc enmeshed with a storyline and emotional trajectory. Multisensory and temporal aspects work hand-in-hand in the context of somaesthetic efforts to cultivate bodily awareness as well as Böhme's proposal of atmospheric competence in terms of both reception and production.

**Bridging virtual and physical spaces**

In addition to examining embodied experiences of atmosphere from a vantage point within VR, spanning virtual and physical spaces offers another framework for analysis. On one level, such bridging can entail physical installations coupled with VR environments (or VR projects brought to specific locations), with the pathway into or out of VR functioning as part of a blended experience. At another level, researchers are studying whether VR can serve as a means of combating prejudice or grappling with embodied responses to trauma, asking if VR can produce effects that thereafter inform visceral responses in physical environments (Tassinari et al., 2022; Waldrop, 2017).

The transmedia project *NeuroSpeculative AfroFeminism* (2017) involved multiple forms of creative and spatial design including a physical installation, speculative consumer products, a VR experience, and cognitive-impact research. Developed by members of Hyphen-Labs, a multidisciplinary international collective of women of color, project team members Ashley Baccus-Clark, Ece Tankal, Nitzan Bartov, and Carmen Aguilar y Wedge brought expertise to the project ranging from architecture to molecular biology and structural engineering. Audiences for *NeuroSpeculative AfroFeminism* began in a physical installation modeled after hair salons and featuring imagined consumer products designed for women of color.[15] From this installation, individuals entered a similar environment in VR, a "neurocosmetology lab," where they embodied an avatar representing a young Black woman. This futuristic virtual salon transitioned to a virtual dimension of inspiration featuring Black women pioneering technologies of brain optimization and cognitive enhancement.

Describing *NeuroSpeculative AfroFeminism*'s spatial grounding, Baccus-Clark connected the project's virtual realms of empowerment to existing spaces of community. She noted that "salons for Black women have been the site of political activism, community building and creative endeavors," drawing an analogy between this generative momentum and scientific innovation. Observing anticipated trajectories of VR to become a widespread storytelling medium that also offers a platform to question existing structures and envision possible futures, Baccus-Clark underscored the importance of featuring perspectives from and stories by women of color from the outset (Helm, 2017; Mercer, 2018). Through transmedia installations, *NeuroSpeculative AfroFeminism* presents a form of storytelling that is both symbolic and palpable, establishing an experiential cycle from physical through virtual and back to physical again.

This format opens up questions for somaesthetics and atmospheric competence regarding how to draw on tools and opportunities specific to virtual or physical environments, as well as how to develop practices that blur the boundaries and extend one type of experience into another. In outlining methods of strengthening atmospheric competence, philosopher Tonino Griffero emphasized attention to processes of "immersion and emersion" (2020, p. 165).[16] Focusing on the discrete phases and experiential arc of entry into, time within, and transition out of virtual environments can here be applied as a framework for critical reflection as well as creativity and enhanced embodied awareness.[17]

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15 Examples of speculative products include a scarf that undermines facial recognition software; transparent sunscreen that does not discolor skin; "Octavia electrodes," transcranial stimulation devices named for Afrofuturist author Octavia Butler; a visor that blocks microaggressions and reflects them back at the viewer; and earrings with hidden cameras and microphones for recording police actions (Ding, 2017; Helm, 2017).

16 Griffero further discussed atmospheric competence in relation to the abilities to discern toxic and benign atmospheres and to learn from exposure to an array of atmospheres (2020, pp. 164-165).

17 Nurturing such critical faculties also builds on existing structures and capabilities. The current necessity of donning a VR headset can be approached as a form of framing device (Ng, 2021; Pinotti 2020) and while atmospheres may "wash over" an individual, as noted previously,

**Figures 8 and 9** *Hyphen-Labs, NeuroSpeculative AfroFeminism (2017). Virtual reality scene and project installation from the Tribeca Film Festival. Images courtesy of Hyphen-Labs.*

Beyond the installation, the VR experience of *NeuroSpeculative AfroFeminism* has been connected with cognitive research into the aftereffects of virtual representations. Partnering with university researchers and scientists, Hyphen-Labs investigated how VR projects centering positive portrayals of Black women might play a role in decreasing prejudice and bias, particularly among individuals removed from these identities. Connecting the experience of stepping into and embodying an avatar of a Black woman in VR with cognitive physiological processing, Baccus-Clark posed the core question: "If you are immersed in this content, is it actually having an impact on the way your brain is firing?" (Bye, 2017).

While *NeuroSpeculative AfroFeminism* offers an example of crossing physical and virtual environments through speculative product design, spatial design, and cognitive research, the project *SPACED OUT* (2019) by artist Pierre Friquet (Pyaré) provides an example of a

engulfment does not guarantee enchantment. Audiences surrounded by a VR representation may identify or interpret in unexpected ways (Pinotti, 2017, p. 3; Polansky, 2019) and interfaces play an ever-present role (Murray & Sixsmith, 1999, p. 324), with each instance of stimuli and device interaction offering a moment that could jar an individual out of experiential flow.

transmedia pathway to recenter the body through both physical and virtual immersion. The VR experience itself transported audiences to a surreal moon landscape, inspired by the imagery of George Méliès' 1902 film *A Trip to the Moon*. In *SPACED OUT*, audiences explored this virtual world while submerged in a swimming pool, floating face down with a snorkel and wearing an underwater VR headset, DIVR, designed by Ballast VR.

The title *SPACED OUT* thematically referenced voyages to outer space as well as dissociation, a form of disconnection from one's surroundings and even one's own body associated with post-traumatic stress disorder, which can be physical, perceptual, and emotional. In addition to his work as an artist, Pyaré is an advocate for victims of childhood trauma and sexual violence, working with the French organization Association Parler. Describing the impetus for the project and confluence of themes, Pyaré emphasized that the virtual journey to the moon is also a journey inward, an opportunity to reconnect with the body both during the experience of immersion in VR, buoyed by weightlessness in water, and in the return to gravity afterwards (Bye, 2020). Reflecting on the broader implications of such projects, he asked, "Beyond trauma and pathology, as [a] human species, aren't we 'spaced out'?" In-line with analyses of somaesthetics in VR, he noted that journeys into "cybernetic sensuality" may offer routes toward an embodied reconnection with the "here and now" (Friquet, 2020). Ballast VR co-founder Ando Shah similarly connected physiological and emotional responses during the face down submersion used with DIVR to the mammalian dive reflex, associating phenomena such as a slowed heart rate with calming effects like reduced "mental chatter" (Bye, 2020).[18]

Alongside coupling virtual immersion with engulfing physical sensations, *SPACED OUT* offers a means of examining movement in VR. Technologies can enable movement within virtual space (or across a virtual map), however, physical roaming while in VR often bumps up against safety and spatial limitations. A flexible tether enabled audiences of *SPACED OUT* to experience a sense of motion while restricting mobility within the pool, a specific solution that points toward a larger challenge facing embodied experiences of atmosphere in VR.

While VR relies on habitual somatic movements around one's self to undergird verisimilitude, experiences of physical place are in part informed by locomotion—wandering up and over or through, circumnavigating, or approaching from afar—enhanced by momentum, distance, and feelings such as hard, soft, or unstable ground. The view from atop a mountain summit in VR involves notable somatic differences from its physical counterpart, both in the journey of arrival and the ability to maneuver and meander once there. Such differences can lead to hierarchically judging VR as "lesser" than parallel in-person experiences.[19] However, this paper presents virtual atmosphere as not simply mimicry of physical space but rather a medium that opens up distinct somaesthetic possibilities. Constraints and opportunities for action within VR are in part designed elements (Shusterman, 1997, p. 41), the result of decisions and common practices that artists help to identify, interrogate, and subvert.

## 5. Cultivating Atmospheric Competence in Virtual Environments

VR can take audiences to far-flung locations and imagined places, establishing a sense of "being there" in part through the technological and creative crafting of atmosphere. However, this ability to generate an immediate, intimate experience also gives rise to a need for awareness of

18 Researchers are also studying ways the physical submersion of underwater VR might undercut cybersickness, a phenomenon akin to motion sickness (Bye 2020; Carey, 2021; Fauville et al., 2021).

19 For a critique of such hierarchies, see Chalmers (2017).

how the senses and emotions are being deployed.

Despite its reliance on advanced technologies, scholars have noted that VR can generate an impression of an unmediated experience, placing audiences inside a representation wherein the space of representation coincides with the surrounding physical space. Rather than externally *observing* a work of art, audiences are positioned to directly *experience* an environment (Pinotti, 2020, p. 595), with the compressed distance between audience and artwork sparking concerns that the medium may hinder "critical detachment" (Grau, 2003, p. 201). Within designed environments known to be virtual but apparently "real," the constructed may seem "natural" or feel personal, lacking the bounded frames of other media and platforms such as screens, canvases, and stages (Grau, 2003, pp. 200-204; Ng, 2021, p. 115; Pinotti, 2020, p. 594).[20] While eliminating distance provokes questions related to how VR can be used for manipulation, being engulfed in an environment is also part of what gives the medium potential as a meaningful space for artistic experimentation and somaesthetic exploration.

In one example of this tension, VR has been both touted and critiqued as an "empathy machine."[21] Proponents note VR's ability to center underrepresented perspectives by transporting audiences into situations with individuals they may never normally face and offering an acute tool for journalism, advocacy, education, and nonfiction storytelling. But how do the entwined emotional, psychological, and physical aspects of a relational concept such as empathy (Torchin, 2019) translate into media stimuli and somatic response? When does "being there" in VR result in human connection or bearing witness, even inspiring action outside of VR, and when does it become mired in the relational dynamics of "experience tourism" or "tragedy porn"? While many artists and storytellers methodically work to empower communities in telling their own stories, as with other VR applications, concerns surrounding the financial motivations underpinning uses of "empathy" abound, which can range from aid organization donation drives to corporate initiatives to humanize brands (Farmer, 2019; Kang, 2017; Yang, 2017).

Just as Böhme saw a need for atmospheric competence to discern the use of physical atmospheres for political or commercial ends, so too, such an awareness is necessary in virtual environments. In addition to aesthetic appreciation, atmospheric competence supports charting one's own path through virtual spaces by better recognizing the roles one is invited to step into, the communities fostered and underlying interests at play, and the values and power dynamics inherent in both platforms and representations. However, nuanced approaches are necessary to respond to the particular qualities of the medium. Considering atmospheric competence in VR through the lens of somaesthetics offers an array of practical areas for creative expression and critical reflection—constraints and opportunities inherent in interface design, properties of all-surrounding representations, methods of engaging the senses, modes and degrees of interactivity, and overlays of the physical and virtual. While meaningful on their own, all such elements also contribute to holistic experiences of the specific VR content encountered.

Shusterman emphasized the practical application of somaesthetics through meliorative efforts aimed at training capacity and embodied awareness. VR offers an expanded ground for engaging the body—an inventive space to reorient and reengage, to reflect and experience

20 Approaching VR as a form that situates audiences inside representations, Andrea Pinotti advocated for transdisciplinary explorations of the foundations of such representations as well as *gradations* of designed components such as immersion and interactivity (2017, p. 3-4). Noting that VR representations do not simply *replace* the physical with a virtual world, but rather coincide with the physical in complex negotiations, Jenna Ng proposed analyses of *re-placement*—ways that the physical re-emerges with new dynamics, awareness, and interpretations alongside virtual experiences (2021, p. 132).

21 See, for example, Benjamin, 2019, pp. 169-173; Bollmer, 2017; Eveleth, 2018; Farmer, 2019; Kang 2017; Milk, 2015; Polansky 2019; and Yang, 2017.

relationships between self, space, and community anew. Within the medium, the body and the space it occupies intimately mingle with representation, making somaesthetic awareness, together with atmospheric competence, particularly relevant as VR's popularity grows.

## 6. Concluding Considerations

Entering VR, the body is both present and elsewhere. One can traverse landscapes impossible in the physical world and experience modes of embodiment and interaction that can only be realized through technologies. By offering extra-ordinary ways of being in, perceiving through, and understanding one's own embodiment, VR provides opportunities for grounding in the soma and considering the body's relationship to atmosphere through a new lens. Yet these excursions into the virtual also hold the potential to heighten a return. Early VR pioneer Jaron Lanier described the unparalleled and renewed sensory experience of the physical having passed through the virtual:

> *I saw a way to finally appreciate how wonderous our given reality is by having a point of comparison…if you've spent some time in virtual reality and then you go into a real forest, I think you're able to love that forest in a more visceral way than is readily apparent otherwise…just looking at someone else's face is astonishing after you've been in virtual reality for a while…However fantastical it might be, the best moment is the moment you take off the headset and you can see the world with freshened senses.* (Swisher, 2021)

As online and virtual spaces become more and more enmeshed with daily life as forms of entertainment, methods of communication, and strategies of self-presentation, the soma's experience both within VR and moving between virtual and physical spaces becomes a ripe expansion for the field of somaesthetics. Unconventional interface design, multisensory storytelling, and overlays of physical and virtual environments offer just a few examples of ways that artists are experimenting at the intersection of somaesthetics and atmosphere in VR. Immersive virtual environments further offer rich ground for somaesthetics and atmospheric competence in analyzing sociopolitical questions of representation, interaction, and influence.

VR is a tool that can be viewed with both optimism and skepticism, as well as adapted in ever-new ways across fields of practice. As technologies such as VR evolve and become more accessible, questions will continue to arise regarding how virtual spaces are designed and what actions they make possible. Within this ever-shifting terrain, the body remains central. It is the foundation for perceiving the self in technological dreamscapes, a visceral processor through which virtual voyages are felt and navigated, and the heart of experience to which one returns. Just as somaesthetics provides a framework for approaching the physical spaces one inhabits and passes through, so too, it offers a lens for examining dynamic, enveloping encounters with the carefully crafted atmospheres of virtual space.

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Essay

# Notes on the Aural Aspects of Built Environment

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***Abstract:*** *Aural architecture might seem at the first sight as some oddity, a deliberately unique niche genre, and an out-of-the-ordinary hue on the wide spectrum of built environments. In contrast, the essay overviews some of the most important aspects that foster a broader conceptualization of architecture conceived as substantially interlinked with the sonic realm. In comparison with the established discourse on soundscape, this writing does not start from fieldworks and empirical-based terms with the goals of a general theorization but works the other way around: it arrives at the notion of soundscape in its conclusion by pointing out the unsatisfying nature of any conception of architecture that misses the aural aspects of architectural space, hence excluding a crucial somaesthetic dimension both from theoretical discourse and designer practice.*

***Keywords:*** *architectural experience, aural architecture, soundscape, sound insulation, urban planning.*

## 1. Introduction

In the last two decades, research on the arts has shown that the perspective provided by somaesthetics could greatly contribute to the efforts of rethinking artistic practices and the aesthetic experience in general (Shusterman, 2014; Journal of Somaesthetics vol. 1-7). In addition, the somaesthetic perspective has also helped to re-conceptualize the social impacts art can and does exert (Koczanowicz and Liszka, 2014; Ryynänen, 2015; Shusterman, 2022), viewing those impacts from different angles than the ones provided by sociology of art (Luhman, 2000), relational aesthetics (Bourriaud, 2002), participation theories (Bishop, 2012) or the anthropology of culture (Pfeiffer, 2002). In an earlier study (Veres, 2014), I contributed to the discourse of the somaesthetic theory of art proposing that we should take architecture as the best model for a somaesthetically oriented and historically founded scrutiny of the arts and conceive it as the paradigm throughout the aesthetic field. To make this proposition seriously, there is a need to ponder how architecture can be understood as an art form in the first place and how architecture can bridge what is considered art and non-art. In the present writing the

cultural status and symbolic capacities of architecture are not discussed, instead approached only along its multisensory nature and prime somaesthetic relevance.

However, an immediate objection might occur that needs an urgent response: aesthetic phenomena are countless and infinite, and one must admit that a somaesthetically founded model of art developed from architecture may seem less explanatory with regards to such intensely performative creative practices like dance, music, theatre, and all those vivid and engaging human activities, which are aesthetically relevant but do not have the status of art. This objection is fully admitted, but on the other side, it is worth noting that architecture should not be reduced to the scale, sensorial modality, and range of action it is identified in mainstream architectural discourse. One of the most crucial aspects of the architectural experience – in opposition to the common understanding of its visual primacy (Pallasmaa, 2005) – is its *kinaesthetic* nature, which has to do with a deed, performativity. Architecture is a verb – as the architect, Sarah Robinson insists (Robinson, 2021). This has already been highlighted by Goethe who likened the architectural experience to choreography (Shusterman, 2012, p. 226), and also by Gadamer (1993, p. 332) who identified the act of walking through the space ("durchschreiten") as the primary way of the bodily understanding ("leiblich verstehen") of the architectural work.

To illuminate important performative, non-objectifiable inherent aspects of the built environment, my approach attempts to feature a phenomenon critically that connects architecture, understood usually through its static and lasting outcomes, with performative practices and their ephemeral phenomena – like the way stage and action (the Greek *proskenion* and *drama*) are connected in a play. What directly connects architectural structures to the general *Lebenswelt* in an encompassing experience is the dimension of audibility that comes with every kinesphere, regardless of whether it is understood as a site for actions or as the web of deeds. Although every kinesphere is aural *per se*, from the perspective of somaesthetics, audibility is especially crucial in the built environment – the site of human residence, which takes on a wide range from urban tissues and public spaces to tiny rooms. The many kinds of sounds, noises, murmurs, and silences that fill these spaces awaken (or irritate) our sensibility, and thus, provided they are taken into account within the scope of meliorative pursuit, they offer the possibility to progress our discernment and sensual awareness. As a pioneer in the study of the aural aspects of architecture, Michael Southworth wrote in 1969 (p. 49):

> *At a time when technological progress is bringing city sounds to the threshold of bedlam it is no longer sufficient to design environments that satisfy the eye alone. Today's city dweller is bombarded by a continuous stream of invisible but highly attention-demanding sounds, smells, and micro-climates. His experience of the city is a crazy quilt of sense impression, each of which contributes to the total picture. It is important to explore the consequences of this invasion of nonvisual sensations on the quality of city life and to ask how manipulation of them might improve that quality.*

These considerations, which include not only the aural but the tactile, the thermic, and the olfactory as well, could lead to decisions regarding the built environment that serve our best interests both on the personal level and on a societal one, perhaps including also the shared interests of other species in the living world.

## 2. The Omnipresent, Sounding Wallpaper

Before we get closer to the aural dimensions of architectural sites, for the sake of an illuminating analogy, let's take a detour and recall an example of the somaesthetic relevance of the direct visual environment. In Charlotte Gilman Perkins' 1892 short story, *The Yellow Wallpaper*, the narrator suffers from the oppressive atmosphere of a bedroom – although this should be the place that otherwise would provide intimacy, security, and utter "habitability" (cf. Franco, 2019). Although the protagonist-narrator arrives with her family seeking healing in the "ancestral halls" rented as a summer lodge, her emotional state remains gloomy, and her vitality and ability to act fade as the days pass by. A sinister atmosphere pervades the colonial mansion, and the room seems to hold her captive and drive her up the wall, literally. The woman with broken physical, mental, and emotional condition wastes her life in such a place, which simultaneously manifests itself as the embodiment of suffocating care and male objectification, as well as the intolerable lack of freedom in family life and social relations, along with the resulting frustration and helplessness (Horowitz, 2010, pp. 175-187).

In the focal point of the story, is a densely patterned wallpaper that can be interpreted not only as a manifestation of the overflown visual wealth of late Victorian homes but even more so as a projection of an individual psychological state and a symptom of specific socio-psychological dynamics. The patterns of the yellow wallpaper of the room give rise to an aesthetic experience in which the taste judgment, which seems purely individual and contingent, is influenced and occupied by uncontrollable psychosocial energies, and the narrator desperately fights with her conflicting desires. These desires sometimes urge her to the destruction of the wallpaper, other times to cross the borders of reality and dwell in the "inner world" of the patterns. This double and centrifugal attraction paired with ambiguity is echoed also in the effects by which the narrator characterizes the wallpaper: "It is dull enough to confuse the eye in following, pronounced enough to constantly irritate and provoke study" (Gilman, 2009, p. 168).

Analogous to what happens with the narrator in her affective life and her somatic condition as she is deeply influenced by her visual environment, in the acoustic dimension of the built environment, dizzying ambiguities loom large to millions of people everywhere around the world. After all, everything that lives also moves, and everything that moves also makes a sound, in a large proportion in the range perceptible to the human ear. And while at least the eyelid provides the last shield for the overwhelmed consciousness against the toxic powers of material imagery (cf. Mitchell, 1996, pp. 71-82), it is impossible to escape from the audible: we have no ear-lid that can be lowered. Wherever we retreat from the noisy world to the peace of the home, the solitude of the country house, the yawning silence of the wine cellar, the drowsy murmur of the water in the bathtub, all these can never be more than mere pauses, a transient suspension within the planetary-scale noise. Quietness is unsustainable as a permanent state, because the world, either the outer or the inner one, shouts again and again into the silence and the acoustic calm of the withdrawing life. The neighbor rattles with something in the yard, the noise of a terrible quarrel seeps through the wall, a truck rumbles in front of the house, the dogs start to bark nervously nearby, the beats of a distant rock concert pulsate into the night, the ticking of the wall clock infiltrates the peace of siesta time with a feeling of alienation, the heating system makes a whistling noise, a moving vendor yells through the open window, and on the forest path, in the vicinity of the populated area, a bunch of youngsters sings aloud - with a tint of nostalgia for the 80s glam-rock - their apocalyptic expectations: "it's the final countdown".

None of these examples can be reduced directly to architectural space; yet, none of these examples can be conceived and experienced without planned and constructed environments.

Researchers of acoustic ecology always resounded the elementary phenomenological insight: the sonic realm belongs to the object and its perception at once (Brown et al, 2016, p. 7), and the experience is both acquired and generated. This cannot be avoided when conceptualizing architecture, either of its practice or its experience, on a broader level.

## 3. Dreams of Silence

As desirable as it might be for many, a total acoustic pause proves impossible not only because of the millions of external effects of the environment but also because of the specific internal living conditions of the sentient being, our living, functioning, aspiring, and tormented soma. It is well known that John Cage, the loudest twentieth-century propagandist of silence retreated to Harvard University's anechoic chamber only to realize that it was precisely due to the elementary life processes flowing within his own body that he had no chance of experiencing complete silence (Cage, 1973, p. 8). In his famous experiment, he was only curious about the possibility of silence in the acoustic sense, even though through internal hearing and sonic memory – either voluntarily or involuntarily – the entire hearing range of human beings extends beyond the spectrum of the actual physical vibrations.

Either way, peace is certainly not brought about by silence, although the nostalgia for silence is stubbornly fixed in the structure of desire of the late modern citizen, who carries all the shocks of urbanization already in his genes. However, nostalgia, by its very nature, aims exactly at a state that was never available (Trigg, 2006). For the architectural practice and the areas of the service industry that have adapted to the nostalgia for silence, the issue of acoustics essentially coincides with the problem of sound insulation (Hopkins, 2007; Mommertz, 2009; Rindel, 2018). This strives for nearing the utopia of a spatial existence that is utterly stripped of any outer noise and provides total autonomy for undisturbed, self-referent action.

In art, a similar but more complex nostalgia appears in ambivalent masterpieces such as Joseph Beuys' late installation, *Plight* (1985) which put on stage a grand piano exposed in a room full of felt which exerts a suffocating effect on the instrument and arouses tension on the visitors, as the latter experience an inner ambiguity regarding their acoustic expectations associated to the instrument. Thus their general affection for calmness is once amplified and denied by the peculiar spatial-acoustic situation, which is characterized by a double bond that is directed simultaneously toward the dream of music and towards the dream of silence.

In contrast to the perceptive, symbolic, and affective ambiguities and conflicts exposed in such multisensory artworks as Beuys's *Plight*, the aesthetic disputes on architecture and public space, no matter how overheated they are, have little to say about the non-visual aspects of the built environments. The sonic realm especially suffers from this neglect. Thus, a crucial somaesthetic aspect remains hidden, which in turn has a decisive influence on the experience of the lived space (Gehl, 2010).[1] Nevertheless, the scarcity of discerning attention towards the aural aspects of the built environment in architectural discourse is very understandable. If the lack of audible sound is portrayed as the optimum in spatial acoustics – a typical symptom of which is the idealization of architecture by cool and smooth images in coffee table magazines (cf. Han 2018) –, then at the arrival into the actual sonic realm, architectural aesthetics should inevitably transfigure into anaesthetics: either as a poetic expression of the desire for calmness or a technical-methodological discourse on silence or as the practical need for sound attenuation.

1 The influential urban planner, Jan Gehl approaches the concept of a desirable and attractive city by applying a multisensory methodology (2010, p. 31-60), the aural aspects, however, lack more extensive scrutiny.

Anaesthetics in the present sense can be primarily described as the discourse on the physical and mental reactions by which one seeks to reduce the spectrum of experience to protect one's physical, emotional, and mental-well being as much as possible. However, this anaesthetic approach does not correspond in the least to the elementary experience of the spatial existence of a being who is ingrained in "the flesh of the world" – as Merleau-Ponty put it (1968). Prenatal perception develops along touch and hearing: both attest to the directness of the world, the intimacy of it as a continuum between the sensed and the sentient being. Through hearing, "inside" and "outside" merge. "Our perception of sound is founded on the corporal perception of vibrations," writes Reznikoff (2004/2005). Thus, from prenatal life on, we learn about the world as a pulsating, quivering, and vibrating entity that surrounds us and embraces us, but in addition to that, it is through hearing that we first come into contact with the language and the invisible too. The acoustic dimension is not some kind of extra that optimally slips unnoticed into the visual, haptic, proxemic, and climatic layers of the spatial environment, but appears directly at the origin of spatial perception (Sheridan and van Langen, 2003; Blesser and Salter, 2007). Voice provides orientation; by voice, I navigate myself or give orientation to others. As Reznikoff states (2004/2005): "the first consciousness of space is given by sound." It is the most elementary, most "ready-to-hand" building material I can use to demarcate a slice from the physical and also from the psychical and imaginary space. Sound translates our body and mind, our objects, and our buildings into loci of resonance. While one is dreaming of silence, the built environment reverberates the soft snoring of one's sleeping body. In turn, in the state of being woke, this reverberation and mutual resonance could lead to veritable transformation: a sound begets another sound, hearing brings about susceptibility, and something new can be born from this susceptibility.

## 4. Sound that Transforms

This magic of transformation through sound, which is also a key to the powers of the moving image, was put on stage in a highly illuminating way in the performance piece titled *I am sitting in a room* (1969) by the Fluxus artist, Alvin Lucier. In this work, he gradually managed to dissolve, at least for an imaginary period of life, the individual specificities of his speech into a spatial sound, hence subjecting his physical difficulty, stuttering, that significantly determined his whole life, into an "artistic" cure, in which the personal and impersonal aspects of the acoustic spectrum were mingled.

The transformative power of sound is prevalent, however, within more prosaic everyday circumstances as well. It is enough to embark on a walk through the city with headphones and a music player: the space around us takes on new shades everywhere, and the bustling contingencies of everyday life become arranged in a mysterious choreography as if they would be resonating membranes of a single melody. As the architect, Juhani Pallasmaa (2005, p. 49) puts it:

> *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. I regard an object, but sound approaches me; the eye reaches, but the ear receives. Buildings do not react to our gaze, but they do return our sounds back to our ears.*

In a popular television show in 1960, performing his piece *Water Walk* (1959), John Cage masterfully demonstrated how everyday sounds organized by a predetermined temporal structure can transfigure ordinary house activities – such as making toast, boiling water, flower care, and the like – into a mysterious choreography, the moves of which heighten everyday somatic routines up to the plane of some kind of dancing and a somewhat comic celebration. The way we glance at the visual appearance of an object, of course, plays a significant role in the experience of the thing, but sounds and reverberations from the environment shape the horizon of our experience even more intensely and inevitably than that. Masters of horror movies have long learned this.

However, sound cannot necessarily be understood only as a medium of immediacy. It is no coincidence that in antiquity, sound - not any random sound, of course, but mathematically based sound phenomena - has already been considered a mediator of cosmic order, which is beyond physics (Mathiesen 2008). This idea of sounding order is fruitful even if we consider the concept of order to be acceptable only with an index of temporality or only as a regulative ideal. I mean it in a somewhat similar way to the one exemplified by Deleuze-Guattari's brilliant metaphor about the singing child seeking a home in a dark, unknown, expansive space (1987, p. 311):

> *I. A child in the dark, gripped with fear, comforts himself by singing under his breath. He walks and halts to his song. Lost, he takes shelter, or orients himself with his little song as best he can. The song is like a rough sketch of a calming and stabilizing, calm and stable, center in the heart of chaos. Perhaps the child skips as he sings, hastens or slows his pace. But the song itself is already a skip: it jumps from chaos to the beginnings of order in chaos and is in danger of breaking apart at any moment.*

Only after the sound of the child's song emerges, more precisely after a somaesthetic orientation by a sound leads to the formation of a temporary center and the arrangement of the unstructured space to be formed, only then can the actual "construction" begin: with signs, objects, and various physical entities.

> *II. Now we are at home. But home does not preexist: it was necessary to draw a circle around that uncertain and fragile center, to organize a limited space. Many, very diverse, components have a part in this, landmarks and marks of all kinds. This was already true of the previous case. But now the components are used for organizing a space, not for the momentary determination of a center. The forces of chaos are kept outside as much as possible, and the interior space protects the germinal forces of a task to fulfill or a deed to do. This involves an activity of selection, elimination and extraction, in order to prevent the interior forces of the earth from being submerged, to enable them to resist, or even to take something from chaos across the filter or sieve of the space that has been drawn.*

The acoustic dimension, however, has played a decisive role not only in the preparation to be at home but primarily in the actual dwelling experience. Deleuze and Guattari thus continue:

> *Sonorous or vocal components are very important: a wall of sound, or at least a wall with some sonic bricks in it. A child hums to summon the strength for*

> *the schoolwork she has to hand in. A housewife sings to herself, or listens to the radio, as she marshals the antichaos forces of her work. Radios and television sets are like sound walls around every household and mark territories (the neighbor complains when it gets too loud). For sublime deeds like the foundation of a city or the fabrication of a golem, one draws a circle, or better yet walks in a circle as in a children's dance, combining rhythmic vowels and consonants that correspond to the interior forces of creation as to the differentiated parts of an organism. A mistake in speed, rhythm, or harmony would be catastrophic because it would bring back the forces of chaos, destroying both creator and creation.*

Then again, structuredness and order – that filter out any outer noise – get gradually shifted towards receptivity for the unfamiliar. The dimension of audibility opens up again before the aural world would become a self-evident monotony. We have no ear-lids; our somatic being is on full alert towards the things to come. Our immersion into the audible makes us the aptest to be oriented towards the future.

> *III. Finally, one opens the circle a crack, opens it all the way, lets someone in, calls someone, or else goes out oneself, launches forth. One opens the circle not on the side where the old forces of chaos press against it but in another region, one created by the circle itself. As though the circle tended on its own to open onto a future, as a function of the working forces it shelters. This time, it is in order to join with the forces of the future, cosmic forces. One launches forth, hazards an improvisation. But to improvise is to join with the World, or meld with it. One ventures from home on the thread of a tune. Along sonorous, gestural, motor lines that mark the customary path of a child and graft themselves onto or begin to bud "lines of drift" with different loops, knots, speeds, movements, gestures, and sonorities.*

In the discourses of modern and postmodern architecture and discussions on criticality (Shusterman, 2012), we have learned a lot about architectural meanings (Jencks, 1997), ideology (Tafuri, 1976), history (Frampton, 2020), technology (Abel, 2004), access (Imrie, 2006), justice (Soja, 2010), representation (Venturi, 1977), identity (Lynch, 1960), and functionality (Alexander, 1977). However, the constitutive role of the acoustic dimension in the experience of lived and embodied space is only sporadically recognized, mostly in some urban research or phenomenological studies. "Aural architecture" (Blesser and Salter, 2007) in this perspective seems to be something special, a peculiar extension of a commonly conceived standard architecture that is crystallized in genres such as the concert hall, the sound studio, the cinema, and the like (Bagenal, 1951; Beranek, 1996).

If we admit that architecture is one of the most defining components of everyday life and of social and individual well-being in physical, emotional, and mental terms alike – an observation confirmed also by Sir Winston Churchill claiming in 1943 that "we shape our buildings, and afterward our buildings shape us" (see in Brand, 1995)–; then we can also acknowledge that from the point of view of an individual equipped with a multi-directional acoustic sensitivity and also with an even finer and more extensive sensitivity of inner hearing, the audible qualities of the environment enjoy a privileged status with regards to the overall experience of spatial being. Architecture that is ready to facilitate dwelling and "to open up a world," to use Heideggerian wording, ought to pay more attention to these qualities. Acoustic space, which is intellectually homeless, and somaesthetically neglected, when unleashed, becomes an anonymous murmur of

chaos or terrain for a complacent resounding of power. “It is thought-provoking – comments Pallasmaa (2005, p. 49) – that the mental loss of the sense of centre in the contemporary world be attributed, at least in part, to the disappearance of the integrity of the audible world.”

## 5. Summary

Our built environment – intentionally or unintentionally – creates, re-creates, transforms, and shapes inescapably a sonic and resounding environment for our individual and communal life forms. This can be very pleasant and harmonious but most often turns out to be painfully noisy and chaotic. If we acknowledge this as the unavoidable starting point for any endeavor that strives for better living conditions, then instead of cherishing a nostalgia for silence, it certainly seems more encouraging and fruitful to accept the challenges of shaping the environment and doing so in a way that could help us to surpass our all-too-well-known, discouraging everyday acoustic experiences. For, these ordinary experiences follow most often than not those patterns of the personal and collective soundscape that are “dull enough to confuse [us] …, [and] pronounced enough to constantly irritate and provoke study” - to appropriate again Gilman.

The lesson to be learned is not theoretical, but primarily practical: the constant and entrenching effects of the aural realms on our somatic life are not to be suffocated but to be channeled and taken into account as a formative endowment. Garth Paine (2017) enlisted several suggestions belonging to a possible action plan, which can foster the above goals. Among these, his final proposition (2007, p. 4) seems to be the most important, stressing that only "long-term analysis of trends in the acoustic ecology of both conserved nature and urban environments could lead to insight into the vectors of change and subsequently provide new tools for environmental monitoring, land management, and urban design."

Keeping all these in mind, somaesthetically literate urban planning and a broadened practice of architecture should complement its range of action by incorporating refined planning of urban soundscapes, the study and creative practice of which was initiated by R. Murray Schafer (1977), Barry Truax (1984), and their followers in acoustic ecology (Kang and Schulte-Fortkamp, 2016). In addition, theories of architecture should extend their scope too, embracing the consequences that are associated with the mutual dependence between the notions of planned space and kinesphere: these are the inherent performative, dynamic, and aural aspects of the built environments. A forward-looking example is the work of Sarah Robinson who rightly suggests substituting the all-too-visually determined and naturalized term “space” with the qualitative term "medium" which is more corporeal, engulfing, and resistant. A crucial aspect of such an understanding of space-medium is immersion. As Robinson, providing directions both for future theoretical and designer activities writes (2021, p. 27):

> *We are immersed in a medium, and it is very telling that a much more accurate indicator of space tends not to be our sense of vision but our sense of hearing.*

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Essay

# Architectural Gestures in International Relations

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***Abstract:*** *Somaesthetics helps us think about how buildings gesture. Analysis and interpretation of three embassies – the Belgian and U.S. embassies in New Delhi, India and the Finnish Embassy in Canberra, Australia, offer insight into the nature of architectural gestures. Methodologically, attention to soma serves to reconcile the normative sweep of Kant's political thought with the attention to granularity demanded by Wittgenstein.*

This essay concerns a question that rightly belongs in international ethics but often remains unasked. Namely, how do buildings as sites for international diplomacy- cooperation, and competition-mean (Goodman 1985; Whyte 2006)? Somaesthetics, by way of Kant's idea of political friendship and Wittgenstein's examination of the role of gestures in communication, provides an analytic lens that helps address the question. An embassy building is the material site of international interaction; the body is its locus. In these buildings, bodies of visitors and personnel seek and receive hospitality, conduct commercial negotiations, and promote cultural exchange and understanding, among other necessary activities, all conducted within international legal and deliberative frameworks. These interactions tied to the ideals of international cooperation, dialogue, and peaceful conflict resolution raise the question of their material expression in the buildings, landscapes, and urban contexts that provide the stage for their realization. Further, under what conditions, we may ask, would placing ethical limits on these interactions be legitimate, and whether buildings can help support, even advance, these concerns? Motivated by demands on individual states to further their interests and well-being, limits-achieved through diplomacy- support peaceful engagement with others within the international sphere. The alternative is war.

Analysis and interpretation of three embassies – the Belgian and U.S. embassies in New Delhi, India, and the Finnish Embassy in Canberra, Australia, offer insight into the nature of architectural gestures. Furthermore, it clarifies the role architecture can and does play in international relations. Relying on somaesthetics as an analytic tool, I propose that the debates around architectural meaning, largely dependent on contested views regarding the relationship between language and architecture, can find resolution through attention to the soma. The strong thesis among these views argues that architecture is a language with its lexicon and distinct

syntactic, pragmatic, and semantic structures. On the other hand, the weak thesis suggests that the relationship between architecture and language is analogical or metaphorical. Following Wittgenstein and Shusterman, it could be argued that a gesture– hence, architectural gesture-is better approached as embodied, material communication. This exploration should contribute more broadly to the emerging theoretical position that brings Kantian transcendental idealism and Wittgensteinian contextualism and pragmatism into accord. Thus, in Le Differend, Jean-Francois Lyotard suggests the need for such a détente ((Lyotard, 1989). The challenge is to account for the particularity of experience without abandoning overarching directive ideals within an ever more densely engaged world. While much of Stanley Cavell's philosophical writings reflect extensively on Wittgenstein, Kantian thought is pervasive. In other words, Cavell gestures towards Kant's norms even though he does not undertake systematic engagement with him (Teufel, 2020). That such thinking offers democratic thought and practice as a way of life is noted and extended nationally and internationally by Shusterman (1997). His somaesthetic approach offers a cross-disciplinary analytic approach across both the humanistic and scientific domains of research. Also, James Risser, relating Kant to Baumgarten's aesthetics, makes a strong case for the place of sensible knowing in Kantian thought. For Baumgarten, Risser claims much of the sensible, rich in its granularity, is inevitably lost in attempts to posit something universal.

> *"…. he (Kant) recognizes along with Baumgarten that aesthetics belongs to human life as the way of travelling from "night to noon." He too sees the need for understanding the connection among things in a way that pure reason cannot itself produce* (Risser 2015, 426)."

This movement from the particular to broader claims is not linear. In the Kantian view, the dialectic of reason constantly moves between the empirical and the universal but is responsibly mediated by transcendental critique. This mediation protects reason from its tendencies toward dogmatism and scepticism (Dwyer, 2004). The somaesthetic approach supports this theoretical development. Significantly, a focus on the soma directs our attention to the embodied nature of all thought. In turn, it deepens our engagement with some philosophers and reorients our interpretation of others (Shusterman, 2012). Similar arguments for the dialectic of thought and experience are also found in other disciplines, as in the debates between Sartre and Levi-Strauss in anthropology (Dhillon, 2011).

Diplomacy is an institutionalized form of friendship between states. It can be seen as extending Aristotle's discussion on the necessity of friendship in human affairs by recognizing the value of friendship in the international realm. "Friendship," according to Aristotle (2014), is "a bond that holds communities together, and lawgivers seem to attach more importance to it than to justice; because concord seems to be something like friendship, and concord is their primary object-that and eliminating faction, which is enmity." However, Aristotle is also supposed to have said, "O my friends; there is no friend." Derrida (1988), in reflection on this quote, writes at length about the politics of friendship- any friendship. Besides Derrida, Montaigne, Kant, and Nietzsche, in their writings on friendship, all ascribe this quote to Aristotle. More recently, this ascription has been doubted (Agamben, 2009). Regardless, we have here recognition of the importance of the virtue of international friendship along with pragmatic demands placed on states with interests-convergent and divergent- that lie at the heart of diplomatic relations.

Aristotle admits to friendships of many kinds. Diplomacy is a political form of friendship. In this view, the politics of international friendship that ensues is not one where a collective organized as a state exists in recognition of an existential enemy. Instead, this diplomatic

ideal organizes around principles of rationality and autonomy. In sum, ideal diplomacy in the international sphere–at least in its contemporary incarnation- is fueled by a Kantian worldview rather than the more bounded anarchical and conflict-predicting views of Carl Schmitt and Samuel Huntington. Andrew Hurrell (1990), reflecting on Kant's continuing significance in international relations, notes that global anarchy would be unacceptable to Kant even as any efforts at global governance that ignore local loyalties and cultural affiliations would quickly degenerate into "universal oppression." In Hurrell's words (1990, p.204), "Any solution between the two would have to be based on a tenuous and problematic balance between the reality of state sovereignty and the need to provide a firmer basis for those institutions and obligations that work to curb the excesses of that sovereignty." As noted in the Universal Declaration of Human Rights preamble, it is the work of diplomacy (and education)-and, by extension, embassies- to negotiate such a balance. Furthermore, embassies work towards limiting the pursuit of raw power by certain states and the conflicts-sometimes armed-that arise.

Several additional concerns shape the nature of the friendship between states. The ideal of friendship in international relations is aspirational as relationships between states play out in the murkier realms of human affairs. In the "Doctrine of Virtues," Kant held that friendship is the coming together of two persons in equality and mutual respect, both necessary in normative commitment and struggled for in practice. Through extension, states are obliged to friendship with others in the international sphere even as they pursue their respective interests. Keeping both in view, through diplomacy, they navigate the shifting intentions and interests of all the other states with rights and obligations to do the same. Thus, it could be argued and historically demonstrated that asymmetrical positions held by various states within the international system undermine the balance between affinity, benevolence, and respect that ideal friendship requires. For example, historical ties of cultural affinities can and often lead to unconditional commitments to another state. These, in turn, could lead to the weakening of respect between them- a necessary component of friendship. Benevolence expressed over long periods due to asymmetrical economic relations could, and often does, lead to a decrease in respect and the arousal of resentment among beneficiary states. Even if these states maintain diplomatic relations, the quality of the relations is not maintained in friendship and eventually wears thin. Most importantly, even if states can effectively establish and maintain a balanced friendship, there are limits to the degree of openness they must extend to each other. These limits serve to facilitate the realization of their legitimate interests.

In other words, while openness is valued-pursued and encouraged- in international cooperation, it would be naïve to expect complete transparency for pragmatic reasons. Ideally, in the Kantian view, prudent protection of one's privacy is vital to maintaining self-respect, even under circumstances of great affinity.

With these preliminary remarks on diplomacy as the politics of friendship in the international sphere, let us now consider whether and how states express this friendship in embassy architecture. Aurorarosa Alison (2012), in her discussion of the role of both science and poetry in Gaston Bachelard, too draws out the dialectical movement from the minutia of everyday life to the broader themes that motivate us. She does so by focusing on the body and the spaces it inhabits and moves through. The guiding thought here is that soma is present in the design and use of even the most functional buildings. Hence, it is unsurprising that architects, philosophers, and historians are interested in the messages signalled by buildings. The communicative aspect of a building somatically designed by its creators and 'read' by its users is what Wittgenstein, Richard Shusterman, and others call architectural expression. In

his essay, 'Somaesthetics and Architecture," Shusterman (2012, p.225)) says that "Despite its non-discursive materiality (which suggests mute dumbness)," he says, "architecture, as artistic design, is expressive." As he notes this observation, he notes, this is nothing new. We can find references to architecture as an expression from Vitruvius to Venturi. In 1745 Germain Boffrand (Whyte 2007, 155), for example, held that "An edifice, by its composition, expresses as on a stage that the scene is pastoral or tragic, that it is a temple, or a palace, a public building destined for a specific use, or a private house. These different edifices, through their disposition, their structure, and how they are decorated, should announce their purpose to the spectator." Boffrand goes on to suggest that "the profiles of moldings and other parts which compose a building are to architecture what words are to speech."

Interpretations of architecture often rely on theories of language. However, as William Whyte points out, there is no single correct understanding on offer. He argues that different theories of language yield different architectural meanings. Furthermore, the meaning of a building can change over time. He says architecture is not "an artifact that can simply be described, but a multifaceted construct capable of multiple interpretations" (Whyte 2021, 177)." Inspired by Bakhtin, Whyte provides a rich account for thinking about the complexity of how architecture conveys meanings-not meaning, as he is quick to point out. Despite his impatience with various linguistic approaches brought to the interpretation of architecture, he reluctantly submits that architectural analyses and interpretations must remain within linguistic, discursive confines. However, architecture is not linguistic, and yet it bears meaning. Shusterman's essay "Somaesthetics and Architecture" indicates a possible way out of this impasse. "The soma's non-discursive expressivity," he tells us, "through *gesture* provides a central model for architecture (Shusterman, 2012, p. 225, emphasis mine)."

In emphasizing the centrality of gesture in architecture, Shusterman opens possibilities for further research into what and how buildings mean. He could, however, develop his insight into the somatic dimension of Wittgenstein's cryptic and cautionary remarks about architectural gestures. Reminiscent of Dewey's remarks in his chapter on "The Live Creature," in *Art as Experience*," Shusterman quickly turns his attention to the relationship between architectural design and the environment:

> *"The soma further provides a basic model for the relationship of architectural design to the environment. An architecturally successful building must both fit in and stand out as a distinctive achievement, just as a soma must do to survive and flourish, performing a balancing act of absorbing and relying on the wider natural and social environmental framing, so we cannot feel the body alone independent of its wider* Umwelt (2012, p. 226)."

Reading this passage in isolation, it might seem that Shusterman is setting up the body and architecture in an analogical relationship. Later in the essay, however, he relates the soma directly to architecture. Here he underscores the importance of appropriate points to the importance of a building's appropriate relationship to the body, and its embeddedness within the built and natural environments while maintaining its unique identity. Any building that fails to embed itself within the "wider natural and social environmental framing" is unsuccessful. For example, Le Corbusier's design of the city and government buildings of Chandigarh, India, has faced significant criticism on this point (Bharne, 2011). The buildings, it is charged, are not architecturally successful because Corbusier did not sufficiently consider the social and natural environments. (Dhillon, 2015, p.133). Their monumentality is itself an affront to a nation

emerging as a democracy out of a crippling colonial experience. Furthermore, given the arid conditions in the upper plains of Punjab, the buildings present significant physical challenges to the bodies that use them. Corbusier's buildings in France and Switzerland were very successful, leading to his appointment as the Chandigarh project's chief architect and urban planner. Culturally and historically, his modernist buildings fit the environment in Europe. However, his buildings in Chandigarh did not.

Let us now expand on architecture as a gesture and consider how suitability to the environment plays into purpose-built embassies. These are successful to the extent that they support the political friendships sending states and host countries and admit to the degrees entailed by the very idea of political friendships. David Macarthur opens his essay "Reflections on "Architecture is a Gesture" (Wittgenstein)," by noting the similarities between philosophical reflection and architecture (Macarthur, 2014, p.?). In this, he follows Wittgenstein, Umberto Eco, and others, including Shusterman, whose essay on the soma and architecture draws out the role of criticality in philosophy and architecture. Macarthur tells us that philosophy and architecture ask the Socratic question: "How should one live?" In addition, they both suffer "from an embarrassment of their status (Macarthur 2014, 89)." Macarthur tells us that, following Quine, the first is due to attempts to assimilate philosophy into *scientific* naturalism. Similarly, architectecture is often assimilated to civil engineering. In Macarthur's view, Wittgenstein attempts to save architecture and philosophy from this status anxiety. For Wittgenstein, philosophy and architecture aim for the status of art and "attempt to capture the world sub *specie aeterni* (MacArthur 2014, 89)." Furthermore, Macarthur (2014, p.90) quotes Wittgensteinian as saying that architecture "immortalizes and glorifies something due to its relative permanence. Hence there can be no architecture where there is nothing to glorify […] Architecture glorifies something (because it endures). It glorifies its purpose (Macarthur 2014, 90)."

In Macarthur's reading, gestures for Wittgenstein are distinct from other expressive movements. Unlike facial expressions and like a shrug or a salute, for example, "they must be produced for a suitable duration, to be readily identified as a gesture; that is, a legible movement or positioning of the body parts whose purpose is the communication of an idea or meaning (Macarthur 2014, 103)." By analogy, Macarthur argues (2014,104), buildings -immobile and not designed to express by way of movement- "intentionally expresses an idea or thought as akin to the intentional expression of a human body through the posture." Even though Macarthur takes us beyond the strictly linguistic and limiting analyses of architecture noted by Whyte and sets up a relationship between the body and architecture, he does so by analogy. Shusterman, on the other hand, places them in a direct relationship. Locating himself within the pragmatist tradition, Shusterman reminds us that "all action (artistic or political) requires the body, our tool of tools (2012, p.3)." It frees us from architectural history and criticism that is either subsumed under the philosophy of language or read by analogy through it. If intentionality is an essential aspect of gestures, buildings are certainly intentional, even if only built or used for specific functional reasons. To state the banal, bodies express intention, create, engage, evaluate, and use buildings. Second, if gestures are part of a comprehensive communicative system that expresses through verbal and non-verbal means, then architectural gestures are placed directly under the concept of gesture. They are not *like* bodily gestures but gestures in themselves, albeit of a different kind.

Embassy architecture is a gesture of international political friendship. Not surprisingly, these buildings, their interior design, and landscaping all reflect the normative values of a state. Through its material presence, a sending state signals its values and the quality of the interaction- the level of friendship -they can or wish to extend towards the host country. Embassies are often,

but not always, purpose-built by sending states on land acquired from the host nation either by purchase, lease or as a gift. Typically, an embassy consists of a chancellery -the offices conducting the business between the two states and other member states of the international system - and the Ambassador's residence. The buildings facilitate the interaction between those in high office and ordinary citizens of the host country and embassy personnel. However, not all embassies are purpose-built. Immediately following independence from British colonial rule in 1947, for example, Prime Minister Nehru sought to establish diplomatic relations with other nations of the world. He invested heavily in architecture to declare India a sovereign, modern nation on the world stage. His most well-known project was the development of Chandigarh –its urban layout and its government buildings- by a team of Indian architects under the leadership of the Swiss modernist architect Le Corbusier. In New Delhi, a large tract of land near the presidential and parliament complex- established in 1911 by the British-Imperial Delhi- under the leadership of the architect of Edward Luytens- was set aside for a diplomatic enclave named Chanakyapuri (Metcalf & Metcalf, 2006). Parcels of land were leased or sold to sending states for purpose-built embassies. Some within the international community, like the United States and the United Kingdom, purchased the land and initiated and completed purpose-built embassies quite quickly. Others were insufficiently politically or economically motivated or unable to undertake such costly architectural projects.

Belgium, for example, leased land in New Delhi's diplomatic enclave at the nominal rate of one rupee as early as 1954 but did not build on it. However, it finally initiated and built an embassy between 1979 and 1983 (De Maeyer, Flore, and Morel, 2021). In the meantime, its offices and the Ambassador's residence were housed in rented buildings in residential neighbourhoods within Luytens's Delhi, which, to a large extent, still is one of the most prestigious neighbourhoods of Delhi. As the architectural historians De Maeyer et al. (2021) tell us, the buildings rented by the Belgian government bore a brass plaque with the Belgian coat of arms at the gate. They flew the Belgian flag distinguishing them from the other residential buildings in the neighbourhood. These buildings were functional in support of Indo-Belgian relations but, at that time, showed no sign of committed long-term diplomatic relations. Contrary to the idea that a purely functional building is not architecture because it does not gesture through artistic design, these rented buildings did gesture the tenuousness of Indo-Belgian relations through their emphasis on functionality. However, in Wittgenstein's view, they still needed to meet additional criteria for buildings to qualify as architecture. These rented buildings were not permanent, purpose-built structures and did not glorify Indo-Belgian friendship. The lack of permanent Embassy buildings gestures towards political and cultural changes internal to Belgium and shifting political, cultural, and economic relations with India. These changes played a role in the degree and nature of engagement-the political friendship- between Belgium and India. The decolonization of Belgian-held territories in Africa by 1962 and the ensuing restructuring of Belgium's economy and cultural identifications brought changes to its presence in India. As Belgium restructured internally and its relations with India intensified, its Embassy moved to ever more prestigious locations within Luytens's Delhi until it finally moved to its new home in 1983. The lack of permanence gestures changes internal to Belgium and its changing political, cultural, and economic relations with India. These changes played a role in the degree and nature of engagement-the political friendship- between Belgium and India. As relations between the two countries strengthened, Belgium initiated the building of its Embassy and completed in 1983. The Belgian Ambassador, on moving from a rented home in Luytens' Delhi to the new purpose-built Embassy, nostalgically said he was "leaving a charming colonial house in Tilak Marg to move, in some way, from British old days to modern India (De Maeyer et al., 2021)

As already discussed, the transition from rented to permanent Embassy buildings gestures shifts in Indo-Belgian relations and Belgium's relationship with its colonizing past. In other words, the new Embassy gestured towards the increasingly strong Indo-Belgian relations as the Embassy moved from rented buildings to inhabiting the embassy complex in Chanakyapuri. The Belgian government and diplomatic staff were aware of the political implications of building its Embassy with insufficient historical insensitivity by an erstwhile colonizing country in one that had recently emerged from its experience of suffering colonialism. By the late 1970s, cultural sensitivities around colonialism were still high on both sides. An Indian artist, Satish Gujral, was selected to design this new Embassy. Having made his mark as a sculptor, painter and muralist, Gujral was awarded a scholarship to Palacio Nacional de Artes Mexico City, in 1952. Here he met Frida Kahlo, Diego Rivera, and Frank Llyod Wright. Under their influence, especially Wright's, whose interest in pre-Columbian architecture often brought him to Mexico, Gujral's interest shifted towards architecture. Frustrated with art, he often said he would have done better as an architect. He was well-known in Delhi's elite circles and was invited to design a house and a hotel in the city. Despite this limited experience, and given his lack of credentials, it is surprising that he was appointed the architect for the new Embassy. In the view of De Maeyer et al. (2021, p.7), "It was likely a combination of Gujral's prominent position in Indian society and his ties that brought him into contact with the Belgian Ministry of Foreign Affairs." The Gujral family was affiliated with the Congress Party of India. Satish Gujral was on social terms with Roland Bunny, who then served as the chancellor of the Belgian Embassy.

"For writers like John Carter and John Britton, writing in the 1780s and 1810s, the architectural style was presumed to be indicative of social and intellectual development. It was also strongly linked to national culture (quoted in Whyte, p.160)." Gujral, of a generation that fought for freedom from British rule and with other intellectuals of his time, sought to find a design vocabulary that was distinctively Indian yet modern (Dhillon, 2013). It is important to stress that the use of local architectural vocabulary in modern architecture has long been in practice, even though it was only in the 1980's that the term "critical regionalism" was coined (Bagha & Raheja, 2018). For the Belgian Embassy in New Delhi, Gujral chose brick as the primary building material, as is traditional in much of South Asia. For example, brick was used significantly by Louis Kahn in the public buildings he designed in South Asia. Furthermore, brick directly contrasts with the concrete used in Le Corbusier's modernist Chandigarh project. Furthermore, seeking to decolonize architectural aesthetics, Gujral also turned to classical Indian forms borrowed from Hindu temples, Mughal palaces and forts, and the ancient Indian sites of Harappa and Mohenjodaro in his design.

In so doing, Gujral signalled his nationalism and celebrated the diversity of Indian culture at a time when northern India was in considerable political upheaval around issues of religion. This turn to regional architectural forms ensured the legibility of the building for the host country's population and fed into its pride in its hard-won position within the international system of independence from colonial rule. Gujral's design fully articulated the building within the context of India's built environment. Its Embassy signalled the quality and degree of political friendship it sought to establish with India. The building is often referred to as "an Indian nest for Belgian birds" by embassy personnel. It is one of the most visited embassies by Indians for aesthetic and other non-functional reasons (De Maeyer et al., 2021). These shifts in architectural gestures from simple functionality to full-blown respect for the sending or the host country admit to degrees in political friendships and changes in global politics. Suzanna Harris-Brandts and David Sichinava (2021) offer a telling example of this dynamic in their case study on the

shifting cultural policy in Tbilsi, Georgia, after the end of the cold war. Furthermore, Macarthur reminds us that the success of a gesture, in Wittgenstein's view, is not a response to the building in words, even if one can articulate it.

> *"Remember the impression made by good architecture, that it expresses a thought. One would like to respond to it too with a gesture."*

To Indian visitors, this building continues to offer such a non-verbal, embodied gesture of appreciation.

Most embassies are built for functionality, to express friendship towards the host country, and also to declare the sending country's cultural achievements. However, there was nothing particularly *Belgian* about the Belgian Embassy in New Delhi. Hence, it remains an anomaly within embassy architecture. Deeply appreciated though it is, it would only be considered partially successful. In Shusterman's words:

> *"An architectural building must both fit in and stand out, just as a soma must do, to survive and flourish, performing a balancing act of absorbing and relying on the wider natural and social resources of its environment but at the same time asserting its distinctive individuality* (2021, 226)*."*

Embassy buildings need to be functional, a gesture of friendship towards the host country and also display the cultural accomplishments of the sending country. The Belgian Embassy was not able to materially signal its own cultural identity. Interestingly, until the publication of De Maeyer et al.'s article in 2021, the Embassy was relatively ignored by architectural historians and critics in Belgium. Arguably, the building signalled aspects of Belgian identity-its openness and respect for other cultures- by the very absence of material representation of its own culture. However, given Belgium's colonial policies and the controversial choice of Gujral as the architect for the project, this aspect warrants further research. Regardless, it did not find the balance demanded of political friendship that a successful Embassy building needs to achieve.

Let us turn to a building that explicitly sought to achieve such a balance: the Embassy of the United States in Chanakyapuri, Delhi. An architectural historian, Jane C. Loeffler (2011), placed embassy architecture at the heart of diplomacy in her book *The Architecture of Diplomacy: Building American Embassies*. In an earlier article, she quotes the diplomatic historian Harold Nicholson as saying, "the worst kind of diplomatists (sic) are missionaries, fanatics, and lawyers." Loeffler (1990, p.251) then asks:

> *"Given the chance to serve a diplomatic role, could architects establish a language of discourse through which American architecture might speak to the world of American hopes and American strength? Could they create a dialogue of mutual trust and respect with people of different cultures and sensibilities? Or would they simply make grand or empty gestures incomprehensible to all but their peers in the United States and abroad—statements resented like the intrusions of missionaries, flamboyant like the work of fanatics, or dull like the timid efforts of legal experts whose ultimate aim is compromise?"*

For the United States, India's non-alignment foreign policy during the cold war spurred interest in building an embassy in Delhi to counter the presence of the Soviet Union. Despite considerable resistance to establishing robust relations with any country that was not overtly

anti-communist, President Truman initiated an aid program to India in 1949, and official American presence became substantial in New Delhi. Chester Bowles was appointed Ambassador responsible for developing and consolidating American regional interests in South Asia. Bowles, a businessman and a liberal, encouraged the Americans in India to travel around the country to know it better and urged his staff to learn Hindi. Back home in America, he put his efforts into acquainting Americans with India and its economic and strategic importance. With other voices, including those of the economist John Kenneth Galbraith and first lady Jaqueline Kennedy joining in these efforts, there was a growing awareness of the importance of India. Despite some resistance in the U.S. State Department, it was decided to build an "embassy in India that would be worthwhile, a credit to us, and a credit to India. (Loeffler, 2011, p. 185)

With mutual awareness proliferating in both India and the United States, and despite Nehru's non-alignment policy perceived as unstable and vacillating by Washington, New Delhi gained top priority for the Department of Foreign Building Operations (FBO). Thirteen acres of land, later expanded to twenty-eight, was acquired in Chanakyapuri. Edward Durrell Stone, whose career as an architect was controversial, Loeffler tells us, seemed to have hit a rough patch. Despite this, he was selected as the architect to design the chancery of the Embassy. The director of the FBO, Nelson Kenworthy, knew Stone from past projects and did not feel he was suitable. He turned the final decision over to the newly appointed American Architectural Committee. Stone, who had friends on that committee, was selected.

Loeffler tells us that Stone had visited the Pan American Union Building in Washington D.C. when he was eighteen. Taken by its garden court, "lush with tropical vegetation, birds, fountains and brilliant coloured tile," he decided to become an architect (Loeffler, 202, p. 226). The Mughal palaces Stone visited in northern India resonated strongly with this early encounter. Their slim colonnades running along the sides of rigorously geometrical buildings, with rooms hidden behind them, were often arranged around a central courtyard. The meticulously carved stone screens, *jaalis*, of sandstone or marble, provided privacy and shade, allowing breezes to blow through the buildings. Rectangular pools with lotus plants, and open pavilions with channels of water running through them, moved him to design a building that incorporated these Indian architectural design elements. His earlier experience in Panama City, when working on the *El Panama Hotel* project, had also made him sensitive to the value of these elements in an environment where heat and glare provided considerable challenges.

Stone submitted a design inspired by the Taj Mahal. It was a low rectangular white building with deep overhangs held up by slim columns running along all the sides reminiscent of Mughal columns and overhangs. It is interesting to note that even though modern architecture was European in origin, by the 1950s, mainly through the work of architects like Mies Van de Rohe in Chicago, it came to be associated with American architecture. Despite being influenced by Mughal architectural forms, the Embassy was a modern American building. Behind the slender columns supporting a portico that ran along the perimeter of the structure, the entire building, wrapped in glass curtain walls, gestured towards the material and style of American architecture *par excellence*. The walls clad, in turn, in traditional marble and concrete *jaalis* gave the building an airy look, incorporating American and Indian architectural styles. The main entrance to the building was at the short end of the rectangle facing the chief avenue, *Shantipath*, that ran through Chankyapuri. On entering the gates from Shantipath, a serene pool ran the width of the building, behind which were shallow steps that led to the recessed entry with the Great Seal of the United States set above the door. The elevation was modern and American, with glass, clean low lines, slim columns, *jaalis*, and the pool, yet reminiscent of the India-Mughal-garden pavilions.

**Figure 1** *U.S. Embassy in New Dehli, 1954*

An inner court had two umbrella roofs to reduce heat gain and promote air circulation. Shaded by an aluminium screen, they were to deflect the sun and direct rainwater to the pool. (Loeffler, 2021, pp. 183-191). The screen, running the entire length and breadth of the inner court, created an ample, airy space, awash in filtered light and further softened by lotuses and other tropical plantings in the pool. The offices arranged around this inner court were air-conditioned. However, the court was not. The contrast in temperature, particularly in the hot summer months, caused significant discomfort to the personnel and visitors to the Embassy.

On its dedication on 3 January 1959, the building met with an enthusiastic reception in the United States and India. Frank Lloyd Wright hailed it as the most beautiful building in the last 100 years. Loeffler (2021. p.189) reports:

> *"The New York Times informed its readers that the new embassy was "probably the most elegant in the world," and that Prime Minister Nehru hailed the building and its American architect. "I was enchanted by the building," Nehru reportedly said. "I think it is a very beautiful structure and a very attractive combination of typically India motifs and [the] latest modern technology."*

Stone was widely praised for his skilful blending of Mughal and contemporary American architecture. The State Department was applauded for its "enlightened new design policy, which recognized how important it was for American buildings overseas "to be in harmony with the cultural, architectural and climatic conditions." (Loeffler, 2021, p.189)." When Jacqueline Kennedy visited India in 1962, she was so taken with the Embassy that she selected Stone to design the Kennedy Center in Washington, D.C. As a communicative act, the chancery of the U.S. embassy in New Delhi was legible to both Indians and Americans. The gesture was reciprocated by appreciation expressed by all who visited the Embassy and those driving by on Shantipath.

Stone's chancery was an architectural gesture of Kantian political friendship based on equality and mutual respect even as the two countries pursued their interests. It was a glorious gesture towards a refusal of the East/West divide settling around the globe. In passing, it is interesting to note that philosophy, too, sought to resist such settling. John Dewey (1951) explicitly questions this settling by calling for a global extension of pragmatism. The architect and philosopher were diplomats. The building meets Shusterman's criterion "of absorbing and relying on the wider natural and social resources of its environmental framing but at the same time asserting its distinctive individuality (2012, p.226)." It failed, however, because the building did not meet Shusterman's criteria of somaesthetic functionality. Built without sufficient attention to the natural environment, an essential element in the balance required for successful architecture, the building failed. While lovely, the inner courtyard becomes a sauna in Delhi's relentless summer. A somaesthetic approach brings this failing into focus. It compels us to rethink Wittgenstein's aphoristic claim, often uncritically quoted, that architectural gestures are more than the functionality of a building. The Embassy building meets Shusterman's first criterion for successful architecture; it fits in and stands out, "performing a balancing act of absorbing and relying on wider natural and social resources of its environmental framing." However, it does not meet Shusterman's somatic criterion of seamless articulation between the body and architecture- its "wider *Umwelt* (2012, p. 226)." The bodies using this enduringly beautiful building are under stress to thrive and flourish. Many personnel, for example, said they fell ill from constantly moving between their air-conditioned offices and the steaming courtyard. The building, for all the received accolades, is flawed from a somaesthetic perspective.

Moreover, the U.S. embassy gestured democratic values through its use of Indian and American architectural materials but was not fully democratic in conception. Given that the promotion of democracy in the region was the prime motivation behind the political friendship extended towards India, the turn to the royal Mughal mausoleum- the Taj Mahal- is surprising. The Embassy reflects an ambivalence between the need to establish a democratic international friendship and a commitment to gesturing towards the power of the United States by choosing decidedly un-democratic Indian architectural motifs. This ambivalence dogged the American program of building embassies around the globe from the very inception of the American Embassy Association (AEA) in 1909. The association torn between demonstrating democratic principles and the desire to showcase its growing importance on the international stage led to fierce debates during meetings for establishing building policies. Arguments in favour of signifying power won the day. For example, an article published by the AEA in 1910 lays out the position for signifying power:

> *"All men, rich or poor, cultivated or uncultivated, are impressed by appearances. Foreigners necessarily judge us by what they see of us in their own country… We pride ourselves on being the richest people on earth and declare loudly that nothing is too good for us. And yet we are content to cheapen ourselves among the nations of the earth by the shabby showing we make among them in respect to our embassies. We feel ashamed at appearing poverty-stricken in the eyes of the inhabitants of other countries and of placing ourselves below the third or even fourth-rate powers* (Loeffler 2011, 252)."

Furthermore, in the wake of attacks on U.S. embassies in many parts of the world, a great wall was built around the U.S. embassy. The building is no longer visible to the people walking or driving down Shantipath. Once open to view, the Embassy building has become an enigma to

the local population. Understandably, the need for security now plays a crucial role in developing and implementing plans for the design of new embassies or the renovation or extension of existing ones. As relations between India and the U.S. strengthen, a prolonged expansion and renovation of the more than sixty-year-old compound are underway. An open and transparent competition selected the firm Weiss/Manfredi of New York for the project. Their architectural philosophy is to design by taking the entire environment-built and natural-into consideration. In their words,

> *"A new tree-lined central green offers shade connects functional zones across the campus and introduces reciprocal relationships between the buildings and gardens. Inspired by India's enduring tradition of weaving together architecture and landscape, a series of cast stone screens, canopies, and garden walls introduce a resilient, integrated design language that brings the campus into the twenty-first century. Nearly sixty years after the opening of the Edward Durrell Stone-designed Embassy, the rejuvenated embassy compound expresses the symbolic values of American diplomacy through environmental stewardship and gives measure to America's democratic presence in India* (Weissman/Fredi, 2022)."

The expansion will take ten years to complete. Through its use of walled gardens, pavilions, and architectural elements borrowed from the Mughal period's elite architecture-forts and palaces, the building will once again be legible to Indians. Evaluation of its success has to wait.

If, following Wittgenstein, we claim that "architecture immortalizes, and glorifies something," then for an embassy that gestures democracy, let us turn to the Finnish Embassy in Canberra, Australia. Built in 2002, the Embassy was designed by Finnish architect Vesa Huttunen of the firm Hirvonen and Huttunen (2022), who won the commission in an open competition in 1997. Given the increasing significance of transparency in democratic thinking, the selection of the architect for the project stands in contrast to the selection of Satish Gujral and Edward Stone. The new building is an annexe to the existing Finnish Embassy and now houses the chancery and a residence for the counsellor. The old building now serves as the residence of the Ambassador. The Embassy is often lauded as a "courageous" building because it boldly and transparently affirms Finland's democratic commitments despite its delicate geography and relatively small size. It is named Ilmarinen in commemoration of the Finnish flagship that fired several times on an airfield in the Soviet Union but ultimately sank during World War II. The ship itself was named after Ilmarinen, the blacksmith and inventor-hero of the Finnish mythological epic, Kalevala, capable of creating anything. The name refers directly to Finland's cultural heritage of creativity and its steely resistance, first to the values of the Soviet Union and now to expansionist Russia.[1]

The Embassy gestures this transparency of affiliation to a set of political values. Furthermore, its architectural design expresses transparency as a critical political and democratic value. One aspect of the façade of this modernist building is glass which allows you to see right into the offices from the outside. A different aspect, a curved wall of concrete, and the interior of the building invoke the atmosphere of a ship, a gesture to the *Ilmarinen* and hence to Finland's culture and history of innovation and brave independence. The offices lined along the outside walls like cabins have a walkway that runs along them. From the walkway, the atrium and the beams supporting the higher levels of the building render a significant part of the interior visible.

1 https://media3.architecturemedia.net/site_media/media/cache/6d/74/6d744362b91e72e5b45e6b8e1704378b.jpg

The overhang is of eucalyptus, and its outside decks and stair treads of reclaimed *jarrah*; are both timbers native to the Australian landscape. Moreover, the jarrah was sourced from old sheep stations. Thus, the building gestures towards the natural and cultural resources of the host and sending countries.

Furthermore, the partitions between the offices are open at the top and bottom to allow aural access to ongoing conversations and negotiations. However, it is worth noting that despite the building being so open, some mechanisms allow for security from the broad to the subtle. These mechanisms place material limits- albeit subtle-on a building. Thus, even though the walls between offices are aurally permeable, some mechanisms allow dampening or elimination of sound when needed. While the building is boldly transparent, it has provisions that enable privacy and security. Architecturally, it "glorifies" democracy and exemplifies a relatively high level of *political* friendship. It could safely be said that the Finnish Embassy at Canberra "expresses a thought" and "glorifies something…It glorifies its purpose." Wittgenstein would have appreciated it, and Kant too. It will be years before we have enough data and information to comment on its functionality.

This essay focuses on exploring the ideas of embassy architecture as a gesture of political friendship from a somaesthetic perspective. Methodologically, I sought to diminish, if not erase, the distinction between theory and experience. Somatic attention places verbal and non-verbal communication, linguistic and non-linguistic forms of representation, on a continuum rather than in opposition. Finally, Shusterman's somaesthetic approach reconciles the broad normative sweep of Kant's political thought with the attention to granularity demanded by Wittgenstein.

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**Artistic Statement**

# Is space recognizing a form? A contributory study for the theory of Somactive Art

***Bartlomiej Struzik***

***Abstract:*** *In the content of the paper, I refer to meetings with people whose reflections, general comments or even unspoken gestures have become a source of inspiration no less important to me than readings and theoretical study. At this point, I would like to particularly emphasize the role of my acquaintance with Richard Shusterman, whose concept of Somaesthetics, growing from his talent, many years of honest philosophical work and solid theoretical foundations, is probably the most striking contrast of the research method in relation to the artistic intuitions proposed in my text and postulates resulting mostly from art practice. The concepts presented in this paper, especially the two key issues of* Somactive Art *and* space recognizing as a form*, will consequently have the character of an artistic supposition and represent a theoretical sketch, rather than a thoroughly researched, well-founded, and mature scientific hypothesis.*

## Introductory Remarks

My respect for the readers of a well-established scientific journal requires me to introduce more extensively my intentions and justify the reason for presenting the concepts of *Somactive Art* and *space recognizing as a form*. I am an artist and in my daily creative practice I use the sculpting workshop and design competences. The concepts presented in this paper, especially the two key issues of *Somactive Art* and *space recognizing as a form*, will consequently have the character of an artistic supposition and represent a theoretical sketch, rather than a thoroughly researched, well-founded, and mature scientific hypothesis. Equally important is the assertion that the concept of systematizing my artistic intuitions and giving them the concise form of a scientific paper, as well as an attempt to embed them in a broader discourse, is a relatively new idea. However the above-mentioned intuitions regarding *Somactive Art* and the concept of *space recognizing as a form* have accompanied me for years and I use them profusely in an intuitive and often subconscious way in my daily creative practice. The presented text will often refer to the creative process, in particular to my series of large-format sculptural compositions entitled *Transitus*. In the paper I will devote a lot of space to the *Transitus* cycle - which will probably

not escape the reader's notice - becoming the main point of reference and a handy illustration of the theoretical issues presented in the text. Although it may seem that too many personal threads and emotionally charged statements are included in the scientific discourse, I include descriptions of spaces and places whose atmosphere left indelible memories in me, becoming both a canvas and a medium for both proposed concepts: *Somactive Art* and *space recognizing as a form*. Referring to my own artistic intuition, body memory, emotional experience and the poetics of language seems to be justified by the fact that I am looking for a theoretical context for my considerations in the field of somaesthetics, which is no stranger to treating the subject as a highly complex and constantly dynamic individuality.

I am aware that as an artist I am entering unfamiliar territory and undertake a difficult task - giving up the comfort of hiding in the shadow of my sculptural projects - consisting in the most transparent formulation and convincing justification of a separate methodology of artistic creation called here *Somactive Art*. I believe, however, that such a proposal may in the future result in the inspiring discussion and development of a brand-new branch of the vitally growing tree of somaesthetics, supported by solid scientific roots and engaging art practice.

For the clarity of the paper, two more used in the text - semantically bound but obviously separate - expressions, require a short explanation. These are the concepts of *space-art* and *sculptural space*. I will use these terms understanding *space-art* as a semantically roomier concept and covering the area of creativity in which elements of sculpture, sculptural installation, and architecture or landscape design are orchestrated and purposely combined. An example of what I define as *space-art* are for instance multi-element memorial compositions - spaces of remembrance[1] (vide: Peter Eisenmann: *Berlin Memorial to the Murdered Jews of Europe*). In this way, it also defines the work of the Israeli artist, Dani Karavan, whose memorial designs and projects in public spaces are a synthesis of disciplines and refer to a multi-sensory, intellectual and emotional dialogue with the recipient. (Vide: *Monument to the Negev Brigade*: near Beersheba, Israel, *Walter Benjamin Memorial*: Portbou, Spain). *Sculptural space*, on the other hand, is understood as the creation, in which purely sculptural qualities such as textures, materiality and expression of sculptural weights and dynamics of form become the dominant aspect of the created space. (Vide: Richard Serra, *The Matter of Time* - Guggenheim Museum Bilbao).

In the content of the paper, I refer to meetings with people whose reflections, general comments or even unspoken gestures have become a source of inspiration no less important to me than readings and theoretical study. At this point, I would like to particularly emphasize the role of my acquaintance with professor Richard Shusterman[2], whose concept of Somaesthetics, growing from his talent, many years of honest philosophical work and solid theoretical foundations, is probably the most striking contrast of the research method in relation to the artistic intuitions proposed in my text and postulates resulting mostly from art practice. Nevertheless, it was my collaboration with professor Richard Shusterman that became the breakthrough impulse that emboldened me to write this article and embark on an intellectual adventure. The structure of the article has been built in such a way as to clearly indicate the role of creative experience as the basis of research (practice-based research). In this context, I would like to thank professor Jürgen Weidinger[3] from Berlin - the tireless advocate of studio practice as

1 Each time large-scale spaces of memory are mentioned, I will consistently use the term *memorial* rather than *monument* except when citing the official names of them.

2 Richard Shusterman, a pragmatist philosopher, Dorothy F. Schmidt Eminent Scholar in the Humanities. Director of the Body, Mind, and Culture Center at Florida Atlantic University.

3 Jürgen Weidinger, a landscape architect and director of Weidinger Landschaftsarchitekten Berlin. Professor and head of Chair for Landscape Architecture at Technische Universität Berlin. His research interests are theories of atmosphere and aesthetics in landscape architecture.

an indispensable and inseparable basis for formulating theories in the field of design. One of the greatest illuminations on my artistic way was friendly meetings with Dani Karavan[4], with whom I first met in his studio in Tel Aviv. I remember the atmosphere of our last meeting, his bright, joyful eyes and firm handshake when we said goodbye to each other. It turned out to be our last handshake ever but I constantly feel his mysterious presence in my artistic life.

The issues of *Somactive Art* and *space recognizing as a form*, discussed in turn, should be considered in parallel, with the assumption that *Somactive Art* applies to creators - designers of public spaces, public art or space-art as mentioned above, and to artistic creation in general, while *space recognizing as a form* refers to the recipients who, in the cognitive, spatially active and spread-over-time process, have a chance for a deeper interaction with the space of the art work. I will present the significance and possible synthesis of these two concepts at the end of the paper.

## Transitus: Conceptual Objectives and Inspirations

In this chapter I seek to present my inner imperatives and creative inspirations, to define the highlighted issue of *space recognizing as a form* and *Somactive Art*, as far as possible, to transfer these two elements to teaching space-art. Many of the themes, especially those relating to teaching space-art, were partly discussed in the *Przestrzeń – Czas – Forma*[5] [*Eng. Space – Time – Form*], a monographic cycle published since 2011 and in a paper printed in the *Ethos* quarterly in 2013. The conclusions made then remain up-to-date, blazing trails towards expressive and methodological autonomy of *Somactive Art*.

The path of my creative and intellectual development was inspired primarily by my juvenile fascination in classical Greek philosophy and by later trips to Japan, followed by visits to China, and by the influence the cultures of these countries had on my perception of space as well as the role of body in space perception. The dialogue between the West and the culture of the East is undoubtedly the most characteristic feature and background of my considerations. In the first place, I should mention traditional Japanese garden design as well as the historical achievements of the country's architecture. For me, Yoshinobu Ashihara's book titled, *Exterior Design in Architecture*[6] is an example of simplicity and clarity of the argumentation accompanied by adequate illustrative material. I reach for it often and with great benefit. Yi-Fu Tuan's celebrated publication *Space and Place* and classic *Topophilia* remain an inexhaustible source of inspiration for me. Intellectually open and filled with mutual trust, my meetings with Toshihiro Hamano[7], Juhani Pallasmaa[8] (phenomenology of space) and Svein Hatloy[9] (reception of Oskar Hansen's Open Form Theory) helped rationalize my creative intuitions and reinforce many of my views.

My large-size space compositions from the *Transitus* cycle look for the audience's direct physical, intellectual and emotional contact with the sculptural space created (*Somactive Art* approach). Objects and sculptural details are a springboard for, and invitation to, an intimate journey inside the conscious, the subconscious, and the realm of impressions, premonitions

4 Dani Karavan, a prominent Israeli artist. Born in 1930 in Tel Aviv. Died in 2021.

5 *Przestrzeń, Czas, Forma*. Monographic cycle. Scientific editor Bartłomiej Struzik. Jan Matejko Academy of Fine Arts in Kraków Publishing House. Kraków 2013 (vol. 2), 2016 (vol. 3), 2021 (vol. 4), 2023 (vol. 5 - in progress)

6 Yoshinobu Ashihara, *Exterior Design in Architecture, Revised Edition*. Van Nostrand Reinhold Company, New York 1981.

7 Toshihiro Hamano - born in 1937. Japanese artist and Zen master. Lives and works in Kagawa Prefecture, Japan.

8 Juhani Pallasmaa - born in 1936. Finish architect and former professor of architecture and dean at the Helsinki University of Technology.

9 Svein Hatløy - born in 1940, died in 2015. Norwegian architect. Founder and professor of Bergen Architekt Skole (BAS) in Bergen, Norway.

and intuitions. *Transitus* is a gate, an arbitrary borderline, or passage, yet at the same time a movement that exists tangibly and realizes itself in a symbolic space. A body is immersed in a sensual experience, and intuition takes the initiative. In this sense, the objects presented are not only to be viewed but instead acquire their fundamental sense in direct, intellectual and physical multi-sensory contact – in recognizing their emotional space. The objects, although unstripped of their deliberate formal and visual frame, acquire their essential form in the process of the recognizing of their space logic. I look for a more personal and fundamental experience of sculptural space through touch, smell, the strain of the muscles, the feeling of warmth or chill, emotional tension or intellectual reflection. As a creator – the first recipient and a critic of an artwork – I also have the experience of the creative process. Each time a direct, intimate touch opens an individual path of interpretation, which leads further on towards *Sacrum Humanum*[10], the space of our glooms, glows and illuminations, our doubts and hopes, elusive joys, sense of security, anxieties and phobias; towards intellectual liberation, moral credibility and humanistic condition up to eschatological *pathos*.

I look at a small photograph of the Temple of Apollo in Delphi. *Know yourself – γνῶθι σεαυτόν*. The rumpled water surface disturbs the calm. *Where do I come from? Who am I? Where am I going to?*[11] I leave these notoriously recurring questions unanswered for now. Constant movement and the inevitability of choosing a direction are relatively probable. *Transitus* as a process – *space recognizing as a form.*

## Body Movement in Space – Space Recognizing

The experience of a dynamic or leisurely march; discovering the urban tissue with its space logic and fluid atmosphere. Amsterdam, Basel, Luxembourg, Zurich. What I am after is to feel the place and movement. Florence, Rome, Nice. Roaming the cities aimlessly for hours. Like Herbert[12], I try to, so to say, go *astray*, to lose my bearings, so that later I can search for signposts and traits engraved in my memory and muscles to help me find the known trails back. Remembering and *space recognizing*. Vienna, Stockholm, Helsinki. I try to recall in my works the places and spaces I remember. I employ imagination where memory turns out imprecise. I set off intuition and make use of gesture and the memory of the body.

I visit Zen gardens in Kyoto thoughtfully. The famous *Ryōan-ji*. The *Kenrouken* garden in Kanazawa. The *Ritsurin* garden in Takamatsu, where I am showed around by Zen master Toshihiro Hamano explaining to me the complex structure of Japanese gardens. Having studied a lot on the subject and met the master I seem to be getting the idea. I keep asking, looking for confirmations. The master cannot be consoled. After a several-hours-long walk through the tissues of the garden, with our exhausted bodies we start a tea ceremony. I give up. I am unable to put together all the bits of information into a logical structure. The master smiles: *You got it? At last!*

The magic island of Naoshima[13], where the masters of Impressionism found a safe harbor amongst the latest achievements of architectural design and contemporary art. This is where I

10 *Sacrum Humanum* - expression used by my friend and preceptor, an artist Bogusz Salwiński to describe deepest dimension of human existence.

11 A reference to the existential character of the painting by the French artist Paul Gauguin titled: *D'où venons-nous? Que sommes-nous? Où allons-nous?* (Museum of Fine Arts in Boston, Mass.)

12 Zbigniew Herbert - a prominent Polish poet, essayist, and drama writer. Born in 1924, died in 1998.

13 Naoshima - an island in Seto Inland See in Japan. A home of finest contemporary art museums and artists' residencies.

first see Monet's *Water Lilies*[14], standing barefoot on a white marble floor that gently vibrates with its texture under my feet. Dominated by the cognitive function, a western man's space perception received a surprising tactile impulse. Here too, on Naoshima, I meet the great artist James Turrell. We gaze together[15] at the blue of the sky framed by the impossibly white *Skyscape*. Nearby, there is another fascinating object by Turrell and Tadao Ando: a black pavilion where I see all that cannot be seen. The minimalist form of the object and the intriguing concept of the *Dark Side of the Moon* make me revise my cognitive habits. I go back to Europe, visit the *Merian* garden in Basel, which is like a oneirically perfect meadow created by a gardener's hand. I relish the spectacle of fragrances in the heat of the afternoon sun, outdoors. When in the gardens of the Viennese palace of *Schönbrunn* I feel like the inside of a postcard, where the crunch of gravel under my feet responds to every step I make. In Bergen, I am dumbed by the intensity of color of the painted walls of wooden architecture washed and sharpen by continuous rains. Body gets wet, clothes stick to my skin. In the suburbs of Bergen I visit Svein Hatløy's *Black House* that leans against a rock, where the open form of the building, its peaceful residents and the surrounding wildlife become one. Fascinating. I walk through the house, from room to room, and keep wondering if I am already outside or still inside the building. Open Form! In the hazy scenery I follow the landscape *Path of the Seven Streams*[16] the Chinese rulers of every dynasty strode so as to make their companions gasp with awe. Light shower mist and fog along with the sounding landscape create the perfect atmosphere. I admire the sunset over the West Lake in Hangzhou[17] and the ornamental Venice: the light and the cityscape dissolve in the surface of the water. A *par excellence* sfumato piece. The coldly humid district of *Grund*[18] in Luxembourg opens an interesting vista onto a proud skyline of the upper city built on a towering rock summit that appears with the blue sky as its backdrop.

An atavistic element, or perhaps the *genius loci*, whispers to my reasonable mind: *do not steal that atmosphere. Go on*. What I gain is priceless to me: the atmosphere of the place. My body gets immersed in a multi-sensory topographic collage.

## Body and Intimate Memory

The subject of memory I talked about with Juhani Pallasmaa is a recursive one. It is more than a world of facts recorded in my mind. It is also, or perhaps above all, the memory of our body, of our emotional and subconscious impulses. A 500 feet long, hornbeam lane which my grandfather once planted and which originally formed a low hedge, is now a lordly parkway lined with high trees. This is the way I remember it from my childhood too – a monumental form. Each autumn, the lane overflows with golden leaves. Gold rules unchallenged. As I wade through them, the cover of rustling leaves releases the camphor of melancholy and passing time. That lane has fascinated me ever since I was little. A linear space that offers a shadowy shelter in summer heat and turns into a rapidly flowing brook in the heavy rain. A space-and-time tunnel that ends with a rarely frequented local road. A window on the world and the beginning of my

14 Oscar-Claude Monet - a prominent French impressionist painter born in 1840, died in 1926. Among others author of the *Water Lilies* paintings cycle.

15 I haven't met James Turrell in person and I am using the expression together to emphasize my deep understanding and appreciation to the artist's concept of Skyscape.

16 Scenic walking path near Hangzhou in Zhejiang Province, China.

17 A freshwater lake in Hangzhou, Zhejiang Province. Considered as a natural wonder, a source of inspirations for poets, painters and garden designers, reflecting harmonious fusion between nature and human being.

18 A part of the downtown in Luxembourg City located in a deep valley and contrasting with the upper part of the city.

dream about *Great Journey*[19]. On the other hand, a place of summer holiday playtime, a forester's lodge in the midst of a wood, isolated from the entire world.

## *Transitus* - A Form Relatively Recognized

I use pinewood for creating the *Transitus* cycle, charring its surface with a gas burner. Each square feet means several hours of careful work. I do it gently and with precision to make sure that fire does not consume and destroy the structure. I have always been interested in the alchemy of executing an artwork - in creative process. In my *Memory of Space* sculptural project white paraffin was the medium, which, when liquefied and poured into a mould, became a brittle material for a multi-element, symbolic non-monumental memorial. It was a rite, so to say, that involved a repeated act of pouring paraffin into the mould while fluid, uninterrupted movement had to be ensured to have the paraffin fill the matrix completely and create an even coating, as thin as parchment paper. *Transitus* is my training in patience and humbleness. The high temperature of the process, the smoke and the dust swirling around my body make me learn the less friendly side of sculptural material. The textures that show on the surface of the charred wood are highly inspirational, stirring my interest in detail. The blackened vertical panel takes on new senses and new visual expressiveness. A charred crack turns into a symbolic space.

## Somactive Art, Sculptural Space and Materiality of Sculpture

The belief that it is an inter-disciplinary process that embraces the domains such as sculpture, sculptural installation, architecture or landscaping underlies the concept of *Somactive Art*. At the same time, it is beyond any doubt that emotional, direct and individual experience of traditionally understood sculpture is the source element and the core of the creative process. *Somactive Art* draws on sculpture for conceptual foundation and formal depth. Through its material aspect, as well as intellectual value and emotional tension, this direct experience of sculpture's physicality gives the creative process a deeper dimension. As an adept of sculpting, I learned all traditional sculpting techniques: work in wood, stone, modeling in clay and wax, as well as spatial installations using mixed techniques. The sculptor's thoughtful hand (Pallasmaa) builds the formal structure of a work while reference to the materiality of the sculptural medium underlines its sensual dimension and asserts the creative intuition of the artist. The key elements of the design process are: freeing the body memory, the expressiveness and dynamics of the sculpture's gesture and the disclosure of the semantic and expressive potential of the sculptural medium. With no sculptural experience gained through practice, without the experience of the sculptural medium in its multi-sensory dimension, in detachment from the physicality of the creative process and its conscious and subconscious gestures and creative intuitions, the idea of *Somactive Art* could not emerge at all. In this context, the space of the somatic memory is closer to the physicality of sculpture and its material significance. My affirmative attitude to the sculptural media directly associated with traditional sculpture technology, such as stone, wood, ceramics or bronze, results from their semantic saturation, rich symbolism and a variety of their cultural references and intellectual attractiveness. The non-standard approach to traditional sculptural materials and reaching for totally off-beat opportunities offered by advanced products of material engineering, unstripped of their semantic value, sensual quality and tactile allure

19 The author's personal reference to idyllic childhood spent in a secluded place, surrounded by a forest and untouched nature, and his later travels to the world's busiest metropolises and remote places on several continents.

prove an artist's ongoing dialogue with matter and a deeply rooted need to rely on unmediated experience. Equally important is the synthetic character of a visual sign that materializes in the concreteness of sculptural act.

## Void - Where Space Recognizing Becomes a Form?

The creative experience in *Somactive Art* sums up many others in proposals for memorials in which all the critical elements of the design process come to view, from the significance of the topic to the formal culture and compositional value that are determined by the personal creative potential, to the emotional experience and ethical aspects[20]. Memorial designs obviously give physical shape not only to the aesthetic and functional objectives of the content but in their deepest and most significant dimension they reach to their ontological and ethical sense as their original ideological foundation. The understanding of contemporary memorials as space of engagement and space for contemplation finds support in the evolution of memorials from vertical and axial objects with inaccessible bronze statues located on imposing pedestals that dominated up to the 19th and the first half of the 20th centuries to vast horizontal compositions that create void, a formal and emotional backdrop for individual experience and moral reflection (Quentin Stevens, Karen A. Franck[21]). In his classic book *Experiencing Architecture*, Steen Rasmussen points to *free space* or the *void*, as the discipline's medium treated on a par with construction materials:

> *Instead of letting his imagination work with structural forms, with the solids of a building, the architect can work with the empty space — the cavity — between the solids, and consider the forming of that space as the real meaning of architecture.*[22]

In contemporary memorials, the void carries a new significance. A crack in a road and a platform collapsing into the ground in the Bełżec Extermination Camp Memorial (memorial design team: Andrzej Sołyga, Zdzisław Pidek, Marcin Roszczyk), or the void space between boulders of dramatic texture that cover the expanses of the Treblinka Extermination Camp Memorial (memorial design team: Adam Haupt, Franciszek Duszeńko and Franciszek Strynkiewicz), take on a completely different meaning. The void seems to be the leading carrier of content, in dialogue with the internal *Sacrum Humanum*, and the medium that leads to intellectual liberation, disclosure of moral credibility and defining personal humanistic condition.

Memorials - these are both urban-scale layouts using vast spatial compositions or intimate commemorative spaces. The multidimensional character of memorials links with the concept of sculptural space and its emotional experience. I understand the experience of sculptural space as a subjective, engagement-laden sphere of emotional experiences relating to the broadly-defined sculptural form in time and space. What makes this experience unique are, for example, internal tensions emerging out of dialogue with a chosen space of execution, intuition and reference to spatial and semantic context. No less important are individual sensitivity and visual imagination as well as the awareness of traditions, cultural contexts and private memory which, apart from

20 The issue of a significant void or the symbolic meaning of the lack of a monument in urban space is described by R. Shusterman in his essay *The Urban Aesthetic of Absence: Pragmatist Reflections in Berlin* referring to the example of a city marked by a multidimensional absence. *Performing Life. Aesthetic Alternatives for the Ends of Art*. Ithaca Cornell, 2000.

21 Quentin Stevens, Karen A. Franck, *Memorials as Spaces of Engagement*. Design, Use, and Meaning. Routledge 2015

22 S.E. Rasmussen, *Odczuwanie architektury*, Kraków 2015, p. 51.

mental memory, embraces body memory too. As a result, all these factors add up to a nucleus of individual visual concepts in sculptural space and are their indispensable components.

## Somactive Art: Potential Academic Curriculum Widening the Field of Sculpture

The vast range of issues that surface in *Somactive Art* puts a strong emphasis on the interdisciplinary nature of this kind of creative work. The fundamental experience of sculpture and a search for formal determinants imposed by the spatial activity of the architecture and urban plan offer natural space for mutual references. Deeper *Somactive Art* studies look to fine-tune the sociological aspects, and draw on anthropological reflection, proxemics and art-theoretical and philosophical, somaesthetic reflection.

*Somactive Art* as a creative methodology, and autonomous language of visual arts that draws on interdisciplinary experience is an interesting area of further explorations, technical experimentations, including digital techniques, and a field for academic research and theoretical reflection. In a complex creative process, it merges individual emotional experiences of visual inspiration with a project-and-study method geared towards recognition of spatial relations and contexts, and, at the stage of creation and presentation, it engages a great number of competencies that build practical professional experience. That said, it becomes reasonable to try to promote the achievements and bolster the scholarly potential of *Somactive Art*, and ultimately to create a new academic curriculum in which conscious and responsible artists will hone their unique creative skills rooted in traditional field of sculpture. Enhancing the interdisciplinary academic discourse that makes references to the experience of *Somactive Art* will help increase the technical contribution to the diagnoses of the potential of public art, shared spaces, their formal significance and role in shaping the atmosphere and character of contemporary cities.

## Conclusion

For me, *Somactive Art* is on the one hand based on fundamental body experience and on the other hand, it is a potentially new methodology in building the form of an artwork: first of all, in sculpture, sculptural installation, but also in memorial and public space design etc.

*Space recognizing as a form* is understood as a process (form as process) that covers a wide range of subjective sensory perceptions and emotional impulses, engages intellectual powers, and is aimed at objectivize reflection. The monumental compositions of the *Transitus* cycle were presented at the Centre of Polish Sculpture in Orońsko open to interaction with the audience: they set off the process of *space recognizing*, which ultimately builds a multidimensional *form* of a *Somactive Artwork* and, apart from being visually and materially evident, is a constitutive component of it. All the characteristic aspects of the *space recognizing* process have vital roles in my didactic activity and are present in the syllabi I have formulated for teaching *Somactive Art*. The dialogue of my artistic work with my research activity is a two-directional flow of ideas, which, coupled with my intellectual inquisitiveness, makes me strive for a synthesis and look for existential milestones. A new *Somactive Artwork* titled *The Sense of Balance* is being currently designed, and will be exhibited soon.

## Closing Remarks on Somactive Art and Space Recognizing as a Form

What is the purpose of the concepts introduced and elaborated above: *Somactive Art* and *space recognizing as a form*? What is the prospect of developing a new concept of creative methodology and understanding intentionally *deconstructed* form of work of art defined as a process spread over time rather than static object? The answer to this question again requires the formulation of two separate statements.

Now-days reality, the dynamically advancing digitization of all identifiable - and most likely also unidentified - areas of human life are an unprecedented opportunity for civilizational development. The digitization of the art creation and design process in architecture and landscaping, the area of digital art developing along with the progress of technology raise questions about the role of the cognitive apparatus and creative powers inherent in and assigned to the fundamental aspects of the human body. Ultimately, the creator of public spaces, architectural objects or immersive digital art is an embodied individual - also as a part of a team - with the powers of sensual, intellectual and emotional perception. The proposal to found a creative methodology - *Somactive Art* - will therefore be an element of a broader anthropological perspective, in which understanding the role of the human body as an integrator of acts of artistic creation will play an important role in the development of digital creation tools. The personal perspective and attitude of an active art-creator also makes me defend the position of the artist as a subject that cannot be definitively and unequivocally defined, for whom emotional impulses and references to decisions inspired by an unconscious creative gesture indicate the important role of the human body in the process of creation.

*Space recognizing as a form* is, in turn, embedded in thinking about sculpture, sculptural installation, public space and the space-art, taking into account the question of changing the paradigm of man as a subject determining the surrounding reality, to the perspective of active human co-presence in a pluralistic Universe. In this context, strengthening the processual aspect, increasing direct interaction with the space, sharpening cognitive powers while spreading perceptual impulses in time may be a path to deeper understanding and better integration with the environment in which a significant act of human existence takes place. Sustainable development and climate threats, which have become the primary challenges of the contemporary world, create an additional context for the development of the concept of *space recognizing as a form.*

A better understanding of the processes of nature and meeting the environmental challenges awaiting us can be facilitated by the concept of form as space recognition and shifting the emphasis from artistic interventions focused on an individual object (a form as an object and representation of power and landmarking) to spatiotemporal solutions integrating sensual, emotional and intellectual impressions (form as process and representation of empathy, coexistence and democracy). Balancing purely aesthetic perception visual structure of the work can also become a leaven for a new, in-depth and individualized way of communing with art.

The content of this article is dominated by references to illustrative material, classical footnotes remain marginal and serve as clarification of my discourse, however, in order to bring the reader closer to the territories of my theoretical research, I enclose the bibliography below, which became the main field of cognitive exploration and the theoretical leaven and reference point for the theses I formulated.

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