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Editorial

Artifacts, Bodies, and Aesthetics

Adam Andrzejewski and Falk Heinrich

The relationship between the human body and cultural artifacts, such as design artifacts, artworks, and religious artifacts, is both fascinating and peculiar. For example, various art forms depict or use human and non-human bodies as a point of reference. However, philosophical aesthetics have neglected the material-energetic body of artifacts. Until recently, artifacts have been mainly viewed as "parenthetical" objects transcending strictly corporal matters because of the dominant aspects of the Western culture. Artworks and religious objects are predominantly represented as intrinsic aesthetic values or spiritual ideas that negate their physical relationship with the human body. Similarly, in addition to serving a functional purpose, design artifacts are also aesthetic objects that transcend their sensory and practical relationship with the user by focusing on the conveyance of narratives and ideas according to mainstream aesthetics.

For example, the rise of minimal art, performance art, and body art in the contemporary art world during the middle of the last century has prompted us to reconsider the complex interconnections between human materials, body senses, and artifacts by granting the artwork an *agential* body of its own. Fried (1997) classified minimal art as theater (rather than art) because the artifacts of minimal art create relationship situations with the onlooker. Furthermore, Danto (1999) claimed that artworks are representational entities that are marked by some sort of agency that is induced to the artwork because the onlooker is drawn into an interactional relationship with the artwork, which is now bestowed with subjectivity. However, the fact that artworks depend on human interaction does not mean that their "agency" can be taken away from them. Hermeneutics has frequently been used to explain the significance and importance of art as culture-instigating and world-instigating artifacts (see, e.g., Heidegger, 1950). It is unknown whether artworks and design artifacts become agential bodies that exhibit features that go beyond aesthetic forms and semiotic representations.

Advances in cognitive sciences (Newman et al., 2014), philosophy of mind and language (Muñoz-Corcuera, 2016), and law (Andina, 2017) have shown that art objects are more similar to us than we realize and that we tend to have serious intimate relationships with them. For instance, both humans and artworks retain their (ontological) identity over time even if they undergo various changes (e.g., growing old, being restored, or even being duplicated) and have legal rights that must be protected. Further, humans have moral obligations toward artworks because of their status as cultural heritage artifacts and historical witnesses, as well as their inner "truth" and the incorporated energy and spirit of their creators.

Although artifacts cannot sense, feel, or act as agents, humans often use them as both objects and subjects in passionate relationships such as love or hate, which are traditionally reserved for the animated world. Humans engage emotionally with art or design artifacts. The somaesthetic shift in the conceptualization of the human body and its affective, perceptual, agential, and emissive capabilities could be a promising starting point for reframing the bodily nature of artifacts and our embodied relationships with them. This is particularly evident when we consider artifacts that create experiential places via human interactions. Places are not mere sites; a site refers to a geographically and geometrically understood space, while a place is characterized by existential and interbody dimensions. Examples of such place- and body-oriented artforms are architecture, gardens, land art, installation art, and participatory art.

We believe that somaesthetics is a promising framework for investigating art or design artifacts as complex and relational "bodies" because the framework allows for practical, experiential dimensions to play a role in the analysis and theory development. Hence, somaesthetics creates a multifaceted, investigatory space of appreciation and analysis by focusing on the somatic relationships between artifactual and human bodies. Conversely, the concept of artifactual bodies as agential body anchors enhances and also questions the somatic dimensions of human existence. All contributions to this issue applied distinct aspects of somaesthetics when investigating the experiential significance of different cultural artifacts––their emotional appreciation, artistic value, function, and relationship with humans. The analyzed artifacts included artworks, manufactured design artifacts, and artifacts created by the author herself. In particular, all contributions used various approaches to emphasize the role these artifacts play in shaping the human sense of self because of their corporal existence. Based on the identity-shaping function of these artifacts, the somaesthetic relationship with seemingly silent and passive objects around us is illuminated and discussed.

The volume opens with Alessandro Bertinetto's highly theoretical contribution, which is fueled by personal experience. In his paper "Body and Soul… and the Artifact. The Aesthetically Extended Self," he analyzes the phenomena of feeling sorry for the loss or destruction of specific cultural material artifacts, such as musical instruments, artworks, or bikes. It is argued that this specific type of feeling or attitude results from the fact that cultural artifacts, which gain personal significance through the process of habituation and skilled repetitive practice of using them, complement ourselves and aid in developing our personality. Bertinetto argues that people become part of the virtual history of self through somaesthetic experiences with specific artifacts. "Thanks to the assiduity of a somaesthetic relationship, these objects enlarge not only our body but also our mind or "soul." They become parts of our extended body and soul," the owner and user. Thus, the loss or destruction of these objects causes us pain.

Chloe Cassidy's article entitled "Healing, Reverie and Somaesthetic Anchors: Designing Objects of Soft Fascination to Move from Fight and Flight to Flow and Flourish" discusses how somaesthetic research can help deal with issues of post-traumatic stress disorder by enriching the

overall quality of life. The author developed a method based on cultivating aesthetic appreciation and somaesthetic experiences that can straighten a sense of safety through mastered body consciousness in order to secure two trauma-informed care principles: safety and empowerment. Cassidy presented self-designed and created artifacts that function as somaesthetic anchors that connect the subject to nature and the surrounding world on a sensory level. Establishing a sensory connection aids in the development of a sense of safety and empowerment as well as the healing process. Cassidy's article convincingly demonstrates the pragmatic and practical dimensions of somaesthetics.

"Handling Digital Reproductions of Artworks" is a contribution by Christian Sivertsen and Anders Sundnes Løvlie. The paper is based on empirical research into how people react to digital reproductions of visual artworks. In the experiment, onlookers were asked to "handle" (touch and hold) physical paintings as well as their two-dimensional (2D) and three-dimensional (3D) virtual representations. After a series of interviews with the viewers, careful analysis, and interpretation of the received data, the article concludes that by designing an aesthetic experience of digital reproductions of visual artworks that involves the body in a significant manner, we can bring back the somaesthetic dimensions of art experience that are currently lost in art galleries and museums, where onlookers are not allowed to touch and handle exhibited artworks. Virtual interactive exhibition spaces can create/recreate the experience of touching and handling art objects, providing a sense of genuineness that is sometimes lacking in modern museums and galleries.

The final contribution is "Object and Soma: Remarks on Aesthetic Appreciation of Design" by Monika Favara-Kurkowski and Adam Andrzejewski. The paper proposes a different interpretation of aesthetic appreciation of design artifacts. They claim that we appreciate and appraise design artifacts not only because of their functionality but also because of our physical reactions to them. Favara-Kurkowski and Andrzejewski challenge the notion of being bodily entangled with a design object by pointing out that when we experience a design object, we evaluate not only the object but also our own body. In other words, a conglomerate of an object, a subject, and their relationship is what is valued in the aesthetic experience of design artifacts.

This volume concluded with lengthy reviews of three books. Alexander Kremer reviewed Richard Shusterman's *Ars Erotica*, and Else Marie Bukdahl reviewed Allie Terry-Fritsch's book *Somaesthetic Experiences and the Viewer in Medicean Florence, Renaissance, Art and Political*. Finally, Kyo Tamamura had a critical look at Satochi Higuchi's recent book *Somaesthetics and the Philosophy of Culture: Projects in Japan*.

Body and Soul . . . and the Artifact: The Aesthetically Extended Self

Alessandro Bertinetto

Abstract: *By thinking on my personal (som)aesthetic experience as a would-be jazz saxophonist, I will argue that the relationship between musician and instrument can exemplify the "extended self" thesis in the artistic/aesthetic realm. As can happen with a human partner, a special affective relationship may arise between human being and instrument and, through repeated practice, the instrument can become an indispensable element of the aesthetic habits by virtue of which we interact with the environment, thus becoming part of the (extended) self. As I will suggest, this special bodily and affective relationship is due to the affordances offered by the instrumental partner and to the expressive experiences that this encounter makes possible. This affective relationship is one of the reasons behind the regret we feel for the destruction or loss of artifacts. Thanks to the assiduity of a somaesthetic relationship, it happens that these objects become extensions not only of the body but also of the mind or "soul."*

Keywords: *artifactual agency, extended self, affective scaffolding, aesthetic habits, arts of action, artifact-human entanglement.*

1. Artifacts as Agentive Extensions of the Self

The philosophical inquiry I intend to develop in this article can be introduced by raising the following question: How is it that we feel such respect for material cultural artifacts that we feel sorry if they are damaged or lost and even find it morally wrong to damage or destroy them? The material cultural artifacts that I have in mind here include not only books, artworks, songs, and technological artifacts such as computers and smartphones but also, for example, pieces of furniture, clothes, jewelry, and toys. I also consider means of transportation (e.g., cars and bikes), as well as musical instruments; the latter two types of artifacts, in particular, will be the focus of the present article. Thus, the specific question driving the discussion in this article can be spelled out as follows: Why do we generally respect musical instruments and many find it sad, hideous, offensive, and morally wrong to damage or destroy them?

According to Davies (2003, pp. 108–118), we (should) respect musical instruments because they are "honorary persons," whereas according to Ravasio (2016), our revulsion toward

damaging or destroying musical instruments stems from the fact that unlike other tools, musical instruments are like *artworks*. My own view is that despite how incompatible these perspectives may seem, their difference does not seem to be crucial. Indeed, following Joseph Margolis (1974, 1999), it could be argued that *artworks are like persons*. Therefore, if a musical instrument is like an artwork, then it may turn out, as I shall defend, that it is also like a person, or, in a sense (and I will clarify in this article), a *part* of a person.

More precisely, my point is this: our relationship with musical instruments is like our relationship with artworks since these artifacts both shape, extend, and intensify our experiences. Artifacts, including those of which we take loving care (such as racing or mountain bikes, cars, jewelry, toys, clothes, or pieces of furniture), are like people we care for and people who take care of us: they become part of our "extended self" in the sense that they allow us to broaden, deepen, and enhance our experiences of the world.[1] In particular, musical instruments—and especially our own musical instruments that we habitually use to make music—are like artworks in that they extend our self by means of generating aesthetic experiences. The peculiarity of musical instruments is that—like other tools, such as a racing bike—they generate aesthetic experiences above all through the use we make of them (I say "above all" because mere contemplation of them as material and cultural artifacts and as symbolic objects can also result in rewarding aesthetic experiences).

Even more precisely, in this paper, I argue the following. Musical instruments (as well as other artifacts we deal with in our daily occupations) are like artworks in that they can possess an *agentivity* of their own—as has been theorized in different ways in relation to technological artifacts (see Mitcham, 2014, for a critical survey).[2] Artifacts, including artworks and other material cultural objects, are not inert. As outcomes and effects of active shaping production, they incorporate and often display in their own material body the agency that forged them, signaling its purpose, function, and meaning—or so some argue (cf., e.g., Gell, 1998). Through the different ways in which this embodied agency can be detected (e.g., by abducting it through perception and imagination), artifacts can produce affective and cognitive effects, exercise power, and establish relationships with human beings (as well as with other artifacts; however, I will not explore this theme here). Put succinctly, cultural material artifacts are endowed with values tied to ends and meanings of human agency, and they variously influence human behavior, change the way human beings perceive and understand the world, as well as modify the way they mutually (inter)act in the world. In a sense, cultural material artifacts are involved as partners in the *distributed agency* that characterizes our inhabiting the world as human beings—to such an

1 A clarification of terminology is in order here. The term "mind" is related to the cognitive sphere in general, whereas the term "self" seems to indicate a reference to consciousness and self-consciousness. However, in this article, I will use the two terms indiscriminately, particularly because I am interested in discussing one aspect of the theory of the "extended mind" or "extended self." In other words, "extended self" and "extended mind" are interchangeable notions, at least for the purposes of this article. Moreover, by "personality," I mean not only the state and status of being a person with self-awareness and potential responsibility for one's own actions (this could be encompassed by the notion of "personhood"), but also the particular array of characteristic emotional, mental, and physical responses to life situations that builds and manifests human beings' individuality. In this sense, on the one hand, it is possible to attribute personality to an artifact if it manifests (to someone) a specific individuality or a particular character, while on the other hand, human beings' individual personality is always extended, in the sense of being built from different experiences arising thanks to cognitive and affective interaction with other people, objects, and, more generally, the environment. The extension of the personality is therefore a question of degree, and the experiences we have also contribute to extending our personality in the sense of consolidating and deepening it.

2 The topics of *artifactual* and *material agency* are complex, being studied from different research perspectives and featuring very different aspects. Without any pretense of completeness, I present some of them here. An important current debate concerns the moral responsibility of the socio-material agency of technological artifacts (Kroes & Verbeek, 2014). Another topic of discussion is the (affective, emotional, and symbolic) power of images and pictures (Freedberg, 1989; Mitchell, 2005), on the one hand, and of sounds and music (Cochrane et al., 2013; Juslin, 2019), on the other. Still another question, of an ontological sort, regards the personal status of artworks (Margolis, 1974, 1999). Last but not least, key research issues include those of *material engagement* (Malafouris, 2013), *entanglement* between human beings and things (Hodder, 2012), and non-anthropocentric approaches to *distributed agency* and *creativity* (Knappett & Malafouris, 2008; Enfield & Kockelman, 2017; Clarke & Doffman, 2017).

extent that a kind of *personality* can be attributed to them.

Consequently, an intimate relationship can develop between the self and given artifacts, and a specific modality of *extension of the self* can follow from this relationship. Artifacts that are dear to us by virtue of the experiences they offer may be seen—and felt—not only as persons with whom we interact but also *as parts of our personality* (i.e., as elements of our *extended self*). Artifacts—as well as other persons (e.g., caregivers for newborns)—extend the self and become a part of it since the reciprocally integrated relationship between artifacts and users is responsible for particular actions and experiences that feed and shape the self's life. Artifacts are not passive tools; rather, they too are agents, not least because they afford interactions (cf. Malafouris, 2013).[3] The relationship with artifacts is structural in that it structures the self by means of inviting human beings to (inter)act. Artifacts thereby help to constitute the behavioral habits that rhythmically shape the individual and social life and regulate the interaction between human beings and the natural and social environment(s) in which they (inter)act.

In this sense, artifacts may be seen and felt not only as *other* persons but as *extensions* of the self. This is analogous to what can happen with people of whom we are fond: on the one hand, artifacts, like other people, are physically embodied in bodies different from our own; on the other hand, they are part of our extended self in that they constitute and extend our personality in terms of knowledge, affects, and experience. Consequently, artifacts affording aesthetic and artistic experiences can be perceived and felt as *aesthetic and artistic extensions of the self*. The way a musical instrument extends the self aesthetically is analogous to how other artifacts that we deeply appreciate as key elements of the most satisfying practices of our lives extend the self by means of making possible explorative experiences of the world, including aesthetic experiences. For instance, we may consider a racing bike to be also an indispensable partner for an aesthetic sporting experience that we particularly appreciate, thus inviting it to become a part of our extended self.

In other words, the musical instrument may not simply resemble a person we interact with momentarily. Rather, like people (we feel to be) indispensable to our life (because they have helped shape it as it is or, better, shape it as it comes into being through our experiences), the musical instrument we are used to playing becomes a kind of dear friend we particularly trust; moreover, like people (such as caretakers, partners, and friends) with and thanks to whom we experience the world aesthetically, the musical instrument becomes our partner in our aesthetic experience of the world. Thus, musical instruments make possible a specific kind of agency, becoming elements of (our) "extended" or "composite" agency (Hanson, 2014). Moreover, musical instruments are capable of broadening and intensifying our experience. Just as persons of our intimate personal sphere who can be considered—at least at some stages of life—parts of our extended self, instruments can become part of (our) extended self, of (our) distributed personality.

For the sake of clarity, I insist on the following point. This is not only true of musical instruments: artifacts of different kinds can be elements of a composite agency, thereby becoming parts of a distributed and extended personality; moreover, many kinds of artifacts are particularly significant because of the *entanglement*—between human being and the artifact—produced through the affective investment deriving from the gratification elicited by the aesthetic

3 There are different views regarding the nature of artifacts' agency and their degree of autonomy. The two opposite positions are the *Instrument position*, according to which artifacts are "mere instruments of human agency," and the *Agency position*, according to which "artifacts are on a par with goal-directed autonomous human agents" (Illies & Meijers, 2014, pp. 160–161). Here, I take a reasonable intermediate position according to which artifacts have a degree of agentive autonomy that depends on the kind of artifact, the kind of practice, the specific circumstances of the action, and the user.

experiences made possible by correspondence with the object. In my personal case, I guess that in different ways, my personality has been extended thanks to the different aesthetic experiences afforded by my Selmer Mark VI tenor saxophone and my Carrera racing bike.

Like artworks, musical instruments make aesthetic experiences possible in terms of artistic explorations of the world; however, the artistic exploration of the world afforded by the musical instruments we play involves us as agents rather than as spectators. This is not to say that the aesthetic experience of artworks is merely contemplative and passive.[4] The point is rather that in playing an instrument as, for instance, in riding a bike, we are the performers, while in viewing a movie, listening to a song, or contemplating a painting, we are enjoying—actively, in many ways, of course—the outcomes of the artists' activity.

Playing my saxophone during my daily practice, I experience the music that I produce through and thanks to the instrument. Moreover, I feel and savor my physical and (som)aesthetic contact with it: I sense the tactile feeling of embracing the instrument, feeling its weight through the collar, and touching the keys with my fingers, which, in turn, are stimulated by the object, its shapes, and its body. This body enters into an aesthetic interplay relationship with my body not only due to the sounds we make together but also by virtue of its physical quality and presence. I consequently become entangled with the instrument bodily and mentally. I appreciate the way it extends my expressive powers, inviting me to respond to its sensory offerings of a tactile, visual, and obviously sonic nature and to aesthetically explore the sonic world. This can happen even when the music I produce does not work as I would like. Better still, sometimes the sax makes me acknowledge that the way in which I would like the sounds to work is simply not good. So, I modify my expressive expectations thanks to the collaboration with the instrument that guides my musical actions; in turn, this experience affectively shapes my body and my time.

Analogously, when riding my Carrera racing bike, through the sensation of bodily entanglement with the vehicle, I feel the road running under me in contact with the wheels; clinging to the handlebars, I push on the pedals, appreciating the energy produced and the profuse effort and enjoying the environment I am traveling across and exploring. I trust the bike, and it is as if it trusts me too; and when I fall (fortunately, this rarely happens!), it is as if I have betrayed its trust. I drive and let myself be driven by the bike, following its requests. Sensing the air that I cleave while pedaling, I feel at one with the bike and enjoy the activity, which articulates my freedom. In short, I consider it an indispensable companion in an activity that enriches my own experience of myself in the world.

Of course, in both cases, it is repeated practice that shapes the characteristics of a relationship that becomes an important aspect—which is emotionally and aesthetically rewarding—of the habits that model and structure my self's life. Hence, the interaction with an artifact—indeed, the *correspondence* to an artifact—makes possible the realization of aesthetic experiences that shape and express the self and allow one to acquire *aesthetic habits* that extend the self and one's own personality. Musical instruments—and, analogously, bikes and other cherished artifacts—are more than simply tools through which we produce actions, develop embodied skills, and extend our self. Musical instruments, like particular beloved individuals, artworks of which we are fond, and other *affective objects* with which we interact (or "correspond" to and "resonate" with) scaffold our ecological niche aesthetically (Matteucci, 2019; Portera, 2020), thereby shaping our "aesthetic self" and extending it artistically. This is the reason an artifact can become dear to us to the point that we are sorry if it is damaged or destroyed: indeed, we may find such

4 See Bertinetto 2021 for a discussion of aesthetic experience as (en)active and engaged.

occurrences nearly unbearable. Not only is it like an artwork and like a person: it is (a part of) *us*, because it extends our personality—by losing it, our individual identity changes because that which is lost is a part of ourselves in terms of possible experiences, affections, and knowledge.

2. Extended Self (and Extended Agency)

From this section onward, the task of this article will be to articulate and explain the thesis that we take care of artifacts, such as musical instruments, because they are, or rather become (parts of) *us*. The view implicit in the proposal I have sketched so far is the idea that the mind is not an entity hidden in the skull of a human being.[5] Instead, the mind is a process (rather than an entity) grounded in the body and extended through the experiences that the human being has w hile/by interacting in the environment with other subjects and with/by virtue of objects and artifacts. The mind, or the self, is rooted in the body, is not reducible to the self-awareness of the ego, and has many different components, such as embodied, experiential, intersubjective narrative, and situative aspects (Gallagher, 2005, 2013). The self is extended by emotions and affects—which are essentially generated by patterns of bodily processes—as well as shaped by relationships with other persons and even things, including cultural objects and artifacts (both of the ideal kind, such as musical works, and of the concrete material kind, just like a particular piece of clothing, jewelry, or a bike or musical instrument).

The *extended mind* hypothesis has been famously argued by Clark and Chalmers (1998). Accordingly, the mind is not limited to spiritual faculties located inside the skull but is rather extended and distributed in the environment with which the self interacts. For instance, the stick the blind man uses to test the ground around him is a n extension of his perceptual faculties, thereby extending his mind (the example is famously made by Merleau-Ponty, 1945, pp. 165 f.); the notebooks on which forgetful people jot down information allow them to retrieve this information for use at the appropriate time, thus enhancing t heir cognitive abilities and extending their minds (as in the example offered by Clark and Chalmer, 1998).

This proposal has radical and soft versions (cf. Sutton, 2010). The *radical version* works on the basis of the *parity principle*. The objects that extend the mind, and through which the mind is distributed, acquire mental faculties equivalent to those of t he mind traditionally considered the mark of a human being's conscious and intentional agency. Mentality is the same property both when it is attributed to the object and to the subject. The *soft version* operates on the basis of the *complementarity principle*. Objects extend the mind not because the property of mentality is attributed to them in the same way as to the subject; rather, the objects through which the mind is distributed extend cognitive—and also emotional, affective, as well as aesthetic—powers of the self, whose center remains the self-conscious subject.

It is difficult to defend the radical version of the extended mind proposal. It does not seem appropriate to hold that the artifact and the subject are coupled in such a way as to form one single entity (or "system").[6] Moreover, the radical version falls into the "causal-constitution fallacy" (Adams & Aizawa, 2001) because it misconceives the causal role of the environment for our cognitive functions as constitutive within the ontological structure of the mind. The self is extended not because the environment is an ontological part of it but rather due to the

5 This view was already supported by William James (1890). It has been recently taken up by Damasio (2010; cf. Meini, 2012) and appears in new trends in the philosophy of mind and in the cognitive sciences (see, e.g., Noë, 2009).

6 Two systems are *coupled* when "they reciprocally influence and constrain their behavior over time, such that they can be modeled as one system" (Colombetti, 2013, p. 55).

interaction with the environment in which it is embedded.

Reciprocally, it is through experience and use that a self-conscious subject makes of the artifact that the latter incarnates mental and agentive powers: the self is extended through its relationship of engagement and entanglement with the object. By itself, a stick may simply be "a woody piece or part of a tree or shrub";[7] it can, of course, be used in many ways, but it is not part of an extension of the self. However, as it enters into a relationship with a self-conscious organism, their interaction is seen as a "composite agency," such as perceptually exploring the environment or music playing.

Indeed, it could be argued that the artifact (e.g., a notebook, a musical instrument, or a vehicle) is produced to perform the function of extending the self by virtue of making possible perceptual and cognitive experiences as well as other interactions. The artifact incarnates agency in terms of purposes and ends for which it was produced. One may even attribute (a material form of) *intentionality* to artifacts (cf. Verbeek, 2005). However, being produced for a specific purpose and manifesting intentionality are not yet exerting intentionality and performing the function for which the artifact was produced. The artifact affords a kind of agency on the users' part if and when it enters into a relationship with them.

Of course, some objects (for example, a well-crafted notebook or, indeed, a Selmer Mark VI tenor saxophone or Carrera racing bicycle) are born with excellent potential to contribute to the experiential extension of their users' self. They are configured to elicit specific experiences of interaction between the self and the environment that may be particularly rewarding for the users. However, this potential is not, in itself, sufficient to extend the self. This experiential potential is not yet actual experience, although the object bears the "mark of the mental" (Jacob, 2019), because it is an already embodied expression of human mind intentionality (as a material trace of the agency of its producers and as a tool suggesting specific functions and uses).

In any case, the user-instrument experiential extension does not seem to involve a rigid ontological reduction, based on the principle of parity, of the two components to a single system. Just as the blind man can use another stick to orient himself in the environment and the forgetful person can use another notebook to reconstruct a memory, the musician can play other instruments, and the cyclist can ride other bicycles. The extension of the self at issue here is therefore one based on the principle of complementarity.[8]

The soft version of the extended mind proposal based on the complementary principle, which explains the composite agency realized by the interaction between humans and artifacts, can be well explained in terms of the "scaffolded mind thesis" derived from the "niche construction theory" (Sterelny, 2010). Essentially, the thesis posits that the human being exploits the environment on an evolutionary scale to better interact with it by structuring environmental resources in such a way as to support its own cognitive transactions with the environment. The environmental resources on which human beings depend and by which they are transformed are, in turn, adopted, shaped, and transformed to improve human beings' capacities and possibilities. The construction of societies is a part of this process. This idea has

7 https://www.merriam-webster.com/dictionary/stick (accessed on June 2, 2021).

8 It could be argued that this also applies to parts of the body whose replacement seems to constitutively modify the identity of the self. Does the artificial prosthesis that replaces the amputated hand become part of the identity of the self on the basis of the complementarity or of the parity principle? I suspect the issue leads us to the Lockean paradox of personal identity as the ship of Theseus, whose material pieces can all be replaced over time and held together only by self-aware memory (cf. Locke, 1790, pp. ii, xxiv-xxvi). To get around the difficulty, one could understand the difference between the soft and the radical versions as a matter of degree. Although new technologies of implementation of the body are making more and more plausible the idea that an instrument can radically extend the self by becoming part of a single connected system, I take as intuitively plausible the assumption that the bicycle and the saxophone I use "extend the self" in a complementary way without rigidly constituting with it a single entity. I will come back to this in Section 4.

several advantages: in particular, while acknowledging the contribution of the environment to cognition, it nicely avoids the "causal-constitution fallacy."

Moreover, the scaffolded mind thesis can also be applied to the way in which individuals, in interactions with other individuals and by manipulating/building/using objects of different kinds, scaffold their body-mind system by building their ecological niche through the plastic shaping of habits capable of rhythmically regulating their transactions with the environment. Habits shape and guide the exercise of a practice and, in turn, are constituted and plastically (trans)formed by that exercise. Through its transactions with the environment, the self builds habits that regulate and facilitate those transactions, continuously and plastically changing precisely through those transactions (see Caruana & Testa, 2020; Bertinetto & Bertram, 2020).

Fortunately, defending the radical version of the extended mind proposal based on the parity principle is not necessary for the argument I am developing in this article, which is as follows: we find it abhorrent when cultural material artifacts (e.g., musical instruments, bikes) are damaged or destroyed because when entering into a relationship with their users, they become (complementary) parts of their extended self by means of offering *affordances* enabling perceptual, cognitive, affective, and aesthetic experiences. Artifacts and their users thereby enact an "extended" or "composite agency," that is, "agencies consisting of both human and nonhuman components" (Hanson, 2014, p. 62).

The philosophical literature on the notion of "affordance" is growing rapidly, and for considerations of space, I will not dwell on it in this article. Nevertheless, it is worth noting that affordances are not simply environmental opportunities but rather the emerging products—neither exclusively objective nor solely subjective (Gibson, 1979)—of changing and dynamic relationships between objects, organisms, and the environment. In other words, they are "relations between abilities of organisms and features of the environment" (Chemero, 2003, p. 181). This means that an organism's abilities and habits are functions of the specific relationships shaped between that organism and the objects they interact with and respond to within the environment.

Importantly, specific affordances are the "complements" offered by cultural material artifacts to the capacity of the self to perform "expressive aesthetic experiences." With this notion, I mean to express experiences of an appreciative sort in which, through a progressive integration of doing and undergoing, a felt, energetic, perceptual, explorative, and both savoring and savored interpenetration between the self and the world is accomplished, which results in what Dewey called "an experience."[9] Of course, the aesthetic experience happens in many ways and degrees. It can be more or less intentionally driven and can ensue from the attention to the perceptive, formal, and narrative qualities of an object (as happens in the case of a spectator of a film, the listener of a piece of music, or the viewer of a painting) or from the introspective attention of the

9 See Dewey (1980). If space were available, I could argue that this idea of aesthetic experience can accommodate at least some of the features of Kantian aesthetics. In particular, it accepts the view that experiencing aesthetically means turning attention to and engaging oneself in the affective/appreciative dimension of one's relationship with the world. By no means solely idiosyncratic, this particular relationship expresses the wonder at an unexpected encounter, not entirely controllable by the subject, with the perceptive qualities of objects that, in this sense, are considered "for their own sake." As I will suggest later on in this paper (see Section 5), not in spite of but rather for this very reason, the encountered objects are integrated into the experience of successful self-fulfillment due to a felicitous interplay and attunement between the self and the world. In the wake of Dewey, some recent proposals have tried to articulate the notion of aesthetic experience through the concept of "rhythm" (see, e.g., Vara Sanchez, 2021), and in the course of this article, I will use this notion too (see Bertinetto, 2020, for a quick conceptual overview of the notion of rhythm in a morphological framework). Still, I am skeptical that the concept of rhythm alone can do the work of clarifying the notion of aesthetic experience. This clarification also requires the adoption of other categories. Remaining in the context of notions usually adopted in the musical field, for instance, the concept of "harmony" could be well applied to aesthetic experience. Importantly, "harmony" not only conveys the idea of a dynamic and progressive organization and integration of parts into a whole but also that of the encounter with and of the possible overcoming of discrepancies and conflicting moments in the dynamic relationship between the self and the world. However, the literature on the notion of aesthetic experience cannot be surveyed here.

agents toward their own activity, as in the case of dancers or musicians absorbed in their own performative experience (see Gallagher, 2021; Vara Sanchez, 2021; and for the musical case, Høffding, 2018). Cultural material artifacts afford aesthetic experiences in many different ways and degrees. In the case of musical instruments, the realization of expressive aesthetic experiences occurs, in particular,[10] through artistic performances. In this sense, musical instruments, like artworks, are capable of doing more than simply becoming *partners* for the aesthetic exploration of the world through the production of aesthetic experiences; they also *complement* the self while and by extending its aesthetic range of action through a composite or extended agency.

3. Affective Scaffolding and Artifact-Incorporation: The Expressive Extension of the Self

The scaffolding process has a constitutive affective and emotional dimension. Importantly, the ecological niche we organize and engineer through our interactions with the world is not only cognitive but also affective. In general, understanding which aspects of the surroundings are relevant to the subject's action and well-being involves the affective dimension of bodily attunement (Slaby, 2008). As argued by Michelle Maiese (2016, p. 3), "[b]odily affectivity permeates our interpretations and patterns of attention and thereby enables us to make sense of the world." Bodily feelings open up the horizon of possibilities in which things are experienced in their relationship with the subject. The environment not only causally elicits affective experiences but "rather offers action-possibilities in the forms of emotions" (Candiotto & Dreon, 2021, p. 3).

Therefore, affective scaffolding (i.e., the shaping of affective niches made up of behavioral habits) is not only the outcome of passively undergoing emotional experiences; it depends on human beings' active engagement due to targeted and intentional behavior and even, and, in fact, most often, to dealings repeated every day with people and artifacts. Through active interventions, human beings modify the environment, thereby regulating their own affective conditions. Moreover, human beings model or scaffold their "affective environment," thereby affectively extending the self (Candiotto & Piredda, 2019) in many ways: "our affective states are environmentally supported by items of material culture, other people, and their interplay" (Colombetti & Krueger, 2014, p. 1172). In other words, the environment has "the power to shape and modulate individual affective styles" (Candiotto & Dreon, 2021, p. 9) or "affective habits" that scaffold our feelings: while and though interacting with(in) the environment, which affords emotions as patterns of bodily processes, individuals develop habits. These habits are affective as well as cognitive and regulate individuals' behavior and feelings.

As argued by Candiotto and Dreon (2021), the affective scaffolding of (the habits of) the self is *embodied* (in that it concerns bodily processes), *social* (because it is shaped through our interactions with other people and organisms), and *objective* (because it also concerns the material culture in which we are embedded and interactions with objects and artifacts). Through repeated involvement with people and artifacts, a condition of *trust* as well as a condition of individualization or *entrenchment* (Sterelny, 2010, pp. 475-477; Colombetti & Krueger, 2014, p. 1161), develop to the point that they can be considered elements of our affective extended self.

Not only can material artifacts perform their functions in ecological niches that they themselves contribute to shaping,[11] but they also "help humans regulate affectivity" (Candiotto

10 I wrote "in particular" because, for example, everyone, even non-musicians, can aesthetically appreciate the formal and perceptual qualities of an instrument as an object of contemplation.

11 For a philosophical discussion of artifacts' functions, see Eaton (2020).

& Dreon, 2021, p. 3) by means of building their aesthetic niche in terms of aesthetic habits of behavior. The entanglement and material engagement with an artifact, such as a musical instrument, through which aesthetic experiences repeatedly take place, make key contributions to the affective (as well as cognitive) scaffolding of the self. They provide the self with affordances for extending the expressive qualities, range, and possibilities of its experience.

While referring to Merleau-Ponty (1945), Giovanna Colombetti introduces, in this regard, the important notion of "affective incorporation." "Incorporation" means, in general, "the acquisition of a variety of habitual bodily skills;" however, more specifically, it refers to "the integration of material objects into habitual bodily skills" (Colombetti, 2016, p. 232). Accordingly, the second acquisition process ("object-incorporation") is a form, or a part, of the broader first acquisition process ("habit-incorporation"). We acquire embodied habits, thereby expanding the self, by integrating material objects in our "body schemas" (Colombetti, 2016, p. 234), that is, in the patterns of actions of the *lived body*: the body as felt, from the first-person perspective, as a subject of awareness. Hence, in repeatedly interacting with artifacts, we "incorporate" them into our habits. Significantly, this incorporation of habits and artifacts not only concerns the acquisition of technical and practical sensorimotor skills but also, I insist, has a constitutively affective dimension in that it scaffolds and extends our affective self.

4. Performer/Instrument Mediation

However, the acquisition of habits in interaction with objects is often understood as the learning of embodied skills that allow the user to carry out actions automatically. In this way, for example, many understand the incorporation of the musical instrument into the musician's action habits in terms of the acquisition of techniques and expertise. Of course, this is an important aspect of the "composite agency" shaped by the interaction between the self and an artifact. The trained and targeted relation with the instrument shapes particular sensorimotor schemes for the precise prediction of expressive musical actions and their outcomes. According to Marc Leman (2016), this can happen in two ways: through the "dialogue-mediation" mode or the "prosthesis-mediation" mode.

The first type of mediation "occurs when a tool is experienced as part of the environment, such that the tool acts as a device that necessitates a dialogue" (Leman, 2016, p. 151). It is the kind of situated interaction between human performers and material tools such as musical instruments that happens when inexperienced performers deal with the affordances provided by the instrument. This maintains its own autonomy as a material artifact—in comparison with actions performed by integrating parts of the musician's body, such as the hands and mouth—thereby expressing its proper material intentionality (or "material will"; cf. Leman, 2016, p. 151).

Instead, "[t]he prosthesis mode of mediation occurs when the tool is experienced as a natural extension of the human body, such as a music instrument which becomes a part of the human body and transparent" (Leman, 2016, p. 151). "Transparency" means that musicians control the instrument in the same way they control their hands and mouth. The prosthesis mode is the typical way of interacting with the musical instrument proper to the professional musician, and in particular to virtuosi, who master the instrument, dominate its "material will," and use it for their own expressive purposes. As such, the "prosthesis-mediation" is an application of the radical version of the extended mind proposal, according to which material parts of the environment are ontologically coupled together with the self and completely under its control. Accordingly, as claimed by Tom Cochrane (2008), objects outside the body, such as

musical instruments, can be combined with the self's actions and brain state in such a way as to "physically realize an extended cognitive system": "the instrument is part of an extended loop between the musician's brain, the muscles of his hands or lips and the keys of the instrument" (Cochrane, 2008, pp. 332 f.).

Hence, the ideal of the technically skilled musician is modeled on the radical version of the extended mind proposal based on the parity principle, while the dialogue mediation mode is understood as a sort of attempt to achieve this complete integration between instrument and musician achieved with the prosthesis-mediation mode.

Two objections can be raised against this view. The first objection (explicitly addressed by Nannicelli, 2019, to Cochrane, 2008) is as follows. The prolonged and repeated use of an artifact, such as a musical instrument, can shape the instrument as well as the body and soul of the musician to the point of rendering them more and more suitable for each other, and the musician may view the instrument as indispensable to her own musical practice. Still, they nevertheless remain distinguishable and separate entities, although—over time—more and more "made for each other." The scaffolding hypothesis also works better than the radical version of the extended mind hypothesis in its application to the intertwining of musician and instrument.

The second objection is based on the fact that the instrument cannot have its own bodily feelings, and obviously so. Accordingly, the dialogue-mediation mode arguably better respects the idea that the instrument is part of a composite agency articulated by habits incorporated into the musician's scaffolded self, rather than a piece of a single ontological entity. Moreover, this mediation is not *only* a matter of acquiring technical skills. The point is not only how well and robustly a musician becomes able, by virtue of repeated training and performances, to integrate the physical entanglement relationship with the instrument into her sensorimotor skills. The key point here is the role of expressive affectivity in human/artifact aesthetic agency.

Following the aforementioned research concerning affective scaffolding (Colombetti & Krueger, 2104; Colombetti, 2016; Maiese, 2016; Candiotto & Piredda, 2019; Candiotto & Dreon, 2021), I suggest expanding the musician/instrument mediation—and the human being/artifact relationship in general—also to the embodied affective dimension, understanding it as a contribution to the affective scaffolding of the self's aesthetic niche. The emphasis should thus be shifted from the technical skills of the professional musician and from the uncertainties of the musical student to the role that performative practices play in the configuration of affectively connoted aesthetic experiences, which expressively orient interaction between the self and the world in both cases.

In other words, the instrument/musician mediation is a clear case of affective object-incorporation that, as I will suggest, extends the self expressively by scaffolding affective and aesthetic habits. Giovanna Colombetti (2016, p. 242) is correct in observing the following:

> *the instrument is experienced as* that through which *a certain affective state is realized, created, or even better "articulated" in the performance. In this process, the instrument is not taken as an intentional object, but neither is it incorporated only into the musician's sensorimotor schema . . . . While performing . . . , the musician is affectively touched by what she plays, and she is also motivated to play in a certain affective way (a way that will strike her as so or so).*

While interacting with the instrument, not only motor intentionality but also "affective intentionality" is in play. In other words, the (repeated) process of interacting with/through

the instrument is the way affective scaffolding develops by means of arousing affective states, articulating them during the performance,[12] and exploring them expressively. While perceiving the effects of the entrenched entanglement with the instruments (e.g., the sounds played), musicians also experience their bodies as they undergo affective changes due to the performative activity. Instruments are felt as partners in the articulation of the produced affective states, thereby extending the self in a complementary way: "The instrument, like the body, is experienced as that through which the musician can let herself 'go through' a certain affective process" (Colombetti, 2016, p. 243). Performing the expressive art of playing music through interaction with the instrument, the self undergoes the process of affective scaffolding through which trust toward the (correspondence with the) instrument and entrenchment of the instrument within our personality grow. As both an experience of world-exploration and of aesthetic self-knowledge, this process expands the self, developing the performer's personality and "sense of self" (Colombetti, 2016, p. 244).

5. Aesthetic Experiences Through Artistic Extended Agency

Interaction with objects participates in affective scaffolding. Bicycles, cars, furniture, clothes, and musical instruments produce effects on our personality: these kinds of interaction constitute and extend our personality because they expand and enrich the sphere of our cognitive and affective experiences. They produce affordances that move us to explore the world, thereby becoming parts of our extended self.

However, clarification might be in order here. Note that I am not arguing that the self or the mind are constitutively made up of the objects with which we interact. Rather, they are extended in a complementary way by those objects with which we interact in our experiencing of the world (see Section 2). Although we can conceptually distinguish a notion of self (or mind) abstracted from the relationship with the objects with which we interact in the world, actually, since the very first interactions between infant and caregiver, the self is cognitively and, importantly, *affectively* scaffolded (see Section 3). An important aspect of this scaffolding is its aesthetic dimension, and for this aspect, entanglement with artifacts is often crucial.

Interaction with artifacts discloses a dimension of "participatory sense-making" (Fuchs & De Jaegher, 2009) that also has a creative dimension: Lambros Malafouris (2014) called it "creative thinging." The corresponding interaction with objects is certainly embedded in habits that affectively scaffold the self, but the very process of this correspondence between human beings and artifacts is a *creative entanglement*, "discovered or constructed in moment-to-moment, improvisational thinking inside the world" (Malafouris, 2014, p. 145).

The creative dimension of the bodily entanglement between the self and the artifact is an important aspect of the aesthetic experience that the interaction with the instrument performs by virtue of object-incorporation and affective scaffolding. A specific feature of artifacts such as musical instruments and bikes is that they allow even non-professional artists and cyclists (most people) to aesthetically explore the world through performative artistic experiences that are potentially satisfying for the performers (even when there is no audience). Performers have an experience that they themselves set in motion through their engaged entanglement with the artifacts. Playing a musical instrument (i.e., making music together with or through the musical instrument), as well as riding a bike (thereby admiring the environment of the route and proprioceptively savoring one's own effort and fatigue but also one's movement and speed

12 I mean not only or mainly a performance (possibly with fellow musicians) in front of an audience, but also a training performance.

in harmony with the vehicle) are thus, at the same time, types of agency that take place through interaction with a cultural material artifact that extends the agentive and experiential possibilities of the self as well as typical "arts of action."

According to Thi Nguyen, "arts of action" are aesthetic/artistic practices enjoyed by the performers themselves through the way they act and perform. They are artistic practices "marked by distinctively self-reflective aesthetic appreciation": "the focus of the appreciator's aesthetic attention is on the aesthetic qualities of their own actions" (Nguyen, 2020, p. 2). "The enactors experience aesthetic properties in their own actions" (Nguyen, 2020, p. 10). The activity producing the enactors' or performers' aesthetic experience results, notably, from the composite agency generated by the interaction between the self and an artifact (e.g., a musical instrument or a bike). In other words, the complementary extension of the self, accomplished through material engagement, elicits the aesthetic experience of the enactors' own inter-activity with the artifact. Thus, the aesthetic self-appreciating activity depends on the artifact because "the precise aesthetic character of that activity is dependent on its being evoked by that particular artifact" (Nguyen, 2020, p. 23). Yet, the relevant aesthetic properties concern not only, and not even primarily, the outcomes of the (inter)activity but also, and mainly, the ways performers enact their entangled correspondence with the artifact.

However, an art of action, such as playing a musical instrument (or riding a bike), does not (usually, at least) resolve into a single performance. Rather, it requires consolidation into a practice through incorporating behavioral habits. At issue is the habitualized enactment of an art of action that produces, in an exploratory way, aesthetic experiences through repeated interactions with an artifact. The entanglement with the artifact expands the sensory powers of our body and can arouse new representations of the world we inhabit, shaping our actions and our experiences, that is, our selves (cf. Verbeek, 2005; Ilies & Meijers, 2014). Thus, the self, while expressing itself through the practice of expressive arts, is also aesthetically scaffolded through the modulation of its "habits of attention, engagement, and response" (Maiese, 2016, p. 5) afforded by corresponding with the instrument. Playing a musical instrument and riding a bike are cases of practices shaped through repeated exercise so as to produce aesthetic action habits and cognitive/affective experiences that, in turn, shape the self, and by virtue of which the self expressively navigates the world. The repeated aesthetic/artistic interaction of entanglement with the artifact scaffolds the self by generating its *aesthetic habits* and, more generally, its aesthetic *niche* (Portera, 2020). The self is aesthetically extended through artistic interaction with the musical instrument (or with the bike or other objects).

Hence, in reference to my (and others') practice of playing an instrument (and riding a bike), the point is this: since the incorporation of habits contributes to shaping personal affective but also creative, expressive, and poetic styles (i.e., *aesthetic* styles), the incorporation of artifacts into personal expressive aesthetic practices of "arts of actions" also contributes to extending (even in an intensive sense) the aesthetic expressiveness of the self. As rightly remarked by Richard Shusterman (2011, p. 157), *style* is "an integral part of one's own being, so that changing one's style means in some way changing one's self" (Shusterman, 2011, p. 157). An "aesthetic style," I contend, is a kind of "affective style" (Colombetti & Krueger, 2014), a notion that, in turn, enriches that of "somatic style" introduced by Shusterman (2011). While a *somatic* style is due to the multifarious and variable sensory aspects of a personal bodily style in terms of visual, tactile, sonic, gestural, and other types of appearances and experiences,[13] an *affective* style also involves

13 Yet, as observed by Shusterman (2011), somatic style may also be generic and indicate the bodily style of groups or classes of persons.

reference to the affective, emotional, and expressive dimensions in play through the sensory aspects of the aesthetic habits of the self. An *aesthetic* personal style is the particular mode of aesthetic scaffolding of the self, developed through entangled (embodied and embodying) interactions with artifacts and other people of whom we are fond.

The aesthetic habits we develop through interacting with artifacts and incorporating them in the course of the repeated exercise of arts of actions we enjoy as enactors shape and guide our perceptual and expressive experiences and are (trans)formed by the enactment of our perceptual and expressive experiences. Hence, each instance of the art of action consisting in playing a musical instrument (or in riding a bike) contributes to generating aesthetic experiences consisting of expressive enactments of sonic and tactile perceptions that consolidate into habits that, in turn, feed the aesthetic experience back. The (trans)formation of the aesthetic habit of playing the instrument thereby shapes and intensifies the affective and emotional bond with the instrument through and together with which those aesthetic experiences are made and those habits are developed. The self invests in the artifact an affective and emotional charge analogous to that which it experiences with the people closest to it, that is, the individuals thanks to whom it enacts its experiential orientation in the world.[14]

Practical training and exercise (in my specific case, the exercise of playing my Mark VI Selmer tenor saxophone) model the body-mind system cognitively, affectively, and aesthetically. Through this practice, embodied habits develop that retroact on the relationship of entanglement and engagement with the artifact. The instrument becomes part of a living expressive-creative composite agency of aesthetic exploration of the world. Moreover, it becomes a constitutive and (felt as) irreplaceable element of an engaged relationship by virtue of which the self shapes itself through that aesthetic exploration. Musical instruments, but also bikes, clothes, artworks, and other cultural-material artifacts, are entangled with the user as affordances for modeling the expressiveness of the relationship between subject and environment through an affective scaffolding that permeates the aesthetic experience.

The specific instrument, I claim, is charged with affective value. It is indeed *this* specific artifact, as an individual item with its specific history linked to the vital history of the performer, that creates a particular affective atmosphere (which is often non-thematic and implicit, especially for the involved player).[15] On the one hand, the artifact has a symbolic value due to the kind of object it is and, possibly, to its trademark: a symbolic value endowed with charm that is capable, in itself, of expressively scaffolding the experience of those who use it (which is, of course, the case with my Selmer Mark VI Tenor sax, which is the sax once played by famous jazzmen such as John Coltrane and Sonny Rollins). On the other hand, it is the repeated interaction with the artifact in the practice of an expressive art of action that generates aesthetic habits that shape a specific intimate, expressive relationship. The bodily relation with a musical instrument may be a powerful instance of affective and aesthetic scaffolding in that it can contribute to shaping affective and expressive styles (i.e., aesthetic habits of behavior that, in turn, regulate the enactment of aesthetic experiences). In this regard, as argued by Merleau-Ponty (1945, p. 168), the instrument and the musician become the medium for the correspondence relationship responsible for the (habit of) musical production, that is, for the engineering of a specific aesthetic niche.

14 Something like this also happens with the affective investment toward artists and public figures who, due to their works and their lives, not only acquire a strong symbolic value and meaning for many people but become elements of the affective organization of the daily aesthetic experience of the self. The death of a famous singer, for example, can elicit an emotional impact similar to mourning for a loved one.

15 Cf. Griffero (2014).

Of course, professional musicians (or professional cyclists) are more able than non-professionals to establish a valid expressive relationship even with difficult or not entirely functional artifacts. That is, they are able to discover affordances for a satisfying expressive experience even in instruments that others will instead experience as recalcitrant in character and as obstacles to their expressive performance. In other words, highly trained and skilled professional musicians (or cyclists) have developed behavioral and aesthetic habits so solid and, at the same time, so creatively plastic that they can find affective affordances for expressiveness even in unusual, unfamiliar, and "recalcitrant" artifacts. In the famous example offered by Merleau-Ponty (1945, pp. 167 ff.), an experienced organist is able, in a short time, to make use of an organ he does not know, incorporating it into his own body and expressive schemes, that is, acquiring with it quickly a relationship of trust.

Unlike these professionals, average practitioners (who are, on average, passionate about what they do) are instead tied to a particular artifact with which, due to how it was crafted as well as its material and functional qualities, they develop a specific affective relationship; consequently, they have more difficulty achieving the same level of trust with other artifacts of the same kind. Being incorporated into these amateurs' practice in a way that molds their self in a powerful relation of affective entrenchment, the artifact becomes *almost* irreplaceable: it is *this* particular artifact that affords the expressive explorations of the world that affectively and aesthetically scaffold the self, producing its specific affective and aesthetic style. The replacement of the artifact would involve a disorienting transformation of the self. This happens when individuals encounters an artifact with which they enter into an *empathic symbiosis*, such that they pour themself into the relationship with the object, indeed into the object itself. The instrument gradually "becomes entrenched not just in the musician's motoric repertoire, but also in the musician's repertoire of expression and feeling" (Colombetti & Krueger, 2014, p. 1164). The regularly repeated and habitual relationship with the instrument is, I think (and here I differ with Colombetti and Krueger), even in the case of non-professional musicians, responsible for the increasing entrenchment of the instrument "into the corporeal schema" (i.e., it is incorporated pre-reflexively and experienced as a part of our self) and "into the body image" (that is, into our sense of the appearance of our body to others).

Moreover, it is noteworthy that through repeated practice, a kind of "performative entrenchment" also develops. The instrument is not solely incorporated in such a way that something is perceived through it while the instrument remains unnoticed. Moreover, it is not only a matter of acquiring sensorimotor automatisms and automatized performing skills. Instead, the "performative body" (Legrand, 2007, pp. 500–502) is characterized by a condition between entire self-transparency and intentional self-attentiveness. Although one is not intentionally focused on the activities of one's body, one is proprioceptively and pre-reflexively aware of one's movements and positions: as suggested by Colombetti and Krueger (2014, p. 1166), the instrument is incorporated (entrenched) into the performative body, being "neither entirely transparent nor explicitly attended to, but is nevertheless experienced as a present instrument of performance and expression." Yet, it is not simply a matter of "motoric mastery over the instrument" (Colombetti & Krueger, 2014, p. 1164) but rather of creative exploration of expressive affordances and possibilities. Therefore, as I contend, performative entrenchment happens not only to professional musicians but also to amateurs like me, who, in fact, love to dedicate themselves to a practical aesthetic experience—to an *art of action* involving intimate and repeated interaction with an artifact. Then, the specific artifact becomes a special partner for the user: since the primary aim is not to achieve high performative results but to explore

aesthetically one's interaction with the world, the specific artifact becomes a part (felt as) irreplaceable of the aesthetic-affective habits developed.

Please note that it is not only the music I play that reorganizes the physical, social, and, importantly, affective and aesthetic space I occupy during the corresponding entrenched interaction with the instrument. It is not only the music I play that affectively and aesthetically scaffolds my self and my world: I do not only delegate the task of regulating my affectivity to music (Krueger, 2019). Moreover, in this case, I do more than just "actively select specific activities and interactions with the material world" (Colombetti & Krueger, 2014, p. 1163); rather, I directly intervene in the environment, acting together with and through the material artifact. It is my *playing* (with) the saxophone—thereby playing music and exploring the environment sonically —that affectively and aesthetically scaffolds my self and my world through the aesthetic exploration of *my* musical sensitivity and expressiveness. I am at the same time attuned to the music I am making and pre-reflexively self-aware of my (inter)action with the saxophone (cf. Gallagher, 2021, p. 136).

The entrenched entanglement with the instrument provides us with aesthetic affordances, namely, opportunities for exploring our felt body and its dynamic affective and expressive relation with the environment through a sensory medium. This is a powerful way to gain and structure our self-awareness, both in a non-thematic and pre-reflexive way, as well as in a thematic and conscious way. The aesthetic experience provided to the self by musical practice through the organism/instrument dynamic and multi-layered relation is a sensory exploration of the environment that, at the same time, is an auto-exploration of the (extended) self.

My point is that the repeated practical, performative, attentive, and devoted relationship with an object capable of shaping one's aesthetic niche is a case of affective incorporation that extends the self. Therefore, it makes possible those specific expressive aesthetic experiences that articulate its individual vital history. Aesthetic experience causes us to live and explore intensively the conditions of experience as an affective enactive transaction between organism and environment, which includes the "incorporation" of artifacts (cf. Bertinetto, 2021). In this regard, aesthetic experience, as Mark Johnson (2018, p. 2) observes, encompasses "all the processes by which we enact meaning through perception, bodily movement, feeling, and imagination" and is a participative and affectively engaged experience of resonance with the world (cf. Berleant, 2013) that intensifies our ordinary experience. When appreciated aesthetically, then, the ordinary also becomes extraordinary. Ordinary things and experiences become aesthetically extraordinary when perceived in such a way as to bring out the wonder of habit, intensifying one's own bodily awareness of existence into a personal "art of living" (Shusterman, 2013). This is the reason we care about developing aesthetic habits that extend our self. The way we organize habits that offer a rhythm to our usual correspondences with the world we inhabit and the way we savor these daily occupations affectively scaffold the self, shaping the expressive qualities of life.

It is not only daily practices such as, for example, cooking, taking care of the furnishing of one's room, or sports practices that become important ways of giving meaning to one's life through an affectively and expressively satisfying organization of the relationship with the world; even personal artistic practices, such as playing an instrument, become powerful modalities of potentially fulfilling everyday aesthetic experiences. The expenditure of energy and resources (in terms of time, physical and mental fatigue, money, etc.) can be rewarded by the satisfaction and enjoyment that the self can feel as a result of its own making. This satisfaction, in turn, is due to the extension and intensification of one's experience through the sensory, affective, emotional, and cognitive exploration of the world and of the self, which, at the same time, organizes one's

own existence and responds to the contingency of what happens in sense-making ways. By enacting expressive creativity in sensory dimensions linked to different media, the self realizes a vital rhythm capable of possibly taming and exorcising, through the expressive responses it receives through its aesthetic exploration of the environment, the anxiety that permeates human existence (Cometa, 2017).

In this context, the affective incorporation of an artifact becomes a structural part of the expressive organization of the experience (i.e., the particular way we integrate our personality into the experiences we undergo), in particular when the affective incorporation becomes a special condition for the success of the performance of an art of action. The incorporated artifact becomes a constitutive element of the affective and expressive *style* that aesthetically extends the self through the enactment of an artistic practice. Thus, what is particularly relevant for the aesthetic (and also the narrative) organization of the self is not above all (or even to a large degree) the achievement of extraordinary artistic skills but rather the ordinariness of an expressive practice that becomes, owing to habit, an indispensable extension of the self. In this ordinary aesthetic habit, extraordinarily creative qualities can then unexpectedly emerge, which help to reward the efforts made (especially initially) to give life and momentum to the practice and to sustain it.

Therefore, the artifacts with which the self, as a performer of "arts of action," is involved become a condition for the generation of the vital rhythm through which the self forms and transforms its aesthetic identity. Our engagement with artworks as well as with artifacts that we incorporate into our aesthetic practices and our performing body can be understood as a "second-person relation characterized by openness and curiosity" (Brinck, 2018, p. 211) through which we express ourselves, (trans)forming routine practices and habits and savoring them aesthetically.

The artifacts we particularly cherish (e.g., a musical instrument or a bicycle) are, in this respect, like artworks. Art extends the possibilities of human meanings and values: "the arts enact basic ways for us to inhabit our world" (Johnson, 2018, p. 203), making sense of "the structures, qualities, and felt direction of our embodied experience" (Johnson, 2018, p. 210). Artworks are artifacts that express and embody the multifarious ways in which human beings manifest their lived engagement with the world, offering affordances for interactive experiences of *sense-making* (i.e., of enactive perception or *perceptualization*: Matteucci, 2019) of the world. Therefore, artworks are like persons (Margolis, 1974) in that they afford our active perceptual and imaginative interaction, eliciting intense affective participation in a process of joint sense-making. The same goes, I have argued in this paper, for cherished artifacts: artifacts through and with which we enact "arts of actions" that extend the self, thereby allowing the self a vivid and intense experience of perceptive, imaginative, and emotional exploration of the world, which, in turn, affectively scaffolds the self. These artifacts are like artworks and, consequently, like persons as well.

However, the affective entanglement with artifacts is not just a relationship with a person with whom the self merely enters into a short dialogue, only to see the person disappear after the dialogue ends. This can happen with artworks that are experienced one time only, typically during a brief visit to a museum, that then disappear from our life. Instead, a cherished artifact is like a person with whom one organizes one's life over an extended period of time, like those artworks (or those authors and artists) that we experience repeatedly (perhaps also thanks to reproductions) and that aesthetically shape the mobile identity of the self, being incorporated in its aesthetic habits. Indeed, a good bike or a good sax (and similar objects) in which we trust

and for which we care are good travel companions, and, as with a life partner, it is difficult to tear ourselves away from them (and when we do, it is sad and painful).

6. Conclusion: Why We Do not Want to Destroy Saxophones, Artworks, or Bikes

Here, at the end of this paper, I return to the question with which I started. Why are we sorry if an artifact we deal with in our experiences is lost, ruined, or destroyed? (Here, I would add: aside from any financial loss.) I think Davies (2003) and Ravasio (2016) are both correct after all. Damage inflicted on a musical instrument is affectively felt in a way analogous to that visited upon a person (as Davies asserts) or artwork (as Ravasio argues). The musical instrument that allows us to aesthetically explore the world, shaping aesthetic habits capable of scaffolding our aesthetic niche, is like a beloved person who is part of our extended self precisely because she complements the self by contributing to its ecological and aesthetic niche. The same goes for artworks, primarily those with which we establish an everyday affective and emotional relationship: artworks with whose meaning but also with whose corporeal dimension (see Andrzejewski, 2019) we are engaged, intertwined, and entangled to such an extent that they extend, aesthetically and artistically, our selves, bodies, and souls.

The objection could be raised that this view is misleading. Indeed, one may reason that we also feel discomfort and disgust for the damage and destruction of musical instruments and artworks that do not belong to us and with which we do not have an intimate and aesthetically operative relationship of the kind we have with our own musical instruments, bicycles, and artworks. However, this objection is a weak one. When we learn that someone has lost a loved one, we can—obviously, depending on the circumstances—empathize with that individual. We can emotionally understand that this loss is a blow to the identity of the extended self of the bereaved, a disruption of this person's affective, cognitive, and ecological niche. The same goes for artworks, musical instruments, and other material cultural artifacts that do not belong to us and to which we do not belong. The discomfort that we can empathically feel with those who are suffering from the damage, destruction, or disappearance of such objects is the basis of our moral condemnation of acts that lead to such consequences. In fact, we are personally familiar with how much the flourishing of our self owes to the aesthetic experiences that can be accomplished owing to the self-extension that their "incorporation" in our habits makes possible. This experiential knowledge and this empathic feeling are grounds for the normative attitude that generally binds us to respect, as much as possible, the obligation not to damage artifacts: it is thus not solely nor even primarily for economic and legal reasons. Of course, such reasons cannot be neglected either; however, I think it is sound to argue that those reasons too are ultimately based on the affective scaffolding of the interaction with artifacts, which is capable of aesthetically extending the self.

In conclusion, in this article, I have suggested that the reason we feel sorry and disgusted about the loss and destruction of cultural material artifacts, such as saxophones or bicycles, is that they become parts of us. Indeed, they complement our self by making possible a distribution of agency that allows for valuable (som)aesthetic experiences and by scaffolding our affective environment. The artifact is incorporated not only into our sensorimotor skills but also becomes entangled in our affective and aesthetic niche. In doing so, it helps to develop our personality. This is particularly evident and relevant in the relationships between human beings and artifacts that make possible a particular kind of distributed agency, that of the "arts of action": aesthetic

practices in which agents aesthetically experience the properties of their own actions. The habituation of these practices scaffolds aesthetic niches that extend the self by virtue of shaping somatic, affective, and aesthetic styles. Thus, the artifact becomes charged with affective value and becomes part of the vital history of the self: the self enters into an empathic symbiosis with the artifact that organizes the everyday expressive correspondences with the world it inhabits, making sense of it. This explains why it is sad and painful to break away from particular cultural material artifacts and morally reprehensible to destroy them: we share with them our body and soul.[16]

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Healing, Reverie and Somaesthetic Anchors

Designing objects of soft fascination to move from fight and flight, to flow and flourish

Chloe Cassidy

Abstract: *My emerging awareness of a void that lingers with mind-body dualism brought me to this research. I live with the impacts of complex post-traumatic stress disorder, marked by a tendency to ebb between perpetual states of fight and flight, or freeze. Examining my lived experiences in relation to two trauma-informed care principles (safety and empowerment), I present the potential for cultivating an aesthetic appreciation in nature, and improved body consciousness. I hope to empower others to reach a sense of safety by sharing my experiences as I reanimate my creativity to move from fight and flight, to flow and flourish.*

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Introduction

A gnawing sense of mind-body dualism has pervaded my life. Masked by grief, but emerging nonetheless, my awareness of a void that lingers with this dualism brought me to embark on this research. This work has enabled me to honour my lived experiences, articulate aesthetic sensitivities I express through my creative work, and acknowledge my practice as an empowering tool to regulate my mind, body, and soul. My personal goal has been to reanimate my creative practices through somaesthetics, and move from fight and flight, to flow[1] and flourish. By examining my personal trauma as a lived experience in relation to two trauma-informed care principles (safety and empowerment), I propose that cultivating an aesthetic appreciation has the potential to empower a sense of safety through improved body consciousness. Through the account of my lived experiences, I intend to contribute to my own healing through my practice-based research and present a case for the potential for others to integrate somaesthetics and trauma-informed practices in design.

1 Mihaly Csikszentmihalyi (2008) positioned flow on a continuum channel between anxiety (arousal) and boredom (efficiency), achieved with an optimal challenge to capability axis. For me, the optimal state of arousal that flow induces can be better described as intersecting the opposing axis of fight / flight with freeze states.

Figure 1 *Somaesthetic Anchor, Chloe Cassidy (2021)*

In healing from trauma, an anchor can also be something that evokes an interoceptive response to an external stimulus and brings a consistent emotional state. Anchors act as transitional objects, helping people move from trauma to thriving, and navigate the healing process as a form of self-care by offering symbols to be connected to the environment and self (Hartman & Zimberoff, 2005). In this article the term somaesthetic anchors (Figure 1) is used to describe the objects I make in practice-based research. The objects are made by drawing on somaesthetic practices in my designer-maker practice, with the intention to bring a sense of calm to my mind and body through aesthetic and somatic sensory experiences that improve my body consciousness. The anchoring I experience and intend to embed in the objects is an associative mechanism of re-experiencing the calming sensations of finding materials in nature and while reforming the materials, through sensory engagement with the objects.

This article extends on advances in transdisciplinary research that highlight higher instances of dysregulation of the nervous system regardless of the initial trauma which lead to an increased risk of incoherence in somatic relationships experience (Van der Kolk, 2014; Dowds, 2016; Kozlowska et al., 2015). In such research, self-regulation has been promoted as an empowering action for people to engage with autonomously, to bring their nervous system into equilibrium. I draw on two aspects of somaesthetic discourse, lived experience and embodiment, and provide examples of the potential for somaesthetics to be considered as an approach to empowerment in the context of healing from trauma. The inextricable connection of the mind and body, as the soma, is a concept that unites somaesthetics and trauma research. I introduce a conceptual framework I have developed, the ART of living better lives, to capture the inherent value of nature in trauma recovery and potential value of somaesthetics to add value to trauma-informed practices in design. I conclude with photographs of somaesthetic anchors as exemplars of my practice-based research, and descriptions of experiences cultivating aesthetic appreciation in reforming burnt remnants from the catastrophic 2019 Australian bushfires.

My practice-based research draws on Richard Shusterman's somaesthetic project[2] by referring to philosophy in theory and practice, through bodily examples being integrated in

2 Richard Shusterman developed the somaesthetic project as an embodied philosophy that values both the body and mind, the soma, as being necessary to experience the world. This perspective requires both theoretical and practical engagement with the dimensions of the soma to cultivate knowledge and purpose in everyday life.

my designer-maker practice. I examine the role of somatic practices engaging proprioception and interoception in my design processes and outcomes, to consider the agency of the artifacts I am making in relation to empowerment and a sense of safety. I retain the aesthetic roots of somaesthetics with John Dewey's consideration of experience being double-barrelled,[3] embracing both subject and object, how and what, without distinctions between acts and materials (Dewey, 1925). A twofold negotiation that has also been referred to as inner and outer realities (Maclagan, 2001) resonate of my experiences of living with the impacts of trauma, and I ask a twofold research question: *How can I cultivate a sense of safety (by way of improved self-regulation of the nervous system) through somaesthetic designer-maker processes that evoke flow? How can somaesthetic anchors be designed in a way that might contribute to others being empowered to flourish through creative practices?*

Personal Trauma as Lived Experience

I am one of an estimated five million Australians living with the adverse impacts of trauma each year (Kezelman, Hossack, Stavropoulos & Burley, 2015). Suffering the long-term impacts of living with complex post-traumatic stress disorder (cPTSD)[4] is most distinctly marked by a personal tendency to ebb between perpetual states of fight and flight, or freeze. In these states I found myself void of creativity, lacking flow, yet longing for the protection it has afforded me in the past. My unrelenting pursuit for a sense of meaning to be drawn from my own experiences is helping me to reframe my trauma-informed disposition and embrace the complexes I bring to my designs. I now acknowledge a state of flow to be an experience of embodiment that brings a sense of safety that opposes my trauma-informed hyper/hypo-vigilance.

Lived experiences present a considerable variable in the context of trauma, thus I cannot make an all-encompassing claim through my practice-based research. To appreciate the catalyst of loss that informs my research, I will introduce the moment that intersected with my history of developmental trauma and well-honed suppression of complexes which accompanied that. In 2015 my brother died tragically in his sleep. Sober at the time of his death, his mind, body, and soul were however, tired from years of addiction and anguish. He was 36, the same age I am as I undertake this research. With the sudden loss of him, a part of me disappeared too. Until I began this research in fact, I had not created any new designs or artworks due to a deep sense of loss which inhibited my creativity. I struggled to articulate the impact of losing a kindred spirit and fell further into survival mode, a heightened yet numbed state of living. A love of art and design had once flown through both mine and my brother's veins. It was how we communicated. Our creativity was in part a protective factor for us both to escape when life was too much in our trauma filled childhood. It gave us new worlds to creep in to and allowed us to see our own world in unique ways. It was also our shared vulnerability. Our creativity was born from our emotional depths as a reverie, as we felt very deeply but were discouraged from showing emotion. We were broken down by our broken father. A shadow in our reverie.

3 John Dewey refers to William James' discussion of experience being a double-barrelled word, in *Experience and Nature*, stating: "it includes *what* men do and suffer, *what* they strive for, love, believe, and endure, and also *how* men act and are acted upon… [Experience] denotes the one who plants and reaps, who works and rejoices, hopes, fears, plans and invokes magic or chemistry to aid him, who is downcast or triumphant. It is 'double-barrelled' in that it recognises in its primary integrity no division between act and material, subject and object, but contains them both in an unanalysed totality. 'Thing' and 'thought' as James says in the same connection, are single-barrelled; they refer to products discriminated by reflection out of primary experience" (Dewey, 1929, p8).

4 Complex trauma may be a result of cumulative traumas and / or adverse experiences occurring in young ages, when the brain is still developing. The phrase complex trauma, or complex Post-Traumatic Stress Disorder (cPTSD), has been adopted by practitioners in trauma industries to differentiate research and practices that have a specific focus on developmental or cumulative trauma, not classically defined Post-Traumatic Stress Disorder.

The introduction of somaesthetic design in academia also presents challenges related to documenting subjective inner sensations that are dependent on inherent somatic differences (Höök, 2018; Vidal & Segura, 2018). I draw on autobiographical life experiences and sensory ethnography (Pink, 2009) with the aim to further test and develop potential methods of somaesthetic appreciation to combat cPTSD. I document my practice-based research from a first-person perspective using embodied writing of concrete accounts of my experiences, poetry, photography, and in the articulation of the objects themselves. I draw on descriptive practices of phenomenology, and interpretive and re-evaluative practices of hermeneutics, to inform a context-sensitive and reflective methodology. I place contextual significance on empowerment and safety in the context of trauma, and body consciousness and a sense of safety in the context of healing.

The Void: Reigniting Imagination from Within

In 2016 I began therapy for the grief of losing my brother, and fear of being a mother responsible for nurturing my son's soul when I felt soul-less. In 2018, I was diagnosed with Complex Post-Traumatic Stress Disorder (cPTSD) The diagnosis brought with it a sense of validation to my mind and body feeling disconnected. Over time I had developed systems to function as if I was under attack and had no option but to fight, flee or freeze. Being a designer, a trained 'problem solver', I searched the literature for ways to repair myself. I discovered Dr Bessel Van der Kolk's' (2014) seminal text, *The Body Keeps the Score: Mind, Brain and Body in the Transformation of Trauma*. In this text I was introduced to the evidence-based argument that the mind and body are inextricably connected as the soma, and the key to healing from trauma is improving body awareness of felt sensations connected to emotional triggers, as somatic experiences. Upon my first reading of *The Body Keeps the Score* I highlighted the claim:

> *"It is one thing to process memories of trauma,*
> *but it is an entirely different matter to confront the inner void"*
> (Van der Kolk, 2014 p296).

The notion of an inner void is a recurring idea I have been drawn to over the years. Reflecting on the highlighted words I recalled a passage I came across when I was fifteen and have carried the original torn piece of the passage (Figure 2) in various wallets and moving boxes for over 25 years. As the context of my life has changed, the significance of the passage has never waned. I live in hope to dwell not in the inner void. A feeling so deep within that I had not linked it to my unconscious disconnection from my body to survive a complex childhood. I have come to realise my perpetual state of living as if responding to threat was, is, my deepest void. A void I have avoided. Until now.

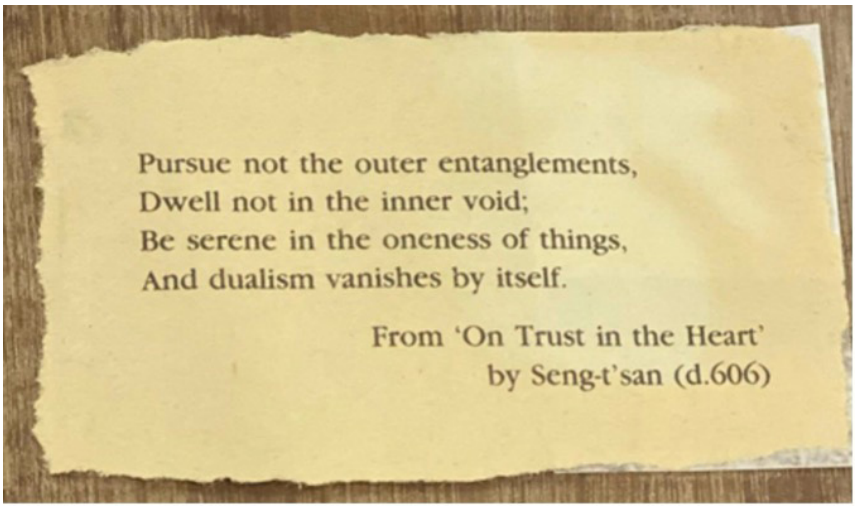

Figure 2 *Author's own page clipping and photograph. Excerpt from 'On Trust in the Heart' (Send-t'san, d.606).*

In hindsight engaging my creativity after losing my brother would have been beneficial, however my grief and complex trauma history rendered me frozen. Van der Kolk (2015) was asked the question "How can we notice the self to feel what goes on to heal?" to which he responded, "trauma patients tend to have lost their will of creativity and imagination." The importance of people accessing their imagination [creativity] for curing themselves is also presented in *The Body Keeps the Score*:

> "*When people are compulsively and constantly pulled back into the past, to the last time they felt intense involvement and deep emotions, they suffer from failure of imagination, a loss of mental flexibility. Without imagination there is no hope. No chance to envision a better future, no place to go, no goal to reach.*" (Van der Kolk, 2014, p17).

In seeking to reanimate myself through creativity, I have been inspired by Carl Jung's reflections on active imagination and his assigning the creative archetype as an expression of the soul. Jung considered the possibility of the 'voice of the depths', the soul, to return after an extended silence, encouraging a spark of hope that my soul might be reanimated after what has felt like an extended silence. To appreciate the light in the darkness, Jung repeatedly refers to 'la noche oscure del alma' ('The dark night of the soul')[5] to express the enduring quest in humanity to learn from suffering. This notion echoes the poet and artist Khalil Gibran who wrote "Out of suffering have emerged the strongest souls; the most massive characters are seared with scars" (1912). And Rollo May, psychologist and author, also said "The creative act rises out of the struggle of human beings" (1975/1994). Suffering as a fundamental aesthetic aspect of life has been examined through hermeneutics as a source to 'dwell in the mystery of life' (Fidyk, 2015) in a way that I interpret as a parallel to my dwelling in a void. The widely referred to light, strength and creativity arising from suffering has given me hope that in sharing my experiences I may draw strength from my own darkness. It is through such experiences, that I draw upon somaesthetics to enlighten my own practices, to cultivate self-compassion, and to empathetically contribute to the growing fields of somaesthetic and trauma-informed design.

5 'The dark night of the soul' dates originally to the 16th Century by St John of the Cross.

Höök (2018) refers to Dewey's perspective of aesthetic experiences warranting evaluation of both disturbing experiences and positive sensations and feelings of safety as problematic, because somaesthetic designs aim to improve lives through repeated engagement and everyday use. It is Dewey's evaluation of positive and negative aesthetic experiences however that I am drawn to, to create a meaningful existence out of the depths of my anguish through my creative practices and engage more completely in everyday life. It is in the aesthetic roots of somaesthetics that I feel I can reanimate my creativity. In the context of trauma, being able to interpret and act on physical sensations, even if they are initially perceived as negative, ultimately enables people to enjoy a life with value and safety (Van der Kolk, 2014). Through soma design elements of slow storming and iteration I have been able to examine the materials and processes central to my research, first as symbols of destruction, then as objects to be healed. Most recently I identify the artifacts as having the potential to heal and act as somaesthetic anchors that aid in building resilience. The heart of my research has only come to light because of my experiences with the 'world of black', my aesthesis of loss, grief, and a deeply rooted aesthetic appreciation in nature that soothes my soul.

A Conceptual Framework: The ART of Living Better Lives

I have developed a conceptual framework, the ART of living better lives, to capture the inherent value of nature in trauma recovery and potential value of somaesthetics to add value to trauma-informed practices in design. Throughout my life I have had an affinity with the inherent value of nature that is an enduring concept in Zen philosophies, many of which also inform somaesthetics. A primal sense of connection with others and the natural world is critical to experiencing a sense of meaning in our lives, through enhancing a sense of belonging (Dowds, 2016). At times the bush, beach or riverbank offered a place to escape lived experiences of trauma both physically and mentally. In recent years, following the sudden death of my brother, my desire to immerse in and reconnect with the natural environment has become a more deliberate act. I seek the solace of sensory stimulation from natural elements to feel grounded. I feel a deep sense of healing in nature. Beyond my personal affinity with nature, biophilic principles and nature-driven theories are increasingly being introduced to existing protocols for trauma in health, justice and education services.

Biophilia

Biophilia was first hypothesised by Erich Fromm (1973) to explain a 'love of life and all that is alive'. In later years Edward O. Wilson wrote Biophilia (Wilson, 1984), and extended the concept to be a more innate affinity between humans and other life-forms in nature driven by evolution. Archived medical records from as early as the 19th century prescribe time in nature to reduce emotional distress and mental exhaustion (Duvall and Kaplan, 2014). A seminal study in 1984 by Roger S. Ulrich provided compelling evidence that patients recovering from surgery who had a window with a view to nature had improved health outcomes compared to those who did not. Design of physical environments can both respond to and affect people's behaviour and mood, encouraging a direct connection between design and environmental psychology research (Berto, 2015). Natural environments provide sensory and tangible spaces that allow a feeling of safety and calm, and they can be conducive to recovery from trauma (Lorber, 2011), and reorientation (Poulsen, Stigsdotter & Refshauge, 2015).

The opposite to biophilia is biophobia. It is interesting to note the primal response to biophobia (fears of snakes for example), is a fight, flight or freeze response like the perpetual hypervigilant state complex trauma may induce. Traumatic stress can lead to somatic responses that upset the body's homeostasis (Van der Kolk, 1998), a function of finding balance in our own body. From an evolutionary perspective, juxtaposed with biophobia, biophilia would enable a natural return to balance in the body's neural responses. There are many examples of natural tendencies to seek balance: equilibrium is a biological or chemical state of balance between opposing forces; and the Gaia hypothesis aims to explain the self-regulating effect of forces in opposition on Earth returning to balance naturally (Lovelock & Margulis, 1974). In the context of trauma recovery, nature has been proven to create a sense of safety and connection (Poulsen, Stigsdotter, Djernis & Sidenius, 2016), which in turn enables people to reduce hypervigilance. These experiences although implicit may be the result of what Stephen and Rachel Kaplan (1989) have termed soft fascinations with nature, a fundamental aspect of their attention restoration theory (ART).

Attention Restoration Theory (ART).

ART argues that we have a limited capacity for fixed attention (a narrow focus) compared to soft fascination (effortless, involuntary attention) caused by the dynamic stimulation of natural environments. As the third of four stages of restoring attention in nature, soft fascinations include mesmerising qualities of nature, such as dappled light movements in the shadow of tree branches and ripples in water. The dynamics of such activity allow for attention to shift between stimuli effortlessly as there is an organic rhythm that we intuitively sense. There is potential for biophilic design to trigger fascination and enhance psychological restoration (Berto, 2015). The prolonged effort required for fixed attention however may lead to negative emotional states and reduced cognitive performance when exhausted (Kaplan & Kaplan, 1989). My own trauma-informed disposition tends to challenge with sensory gating[6] (tuning out) in my day-to-day activities. I have found the practice of deliberate sensory grounding in nature more effective than in other environments due to the sense of presence in the moment I feel as a result of soft fascinations. It is this presence, as a state of restored attentiveness, that has allowed me to critically exam my own living body that is experienced through sensory appreciation, aesthesis. In nature I feel safe to deliberately bring my consciousness to my body, the objects I form using natural materials also act as a sensory anchor that reminds me of that feeling of safety when I engage with them in my studio practice.

The Art of Living Better Lives

By returning to the roots of self-cultivation in philosophy through body consciousness I hope to experience what Shusterman (1999, 2008, 2012) claims might be t*he highest art of all – that of living better lives*. Shusterman's (1999, 2008, 2012) Somaesthetic Project has led to an evolution in philosophy that addresses the complexities of experience, consciousness, and wisdom that may be stored in our bodies. It captures both Eastern and Western philosophical notions of nature, and the pursuit for 'oneness' that has been so influential in my life. Building on somaesthetics soma design theory reinforces aspects of empowerment by emphasising the value of slowing down, self-compassion, self-agency, movement and sensory awareness to effectively design for others (Höök, 2018). It is analytical, pragmatic, and practical, offering an approach to consider

6 "The ability of the nervous system to inhibit or suppress the response to incoming irrelevant sensory input is a fundamental protective mechanism that prevents the flooding of higher cortical centers with irrelevant information". (Howard, Cromwell, Mears, Wan, and Boutros, 2008, p69-70).

the very personal somatic sensations of lived experiences of trauma that inform my practice. I embrace a somaesthetic approach to design as a bridge between my artistic sensibilities and my designer-researcher practices most notably for its potential to engage:

> *"…with bodily rhythms, touch, proprioception, and bodily playfulness, [and] also with our values, meaning-making processes, emotions, and ways of engaging the world. It is individual, as well as social. It deals with self-care, as well as empathy with others. It has to do with movements and bodies, but addresses the whole self, body, and mind, as one. In that sense, to me, soma design is relevant to any design process engaging with aesthetics."* (Höök, 2018, p127).

An example of ART in action in my practice is my increased somaesthetic awareness of the calming action of balancing cold, wet stones on a riverbank, and returning to warm, dry stones that had not moved, yet were further away from the water's edge as a tide receded from the bank, marking time in the dynamic environment. The added kinaesthetic interaction of slowing down to rest and balance the objects on top of each other requires me to be steady handed and I enact breathing rhythms needed for self-regulation of my nervous system. This awareness gained through the iterative process brought me closer to answering my research questions of how I might *cultivate a sense of safety (by way of improved self-regulation of the nervous system) through somaesthetic designer-maker processes that evoke flow. And how somaesthetic anchors might be designed in a way that contributes to others being empowered to flourish through creative practices.* The objects I am designing must also allow users to interact through touch, rhythms, body playfulness and proprioception in a way that helps add value to their experience of the world.

Safety and Empowerment in the Context of Trauma

Trauma research has historically been informed by the prolific CDC-Kaiser Permanente Adverse Childhood Experiences study, ACEs, (Felitti, et. al., 1998)[7] which identified long term pathological detriments of trauma. Albeit pervasive around the world, there is no universally accepted definition of trauma (Menschner & Maul, 2016). The Australian Psychological Society defines trauma as the result of either a single or recurring experience that may cause substantial negative psychological wounds, leading to difficulty in coping or functioning normally. This broad definition is adequate, although I challenge the 'functioning normally' aspect of the definition with the support of Van der Kolk's (2014) claim that this is a "normal response to an abnormal experience." This claim is more empowering for someone healing from trauma in my view. Further, it has been observed that people who experience complex trauma may develop highly adaptive coping mechanisms, yet still experience the long-term, far-reaching negative impacts of adverse childhood experiences; mentally, physically, and psychosocially (Kezelman et. al., 2015). My own unconscious, but conditioned, somatic disconnection has served as a mode to survive adversity in my childhood. To view this conditioned response as an abnormality has fuelled negative perceptions of my sense of self.

7 There are 14,452 literature citations to the original Felitti et al. (1998) study as of 7th October 2021.

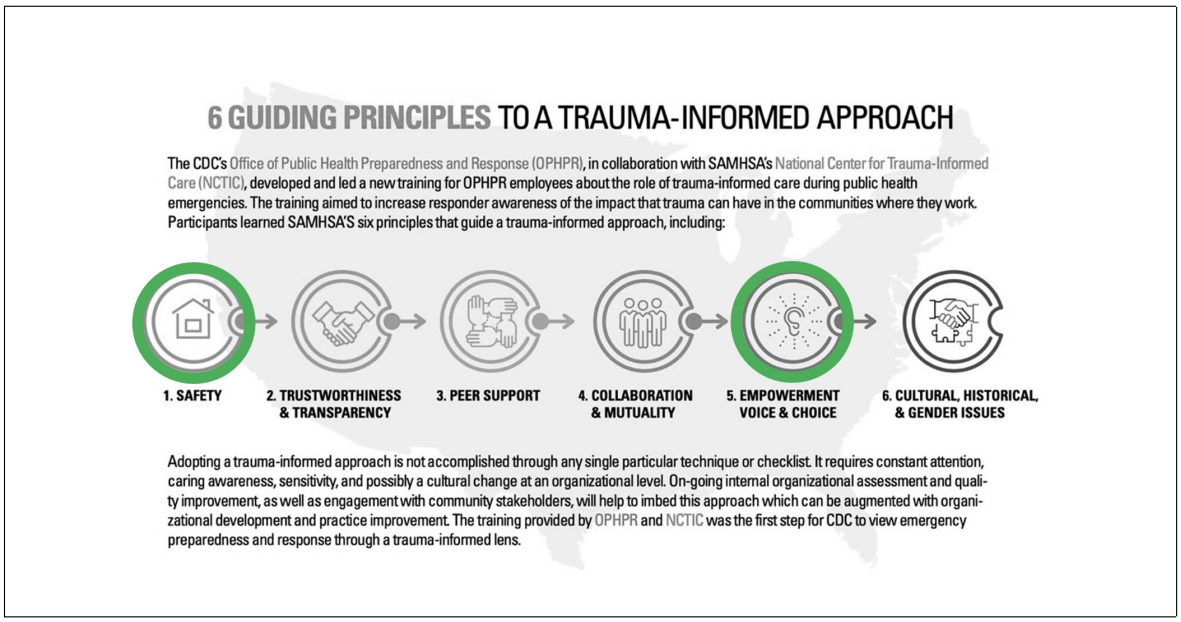

Figure 3 *'Six Guiding Principles to a Trauma-Informed Approach' from the Centre for Disease Control's Office of Public Health Preparedness and Response, in collaboration with Substance Abuse and Mental Health Services' National Center for Trauma-Informed Care* Green circles added by author (2021)

https://www.cdc.gov/cpr/infographics/6_principles_trauma_info.htm

To balance the pathological focus of ACEs, trauma-informed care (TIC) principles were developed by Substance Abuse and Mental Health Services Administration (SAMHSA) and the Centre for Disease Control and Prevention in 2014 (Figure 3). TIC principles have since been widely adopted in health, education, and justice services to avoid re-traumatisation and empower people to be actively engaged in their own healing processes (Stompolis, Payne, Ulker, Porter & Weist 2017). Value is placed on understanding individual life experiences, creating opportunities for education, and building resilience. To be empowered, TIC principles offer an empathic approach that has informed the development of a trauma-informed design[8] framework (Figure 4) that places a value on lived experience. My research focuses on this aspect of the framework with qualitative and interpretive personal accounts of experiencing a sense of safety and empowerment. One factor which appears to be overlooked is the emerging argument that trauma-informed practices may be further progressed with the inclusion of somatic approaches to reducing the neurological impacts of trauma. Laurie Leitch (2017) and Davis Harte (2019), exemplify designer-researchers at the cusp of change in TID for their advocacy for a focus on the nervous system. This is because it offers an inclusive approach that transcends demographic and stigmatising causes of trauma.

8 In lieu of a formally adopted definition of trauma-informed design, Pable (2019) proposes the following adaptation of Hopper et al's (2010) definition of trauma-informed care and the guidelines developed by SAMHSA (2014): "Trauma-informed design encompasses adaptations in the designed built environment that support 'a strengths-based framework that is grounded in an understanding of and responsiveness to the impact of trauma, that emphasizes physical, psychological, and emotional safety for both providers and survivors, and that creates opportunities for survivors to rebuild a sense of control and empowerment." (p11).

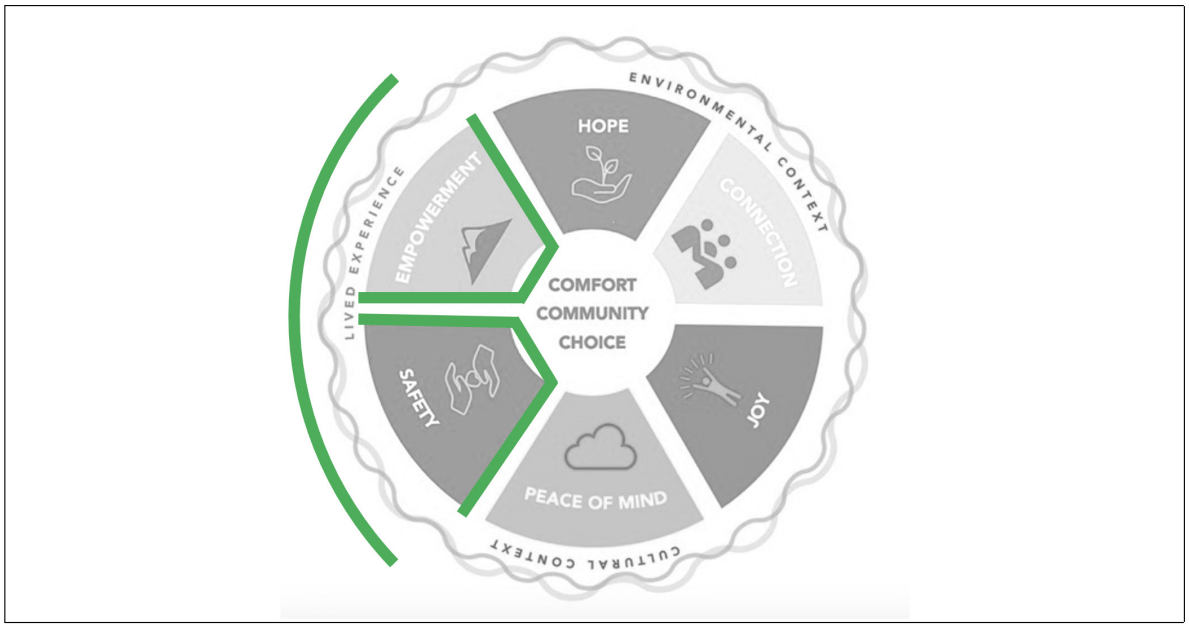

Figure 4 *Trauma-Informed Design Framework (2020)* Green indications added by author (2021)
Proposed by Shopworks Architecture, Group 14 Engineering, and the University of Denver Centre for Housing and Homelessness Research

Harte (2019) integrates TIC principles, biophilic design and attention restoration theory, together with neurological trauma research, empathy and first-person insights. Harte specifically refers to local natural environments to create positive distractions through soft fascinations with nature (Kaplan & Kaplan, 1989) and provide more immediate connections between people and spaces. Leitch (2017) integrates ACEs and TIC with a specific focus on building resilience[9] through design. This is evidenced in the application of rhythm and syntax in the design and delivery of intake questions in Leitch's work. The deliberate rhythm between calming and activating questions generates a rhythm between parasympathetic (calming) and sympathetic (activating) responses to implicitly reduce the potential for dysregulation (Leitch, 2017). I adopt a similar rhythm to create an ideal state of flow and enhance a state of balanced presence. I need to be very aware of the rhythm my body enacts with the tools I use to help reform the found materials. I feel balanced and able to attend to variance in material density, fragility, and temperatures. I am less distracted by racing thoughts, or the absence of attunement to thoughts, in a way akin to being regulated and experiencing a sense of safety. For me flow is being able to attend to the objects in my hands, to consider the variance in their forms, textures, hardness, and other organic diversities that mean no two objects can be responded to and treated in the same way. The resulting hand-crafted, hand-held objects made from natural materials found in my everyday life serve to connect me with the natural world through somaesthetic experiences.

9 "Resilience as a positive characteristic enables people to overcome challenges and could be drawn upon in design to facilitate regulation of the nervous system" (Leitch, 2017 p6).

Body Consciousness and a Sense of Safety in the Context of Healing

Explanations of embodiment in somatic practices vary, with multiple terms such as body consciousness (Shusterman, 2008), body sense and embodied self-awareness (Fogel, 2009), embodied mindfulness and somatic intelligence (Kaparo, 2012), embodied creativity (Malinin, 2019), and somatic mindfulness (Stark, 2017, 2020), contributing to the offerings of descriptions across fields of research. The varied perspectives point towards a common aspect that is non-duality in lived experiences informing awareness of self. My trauma-informed disposition renders me as an animation between Merleau-Ponty's phenomenological perception of embodiment and Sheets-Johnstone's (2011) referral to the significance of movement from an evolutionary perspective.

I am both drawn to and conflicted by Merleau-Ponty's (1945) perspective of embodiment because he proposed that we assign meaning to the world through association and focused attention. I engage with associative meaning in my practices through felt sense, symbols, and aesthetic experiences, but I find focused attention challenging, due to my neurological diversity resulting from trauma. The aspect of Merleau-Ponty's embodied philosophy that Shusterman (2012) draws upon to describe the way we experience ourselves as "sentient, intelligent, purposive, skilled [beings, and] helps construct the world rather than being a mere physical object in it" provides a strong foundation for the central role of the body in holding trauma and aligns with the previously introduced notion that 'the body keeps the score' (Van der Kolk, 2014). The body in this instance acts as a sentient vessel to move out of held responses through movement in my practice-based research. Sheets-Johnstone's deductive argument - if we are embodied, then we have the potential to be disembodied, thus risk perpetuating notions of dualism - is a challenging distinction I also have sought to resolve through my research. I live with a tendency to default between hypo- and hyper-vigilant states, and at times disassociate as a learned response to perceived threat. Does the experience of disassociation,[10] of physically being in the body, but cognitively detaching from my bodily awareness mean at times I am disembodied?

Reflecting on this question and my discomfort with counter arguments to embodiment, by way of not being disembodied, I imagine this discomfort might be shared with others who experience dissociation resulting from trauma. A dissociative state spurred on by a real or perceived threat is an altered state of consciousness in which people unconsciously detach mind and body. This state is a protective mechanism, and an adaptive response (Van der Kolk, 2014). Creating a shift to the survival mechanism in the brain, from an evolutionary perspective, is an ideal and short-term response to threat. In an ideal system however, the body returns itself to a state of equilibrium when there is no longer an imminent threat. The instinctive and primal states it can induce are difficult to describe, although Ripley Stark (2017) captured this difficulty drawing on the work of Peter Levine, stating:

> *"These 'instinctual physiologies' are not only automatic (in that they are performed by the autonomic nervous system) but are a function of synthesized mind-body dissociation – disconnection from the lived experience of the self (embodied consciousness)"* (Stark, 2020, p3).

10 "Dissociation is a mental process of disconnecting from one's thoughts, feelings, memories or sense of identity". https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/dissociation-and-dissociative-disorders

A tendency to dissociate the mind and body warrants a reflection on the oppositional term 'unconscious'. Returning to Jung, in 1918, he wrote We all stand between two worlds: the world of external perception and the world of perception to the unconscious." A century on, Shusterman (2020) highlights a similar distinction between perceiving our body's state of balance, rest, activation, and other inner sensations (interoception)[11] from within when engaging proprioception[12] as opposed to perceiving the external world through external stimuli. The void I mentioned previously inhabits the intersection of two worlds of perception that I experience. An intersection of knowing I need to be more aware of my inner experiences and cultivate self-compassion, and unconscious responses that feel like a barrier to accessing my inner experiences. I have an athletic background, am a designer-maker and consider myself a 'hands on' learner with well-honed proprioceptive abilities for balance, rhythm, and other trained movements. I am confident in my proprioceptive sensory abilities when I am in a regulated state. When I am asked to identify sensations in my body in a dysregulated state however, I can lack the ability to identify sensations spurred by emotions. This may be because impacts of perpetual threat responses for people who have experienced trauma can resemble sensory processing disorders (Dowdy, Estes, Linkugel & Dvornak, 2020).

To cultivate body consciousness, both Shusterman and Van der Kolk promote the value of practices such as Feldenkrais or yoga to improve somatic awareness. Unfortunately, yoga and Feldenkrais tend to perpetuate my threat response. Instead, I have adopted felt sense, as a bottom-up approach[13] I confidently and critically integrate in my practice-based research without distress or the need for a certified instructor to guide me. Felt sense is "the experienced body, the lived from body, is where meaning is made" (Gendlin,1978). Developed in 1978, felt sense has gained traction in expressive arts and interaction design as a body-oriented methodology that also allows autonomy (Neunez-Pacheco & Loke, 2015; Bennett, Froggett & Muller, 2019). One reason felt sense offers a suitable alternative to yoga in my practice is the process of 'carrying forward' in which it is essential to slow down and wait patiently for awareness to become conscious. This is significant to me given my tendency to 'lose' words to describe my experiences when I am in a state of dysregulation.[14] This inability to verbally express sensations can feel paralysing in the moment itself and present challenges to written reflective practices. The value of slowing down in felt sense is also a value in soma design theory that has been critical to my practice-based research. Further, the need to 'come to our senses' is applied in sensorimotor psychotherapeutic approaches to communicate 'when words are not enough,' because an emphasis on movement, rhythm, sensory integration, interoception and proprioception is conducive to re-establishing a sense of safety (Malchoidi, 2020). In the context of trauma, a self-regulated awareness of self is a form of consciousness.

Empowering self-regulation as a corrective experience is beneficial in healing from trauma due to the conscious engagement with actions that counter overwhelming states, as people gain a sense of agency (Levine, 2010, 2015). The experience of embodied consciousness may be considered an evolutionary neural response of not being in fight, flight, or freeze (hyper- or

11 Interoception is an awareness of various inner states that arise from emotional stimuli. It is fundamental for self-regulation (Ceunen, Vlaeyen and Van Diest, 2016) and essential for body consciousness and sensing safety. It is a subjective state that has learned bodily responses to emotions and memories (Van der Kolk, 2014; Payne, Levine & Crane-Godreau, 2015).

12 Proprioception is a foundational sense for body consciousness that enables the body to regulate movement and subsequent sensory perceptions (Shusterman, 2020).

13 Bottom-up practices for me are generative and exploratory approaches that allow the research to emerge through my practices of making.

14 Traumatic memory is stored in the parts of the brain that process emotions and sensation, but not language or speech, people might experience trauma through their body that they may not be able to verbalise (Van der Kolk & Fisher, 1995).

hypo- aroused), and instead being in a position of rational thinking and awareness (sensing safety). There are various explanations given to capture this conscious awareness and embodied state, including a window of tolerance (Siegel, 1999),[15] a resilient zone (Leitch, 2017), optimal arousal and experiencing a sense of safety. Given the breadth of perspectives on embodiment that inform my research, for the purpose of clarity throughout this article, I refer to notions of embodiment as a '*sense of safety*'.

Cultivating Somaesthetic Appreciation

The use of sensory anchors to reduce stress and improve concentration is a common occupational therapy device, in which objects can be used to focus attention through tactile sensations. Sensory tools enable self-regulation respite (tuning out sensory stimulation) and focus tools enable people to tune in. Constant balancing or non-disruptive repetitive movements (of an object for example) requires sensory attention (Biel, 2017). In this instance, anchors are promoted to regulate emotions and arousal levels into a window of tolerance (a sense of safety). The appeal of effortless sensory monitoring is meditative in a way I parallel to ART descriptions of soft fascinations. I propose designing tactile objects of soft fascination as anchors that will act as a potential device to improve body awareness through self-regulation. I refer to these devices as somaesthetic anchors, artifacts designed for people to reconnect and to find a sense of wholeness though somaesthetic awareness.

I have embraced sensory grounding exercises in my recovery from trauma-informed somatic imbalances to improve my sense of safety. Walking barefoot in open natural environments, I engage my senses in that moment. When doing this exercise in March 2020, in an environment that had been so familiar to me for over twenty years, I noticed visceral scenes of charred wood lining the coast (Figure 5a). I felt unusual textures under my feet, I could smell damp organic matter and see darkness on a usually golden surface. I looked closer and saw the darkness amongst the seaweed was burnt timber (likely remnants from the Black Summer fires in 2019/2020). Extreme environmental changes of the bushfires brought on uncharacteristically heavy rainfall and flash flooding across Australia, transporting the burnt remnants thousands of kilometres along the coastline. The stark contrast of the dark material on the sand captured my attention. The burnt pieces themselves represented symbols of damage and sorrow that I knew the country was experiencing. Without thinking about the significance these materials would come to hold, I began picking up the palm sized pieces to embrace them (Figure 5b). An innate love of nature may explain my compulsion to heal the remnants of wood which created such a visceral scene on the coastline after the catastrophic Australian bushfires in 2020. I took a sample home from the beach, perhaps to clear the coastline of this harsh reality, perhaps an inner drive to nurture the symbols of damage to fulfil my inner sense of being 'broken'. Either way, it was an instinctive act spurred on by my sensory grounding.

15 'Window of tolerance' was defined by Dan Siegel (1999) and refers to the emotional state of arousal that is optimal for thriving day to day. It is a state in which threat responses are not engaged (fight, flight or freeze) and a person feels a sense of being grounded, present and able to emotionally self-regulate.

Figure 5a *Photograph of Macmasters Beach, NSW Australia 13th March 2020*
Figure 5b *Flat lay of the materials collected.*

Figure 6 *'Giving form and being witness' (Chloe Cassidy 2020).*

In an iterative process of healing the salvaged materials (Figure 6) the artifacts became a vessel of communication. I cannot recall the thought process or drive that came to me to engage with the burnt artifacts and heal their bodies. I felt compelled to repair the charcoal and restore the once living material. It was this process of repair and reforming of the materials that had the most significance to me. It brought forward my awareness of being drawn to broken, damaged or particularly unique natural growth patterns in raw materials. Experiencing the fragility of the natural materials as I reformed them, and reflecting on what impact these catastrophic fires had, I felt compelled to act, to heal the natural objects and to engage more rigorously with my sensory grounding in natural environments. This awareness has given me a sense of purpose to the processes of care and affect I found myself engaging in while experimenting with forms and materials. On returning to this awareness, the unique visual and tactile qualities of the naturally weathered materials personify how I have considered my inner, true self for so long.

Figures 7a and 7b represent three iterations that came from my continued exploration of the materials and my developing body consciousness in flow. They show a developing confidence in the object, where I am informed by the found form of the materials, but also more deliberately in the exploration of how the materials respond to my rhythms and body movements in their reforming. There is a stillness when I am experiencing flow. It is not the same as being in a freeze response, to which I best describe as feeling numb. In flow I feel more present and attentive to my thoughts and sensations. I need to be very aware of the rhythm my body enacts with the files, saws, fire, and other tools I use to help reform the materials. With a piece of burnt timber that has been drifting at sea for example, on first inspection it is difficult to determine how deep the charcoal is, if there is further waterlogged fragility, or if at the heart of the material there is a

hardwood core. If the material is particularly fragile, my pace may change as the material wears away quickly, but with this also comes an adjustment in pressure as I need to hold the material with a gentle grasp and press it to the tool lightly.

Figure 7a *'Healing Iterations' (Chloe Cassidy 2020).*

Figure 7b *'Healing Iterations' (Chloe Cassidy 2020).*

I recently returned to the sites where I had collected the burnt remnants to photograph the renewed objects. I experienced an incredible catharsis returning these pieces I had felt a part of in my making processes. I have also come to realise that felt sense reinforces metaphors in my designs, through mental matches that have in turn become transformative. Initially I identified with the 'damaged' driftwood material and had an inner drive to heal the wounded objects. I uncovered a burl, nature's expression of self-healing, by sanding away the charcoaled edges of one of the burnt remnants (Figure 9). I experienced a felt sense of relief, with a long exhale, lowered shoulders, and clarity of thought, as I identified the strength and beauty of a natural response to trauma. This experience was the result of a deliberate pursuit of cultivating my aesthetic appreciation through my making processes.

Figure 8 *'Discover of Resilience' (Chloe Cassidy 2020).*

These experiences resonate with the value of nature in trauma recovery identified previously, in which participants living with PTSD reported an ease identifying mental matches in nature. The term 'broken' may have negative connotations to many. My felt sense from making this mental match conscious, however, has been a positive shift in bringing together my inner, true self and my ideal self. Upon identifying my self-perception of brokenness, I was also able to welcome the knowledge that through care and affect, broken things may be repaired, reformed, and renewed. This led to me being able to engage with the materials with more rigour and identify symbols of resilience found in nature. Recurring notions of healing, reverie, resilience, and growth began to resonate with me by observing nature. The forms began to act as symbols of healing and rejuvenation. I reflected on the experience with 'An Ode to Gaia', a 100-word story published on the Artist and Climate Change Tiny Corona Virus Stories website:

Ode to Gaia

She is healing; but she needs our help.
Her body has been ravaged by bushfires so furious they left her hollow.
Floods of emotion swept through her outer edges,
and afterwards burnt remnants of the fires washed up onto to the shores.
I discovered these fragile pieces left to slowly weather away,
as the passers-by are now kept at a distance.
I tend to the pieces as if I can mend and heal each through repair and reverie.
The pieces are renewed. They awaken the senses once more.
Gaia is beginning again. We are all in stages of healing.

Figure 9 *'Ode to Gaia' Published on 'Artist and Climate Change' website 3 May 2020.*

A Process of Slowing Down

My experiences of living in a hypervigilant state is that I crave for time to slow down so I can process the world around me. Instead, I am usually pendulating between racing thoughts and acute awareness (hypervigilance) and no thoughts, a sensation of numbness (hypovigilance). Slow storming, a deliberate intention to return to places and objects over time, has resulted in slowing down the production of the artifacts. Materials that require slow or delicate approaches in their reforming have become central to my practice-based research. Moving through environments marked by signs of coastal erosion from long-shore drift led me to contemplate time and the slow processes of evolution and change that can happen in nature. Slowing down my experiences on the water's edge has also informed my making process through biomimicry of materials and processes. The longshore drift that brought the burnt timber to the shores is also responsible for tumbling materials, polishing, and forming rounded edges, slowly. A natural process of erosion (a slow trauma) with the power to reshape and relocate. Material research of the artifacts that began as burnt wood, and drifted ashore in the storms following catastrophic bushfires, led me to discover the unique 'peanut wood' from the Kennedy Ranges in Western Australia (Figure 10).

Figure 10 *'Peanut Wood raw and reformed, alongside driftwood' (Chloe Cassidy 2020).*

This stone bears a striking visual similarity to the repaired objects I have been forming. I was surprised to find my instinctive act to heal the burnt driftwood using a silicate material is in fact a natural process which I was mimicking. This peanut wood is from the Cretaceous era and is an example of natural healing through petrification.[16] The artifacts reflect two instances of driftwoods healed by silica minerals, 120 million years apart. One healed in nature, forming beautiful stones, and the other as incidental biomimicry from a felt sense response to heal the damaged remnants. I am currently experimenting with this material and exploring the variance in temperature and weight it affords in the proprioceptive function of the designs. The peanut wood being a stone is significantly slower to work with due to its natural strength compared to the burnt driftwood. I have deliberately integrated the same found form influencing the shaping of the objects through proprioceptive push and pull rhythms of griding, sanding, filing, and

16 As the driftwood became waterlogged, holes were bored by shipworms, and it settled on the ocean floor. The cavities slowly accumulated a saturated silica from radiolarian breaking down and filling the cavities. The wood was then slowly replaced with minerals to become a stone.

lifting in my making processes. Tumbling the petrified wood takes a minimum of six weeks, 1000 hours, in a tumbling barrel that mimics hydrodynamics and the movement of organic materials in waves or streams. While the material is tumbled, I observe the natural shaping of each piece when I check the barrels once a week. The process requires multiple stones and grits to work together in the rolling water to achieve a smooth polish. There is something poetic in knowing the function of those pieces is to erode and polish only a few from the container. It's a collective erosion process that I mimic from nature that would not be effective without the support of 'others', a mental match to a social manifestation of healing from trauma. While the stones are renewed, I linger in the thoughts of how they will fit to or with the repaired timber components. I rejoice when the organic forms created over several months do come together.

Exemplars of Somaesthetic Anchors

The somaesthetic anchors restore attention through soft fascinations with nature and allow me to reflect on somatic connotations of trauma and growth. They embrace damage as a symbol of resilience alongside the healed sections to create dynamic forms. I am noticing a significant difference in scale, weight, and texture as a result of heightened somaesthetic awareness. The anchors have become more fluid with a deliberate embrace of the unique characters of the found materials (Figure 11). Through proprioceptive input I evoke an interoceptive awareness, to reach a state of flow. While in a state of flow I feel I am fostering an inner resilience through improved self-regulation of my own nervous system.

Figure 11 *'Iteration #120' (Chloe Cassidy 2020).*

Figure 12 *Chloe Cassidy (2020)*

Figure 13 *Chloe Cassidy (2020)*

Figure 14 *Chloe Cassidy (2020)*

Summary

The somaesthetic anchors arising from this research have been informed by rigorous referral to trauma-informed care principles (specifically empowerment and safety), the use of natural materials (specifically those that induce soft fascinations), and opportunities to engage proprioceptive and interoceptive sensory awareness. The somaesthetic processes applied have unexpectedly heightened my desire to work with fragile and unique organic materials that are underrepresented in biophilic applications in trauma-informed design. I have found the metaphor of healing the materials themselves to be empowering. I engaged with processes in, and materials from, the natural environment to create meaning through a felt sense. The affect and care I experienced in the reforming of the 'damaged' materials has resulted in a reciprocal relationship of nurturing. The more time I spend with the materials and cultivating my aesthetic appreciation, the more I have come to identify with properties in the materials that signify resilience and growth. When I look back on photos and sketches taken while slow storming, I see the direct influence of rock forms, seaweed and other natural elements being brought into the objects through my growing somaesthetic awareness. They have become much more dynamic and organic without deliberate intentions to achieve this. Beyond the symbols of damage, resilience and growth, these artifacts have reanimated my practice and become much more animated in their relationship to the body as well. The relationship of the somaesthetic anchors to the body is two-fold.

1. The materials have been selected by referral to interoceptive senses and used as a grounding to cultivate an aesthetic appreciation of a range of materials stemming from the original burnt remnants found on the beach. I experience a sense of safety while in a state of flow because of my fight and flight responses are being dulled by soft fascinations. I draw on the agency of the materiality of the artifacts to anchor attention through natural symbols of resilience and growth.
2. The anchors are designed using deliberate push and pull rhythms in which my body

movements are articulated in the objects. I hope to provoke others to experience a sense of empowerment that is associated with self-regulation of the nervous system when it becomes a source of solace in applied creative practices.

I engage with somaesthetics to empower myself to shift trauma-informed neural responses out of survival mode and into a state of thriving and flourishing. Self-regulation through sensory grounding and sensory gating enables me to tune in and / or tune out the senses. As previously stated in the discussion of the research, these are acts of self-agency that have potential to empower people to reach a state of equilibrium in the nervous system that is advantageous in healing from trauma. This equilibrium, a calm yet activated state, is one I experience as a state of flow in my designer-maker practices. Engaging flow is empowering me to improve my ability to self-regulate through crafting objects as anchors through soft fascination. I propose the anchors offer a potential place of reverie for others living with complex trauma or seeking to experience a sense of safety, by offering ways to calm the sympathetic and awaken the parasympathetic nervous systems. In sharing my lived experiences through my practice-based research, I intend to contribute to the growing body of somaesthetic and trauma-informed design fields of research through notions of empowerment and safety.

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Handling digital reproductions of artworks

Christian Sivertsen and Anders Sundnes Løvlie

Abstract: *The senses are finding their way back into the art museum, but the way paintings are displayed is still constrained by their fragility. We explore whether it would be helpful to use the capabilities of digital technologies to create meaningful somaesthetic experiences with digital reproductions. We conducted an experiment with 19 participants, letting them handle physical paintings and 2D and 3D digital reproductions, while ranking them according to their personal preference. To discover which cultural qualities participants ascribe to artworks in light of their somaesthetic experience, we interviewed participants regarding their experience of ranking three setups. We found that participants regarded the 3D reproductions as having certain material qualities. We argue that by designing the somaesthetic experience of digital reproductions, it might be possible to bring back dimensions of the art experience that were lost with the development of the modern museum.*

Keywords: *somaesthetics, art experience, digital reproductions, post-phenomenology.*

1. Introduction

In the 17th and 18th centuries, museum visitors were typically allowed to handle the objects exhibited in museums. Indeed, handling and touching were seen as an important part of the museum experience that could enhance learning and enjoyment and create a more intimate connection to the artists (Howes, 2014). However, this practice was later replaced by a focus on *contemplation* and rigid bodily constraints in the museum space (Leahy, 2012). For many years, the white cube paradigm has dominated the way we look at art in museums. The script of the museum mediates our engagement with the art and puts the museum in the role of an authority, defining the right way to appreciate it (Duncan, 2005).

More recently, museum research has been shifting toward a more interpretative or constructivist paradigm, where the museum design is recognized as part of shaping the visitor experience and the visitor as an active part in the learning process (Macdonald, 2007). Nevertheless, the physical configuration of art museums remains largely the same, and the shift seems to be more evident in the way museum experiences are discussed and analyzed than in the way art is displayed. This is especially true of exhibitions of classical paintings. This is not only a question of culture but also of practicalities. The originals on display are fragile, unique, and

expensive, and only specially trained personnel can handle them (Howes, 2014; Leahy, 2012). This severely limits the way painting exhibitions can be shaped. However, technology allows us to break free of these limitations. With digital technologies, we can enable new bodily relations with the paintings that are not constrained by the risk of damaging the originals.

In a merge between the classical artworld and the technologically immersive, some venues such as the Lumières venues by Culturespaces[1] and "Van Gogh Alive" by Grande Experiences[2] are exhibiting classical paintings through room-sized digital projections. Through technology, they are pushing the spatial relationship between visitor and painting. The paintings are bigger, cropped in new ways, and wrapped around walls and on the floor, and sometimes details or whole paintings are animated and moving around. However, they reproduce the role of paintings as something hanging on a wall that we view from a couple of meters distance—as an image, not an object.

Is it possible to use the capabilities of digital technologies to create meaningful somaesthetic experiences with paintings? Our bodily actions and relations to paintings and the context in which paintings are met are shaping our experience of them (Dewey, 1934/2005). To explore the design potential of using digitized reproductions to create somaesthetic experiences with paintings, we created an experiment that compares the act of handling paintings in three different setups. We asked 19 participants to look at and consider paintings in the following three formats: physical paintings, paintings represented digitally in 2D, and paintings represented digitally in a virtual 3D environment. The participants were asked to rank them according to what they would like to have in their own home in order to make them focus on their own aesthetic experience. This was followed by a phenomenological interview, where participants were asked to elaborate on their experience and to compare their experience of the three setups. We discuss how the technological mediation and the somaesthetic qualities of each setup are described by the participants and what this can tell us about the design space for technological experiences containing digital reproductions of artworks.

2. Art experience and technology

John Dewey argues in his 1934 book "Art as Experience" that philosophical aesthetics has wrongly removed art from its situatedness in the everyday experience. According to Dewey, art needs to be considered through its relation to the body and the context in which it appears. In our time, art is increasingly being seen on screens, in part because digital media makes it possible for audiences who cannot travel to the museum to view artworks (a very urgent consideration at the time of writing, in 2021, due to restrictions during the ongoing COVID-19 pandemic).

The literature on technology-mediated experiences in museums often reveals a concern among museum scholars and professionals (as well as the wider public) that technology may come to stand in the way of visitors' direct encounters with physical artifacts. Sometimes this concern is referred to as the "heads-down phenomenon"—evoking the image of (young) visitors walking around the museum with their heads pointed down toward their smartphone screens, oblivious to the treasured artifacts on exhibit around them (Hsi, 2003; Lyons, 2009; Petrelli et al., 2013; Walter, 1996; Wessel & Mayr, 2007; Woodruff et al., 2001).

1 https://www.culturespaces.com/

2 https://grande-experiences.com/van-gogh-alive/

Alternatively, research on human computer interaction (HCI) and interaction design has long explored how interaction with technological systems may form part of the aesthetic experience. Both Dewey (1934/2005) and the ecological psychology of Gibson (1979) have been significant influences in this line of research and in the broader humanistic turn in HCI (Bardzell & Bardzell, 2015). The implications of Dewey's view on the art experience extends beyond the domain of art and has formed part of the theoretical foundations for HCI's focus on experiences with technology (McCarthy & Wright, 2004).

Somaesthetics has received much attention in HCI (Höök et al., 2016; Höök et al., 2015; Lee et al., 2014; Shusterman, 2014). However, there is little work connecting somaestethics to the art experience—although occasionally the results of design projects are themselves exhibited as artworks (e.g., Schiphorst, 2009). More broadly, experiences with technology in museums is a large topic in HCI research (Hornecker & Ciolfi, 2019; Vermeeren et al., 2018), and research has explored how to use embodied interactions to enhance art experiences (Alexander et al., 2017; Steier, 2014). For example, Ryding and Fritsch (2020) present a game for visitors to art museums in which one player controls the movements of another player as a way to challenge the ritualized nature of the museum visit and intensify the visitors' affective encounters with the art.

The interactive art installation "Thresholds" (Tennent et al., 2020) sets up an experience with some similarity to the experiment presented here. Aiming to explore the role of technology in our perception of the world, the installation recreates a 170-year-old photography exhibition inside a virtual space, which is mapped onto a physical space in such a way that visitors donning customized VR equipment have the experience of walking around inside a virtual exhibition gallery that can be explored through touch and other senses. The system allows visitors to virtually select photographs out of the exhibition vitrines using hand gestures to lift the images up for closer inspection. The fact that this feature created significant difficulty for both the creators of the installation and the users—in an otherwise ambitious and highly successful installation—speaks much about the difficulty involved when attempting to facilitate experiences of handling digital artwork.

3. Handling in the museum

According to Howes (2014), museums in the 17th and 18th centuries were hands-on sites, where visitors were expected to touch and handle artifacts. Touching was seen as important for four reasons, as follows: Visitors would be able to learn more through touching, touch was seen as enhancing the enjoyment of art objects, touch allowed for a sense of intimacy with the original creators of the artifacts, and, finally, some rare and exotic objects were believed to have special healing powers. By the middle of the 19th century, the practice of touching in museums had ceased as the reasons mentioned above were no longer considered valid (Howes, 2014). Instead, as described by Leahy (2012), correct aesthetic appreciation became part of a codified bodily practice of walking, sitting, standing, looking, and speaking. Guides were even created that described how to maintain the correct distance from the object that was to be contemplated.

Since the late 20th century, touching and handling have been returning to the museum, first in children's and science museums but later also in art museums. As Howes sums it up:

> *In the museum of the twenty-first century, the senses are making a comeback. Didactic instruction has increasingly come to be supplemented by multimodal*

> *approaches to learning, disinterested contemplation has been offset by affective participation, and the authority to interpret objects has been redistributed.* (Howes, 2014, pp. 264–265)

In a case study exploring the role of touch in relation to sculptures, the authors note that "When allowed to touch, we observed that groups moved, viewed, described, and discussed the works in more diverse ways than when viewing only, and that touch fostered longer and deeper object-related inquiries" (Christidou & Pierroux, 2019, p. 111). Physical sculptures carry their meaning in their shape and form and are often robust. Paintings, however, are primarily visual artworks and are vulnerable to touch. Thus, inviting visitors to touch or handle valuable paintings is obviously not possible. However, the development of new immersive technologies and interaction formats offer interesting opportunities to consider bodily experiences with digital reproductions of artworks. This in turn raises questions about the role of reproductions in art experiences.

4. Reproductions and genuineness in psychological aesthetics

One of the factors that makes it difficult for museums to allow visitors to handle artworks is also arguably one of the main reasons visitors are attracted to museums—the ability to view invaluable (but fragile) artworks in their authentic, original form. For example, Walter Benjamin famously argued that the *aura* of classical artworks such as paintings and sculptures is bound to their cultural and physical properties, which are lacking in reproducible media such as photography. How important is it for the art experience that one is in fact viewing an original and not just a reproduction? Several empirical studies have tried to understand the influence of the genuineness of a piece of artwork on the art experience (Locher et al., 1999, 2001; Locher & Dolese, 2004; Brieber et al., 2014; Brieber et al., 2015). These studies find that viewing original artworks in a museum is rated higher than viewing reproductions in a laboratory in terms of parameters such as being immediate, pleasant, interesting, surprising, liked, and understood (see Pelowski et al., 2017 for a full overview). Considering the medium of reproduction, three of the studies hypothesize that if art viewers can look past the medium, they will evaluate the same image similarly when seen in various media, measured through quantitative and qualitative components of the information content of the images—a phenomenon they call *facsimile accommodation* (Locher et al., 1999, 2001; Locher & Dolese, 2004).

However, in these studies, the role of the context is not clear as the originals are viewed in the setting of a museum or art gallery, and the reproductions are viewed in a lab setting. Brieber, Leder et al. (2015) try to detangle this effect in a study that compares both context and genuineness; however, in the study, neither the context nor the genuineness was found to enhance the participants' evaluation of the artworks. This was attempted again by Grüner et al. (2019), who did find that artworks viewed in a museum are liked more and rated as more interesting when presented in a museum rather than in a laboratory. Genuineness is not found to have this effect.

Pelowski et al. (2017) expand on the comparison of laboratory vs. museum as a factor in art appreciation by presenting a large range of factors that influence the art experience. These factors pertain to the artworks, the museum space, and the visitor. Among the factors related to the artwork itself are texture, immediacy, physical presence, and size (Pelowski et al., 2017). The authors also mention the hanging style as having an influence on the art experience.

Across the studies described above, reproductions take the form of images on computer screens, slide-projections, or even postcard-sized printed images. Bertamini and Blakemore (2019) present two studies in which they asked participants to evaluate hypothetical scenarios of viewing three types of artwork reproductions. The hypothetical reproductions were a painting viewed through a closed-circuit video camera monitor, a painting viewed through a mirror, and a physical reproduction of the painting. They found a large variation in the participants' opinions on the three types of reproduction. In general, the physical copy was preferred over viewing the original indirectly, and a mirror reflection was found to be better than a video image.

These empirical studies seem to indicate that the museum context is important for the aesthetic experience, whereas the importance of viewing an original vs. a reproduction is less clear. Some of the studies indicate that the specific format of the reproduction seems to matter. However, all of these studies were limited to the experience of passively viewing artworks on a wall or in a display. In this article we continue to explore this question from a design perspective, offering an exploration of the design space for digital reproductions that can be virtually handled by the viewer.

5. Handling reproductions: A somaesthetic perspective

Dewey argues that substance and form are central to the art experience: "*what* is said and *how* it is said" (Dewey, 1934/2005, p. 106, emphasis in original). Replicating a piece of artwork in digital media changes its form and subsequently its substance. To understand form with regard to digital media, the literature from the field of interaction design provides a compelling model.

Vallgårda (2014) argues that in interaction design practice, three form elements are closely interconnected: the physical form, the temporal form, and the interaction gestalt. The physical form is the shape and appearance of the system as perceived through our sensory apparatus. The temporal form is the change of states in the system over time. The interaction gestalt is the movement the user performs in relation to the system. These movements have qualities, such as being fast, smooth, or abrupt, and take place in a doing and undergoing relationship with the system. The user acts on the system, and the system shapes the acting.

To better understand how form shapes experience, we turn to post-phenomenology. A post-phenomenological approach implies a particular interest in the relation between participants and paintings and how this relation is being mediated by the technologies used in each setup (Rosenberger & Verbeek, 2015). In this study, we are investigating how the technologies employed reshape the experience of the paintings. Human-technology relations are in the post-phenomenological view characterized by a magnification/reduction structure (Rosenberger & Verbeek, 2015). According to Kiran (2015), this structure is divided into four dimensions of technological mediation: ontological, epistemological, practical, and ethical. These dimensions serve as a helpful framework for analyzing the mediation aspects in the experiment. The assumption behind this experiment is that the technological representation chosen will shape the experience of the artworks in how it *reveals* and *conceals* aspects of the artworks, how it *magnifies* or *reduces* the knowledge available about the artwork, how it *enables* or *constrains* certain practical actions, and in turn how that *involves* or *alienates* the participants from what is considered ethical practice around artworks.

Within this perspective, we find it relevant to pay specific attention to the *aesthetics of interaction*, including the perception of performance. Lim et al. (2007) present the concept of *interaction gestalt* as the shape of interaction: the movements the user makes while engaging with

an interactive system. Lenz et al. (2017) describe the qualities of these movements as *interaction attributes* and find that they are related to experiential qualities. Dalsgaard and Hansen emphasize the social aspect of performance, suggesting that the user of a system continuously acts out the three roles of *operator*, *performer*, and *spectator* (2008). Applied to our experiment, this means that our participants will simultaneously be operating the systems we have put in place while also perceiving the relation between themselves and the paintings and being aware that these actions are a performance for the experiment facilitator and the recording equipment. As Dalsgaard and Hansen (2008) argue, this performance of perception is an integral part of the aesthetics of interaction.

6. Method

The experiment presented in this article bears similarities to the approach of *concept-driven interaction design research* (Stolterman & Wiberg, 2010) in the sense that we are conducting practice-based design research with the aim of exploring a theoretical issue rather than designing new products. Furthermore, our approach is inspired by a *constructive design research* approach (Koskinen et al., 2011), which means that the construction of design artifacts is central to knowledge creation.

In our way of setting up this experiment, we lean on the tradition of performing design experiments in the lab (Koskinen et al., 2011). Contrary to the more common use of experiments as vehicles for deductive reasoning, this experiment is inductive in nature. We are looking for patterns in a design space, not trying to prove them. An important difference between our experiment and those presented by Koskinen et al. (2011) is that the three designs used in our experiment are not made as proposals for future designs. Instead, they are created in order to explore the impact of these different formats on aesthetic experience. We are not primarily interested in the particular designs but rather in the comparison of participants' interactions. In this way, the designs used here are more research instruments than design proposals.

Experiment procedure

The experiment was conducted with 19 participants recruited at our university from the 30th of November to the 4th of December 2020. Fourteen of the participants were master's students or recent graduates in the field of digital design or games, four were faculty within digital design, and one was enrolled in vocational education in the health sector. Ten identified as female and nine as male. The age of the participants ranged between 22 and 36. Sixteen participants said "yes" to being interested or somewhat interested in art, while three did not see themselves as interested in art. All but one had visited an art museum or gallery within the last year, with an average of three visits in the last year. This number should be viewed in light of the COVID-19 situation, where many such places were closed for long periods during the previous year.

The experiment was divided into three different setups. In each setup, the test participants were invited to experience artworks in one of three different formats: framed physical paintings, digital reproductions of paintings displayed as 2D images, and digital reproductions of paintings presented as 3D objects. For each of these setups, the users were invited to pick up the paintings—physically or virtually—in order to get a closer look.

The participants were told that they would be entering a room with three pieces of artwork. They were asked to look at the artworks and rank them according to which they would most like to have in their own home. The rationale for giving the participants this task was to prevent

participants from judging the artworks according to some external ideal and to rather focus on their own aesthetic experience of the artworks. After making their decision, participants exited the experiment room and were interviewed about their experience. This was repeated for each of the three setups. The sequence of the three setups was changed so that participants went through them in a different order each time.

The experiment used nine different artworks, presented below. The artworks were deliberately chosen for being ordinary, non-famous artworks of the type that one might buy in a secondhand store (and indeed, the three physical paintings are "thrift store" paintings). The images represented various visual styles to accommodate a variety of aesthetic preferences. The participants were given no information about the artworks other than what they could see for themselves. Note that it was necessary to use different artworks for the three different setups (rather than repeating the same three images) in order to make the task of choosing an artwork meaningful for the participants for each of the three iterations.

In all three setups, the paintings were partially hidden from sight as the participant entered the room, either due to their placement or the image size. This was done to prompt participants to handle the paintings in order to get a closer look at them.

After each setup, the participants were interviewed about their experience and asked to compare their experience with the other setups. The interview was conducted as a phenomenological interview (Thompson et al., 1989). The 19 interviews were transcribed verbatim. Statements describing the qualities of each of the three setups were separated and then organized thematically using affinity clustering.

Physical setup

In the physical setup, the participants were presented with three physical artworks bought in secondhand stores around Copenhagen (see Figure 1). The paintings were chosen to represent a variation of styles. The three paintings were placed in a rack where the paintings were easily accessible, but each partly obscured by the other. The rack was placed on a tall table (see Figure 2).

Figure 1 *The physical artworks bought from different secondhand stores. The print on the left is signed Line Thimm. The painting in the middle is unsigned. The painting on the right is signed S. Engelbrecht.*

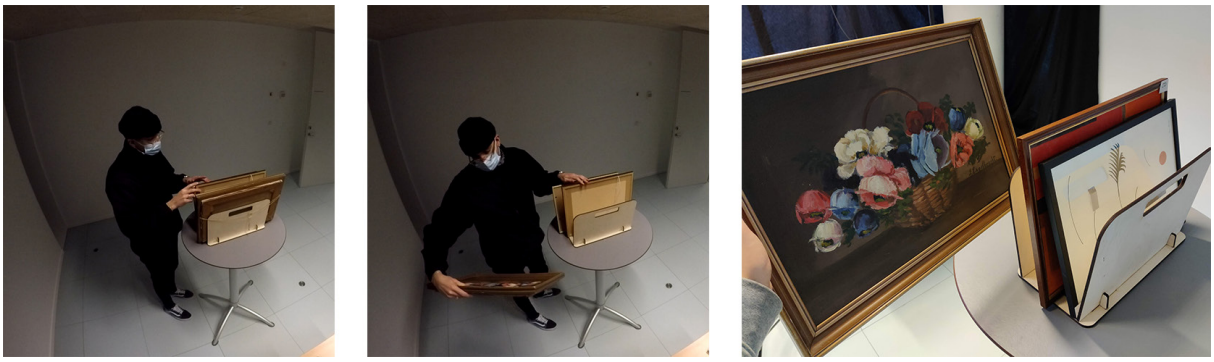

Figure 2 *In the physical setup, the paintings are placed in a rack on a tall table. The first and second image are video stills from the experiment. The third image is a staged closeup.*

Digital 2D setup

In the digital 2D setup, participants were presented with three paintings projected next to each other on the wall of the experiment room (see Figures 3 and 4). The paintings by Bea Mahan and Manjiri were found on their Flickr accounts where they promote their art. The third one is a study by the Danish artist Niels Bjerre. It was found in the database of the Danish National Gallery. The paintings were chosen to represent a variation of styles.

The interface for this setup was created in TouchDesigner in a simple 2D environment (see Figure 4). Frames were added digitally to the paintings. In the middle of the room was a table with a wireless mouse. The paintings were projected in a size that made them too small to view comfortably from the table with the mouse both due to the distance and the resolution of the projector. The participants were made aware that they should use the mouse. When hovering the cursor over the image, it would grow slightly in size, and upon clicking, it would grow to a large size. If the participants clicked outside the scaled-up image, it would shrink to its initial size, and if the click was placed on another image, that one would scale up instead.

Figure 3 *The 2D images with added frames (from left to right: Mahan, n.d.; Manjiri, n.d.; Bjerre, 1934).*

Figure 4 *In the 2D setup, a wireless mouse is placed on a tall table. The participants use the mouse to increase the size of the painting they want to look at. The first two images are video stills from the experiment. The third image is a staged closeup.*

Digital 3D setup

In this setup, the participants were presented with three paintings in a virtual 3D environment (see Figure 6). The painting by Layers was found on Pixabay.com, a stock image site where the artist offers their art for free use. The painting by Miguel Àngel Pintanel was found on his Flickr account where he promotes his art. The painting by Mogens Ballin was found in the database of the Danish National Gallery. Again, the paintings were chosen to represent a variation of styles (see Figure 5).

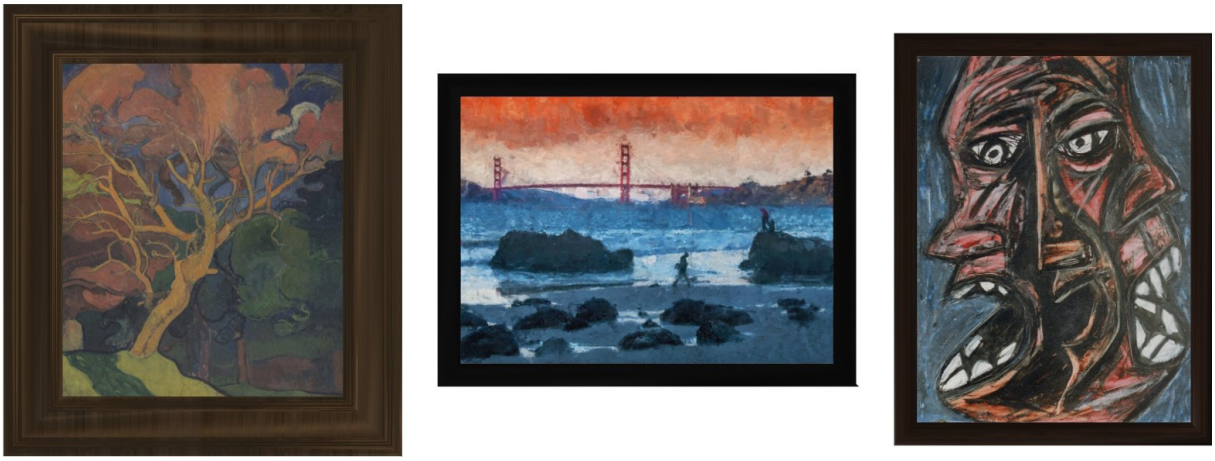

Figure 5 *The 3D images with added frames (from left to right: Ballin, 1890; Layers, n.d.; Pintanel, n.d.).*

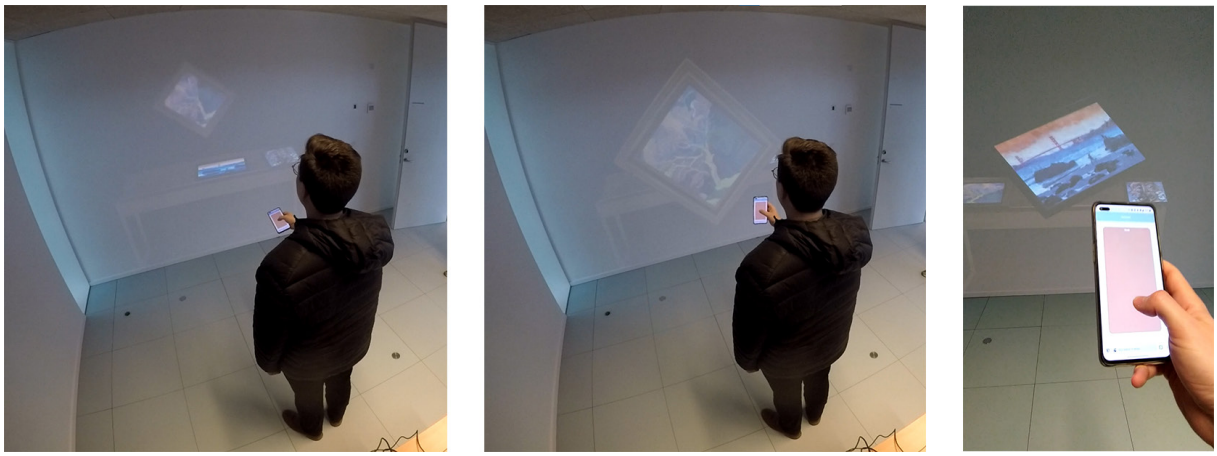

Figure 6 *In the 3D setup, the participant uses a smartphone to control a cursor on the screen. It can be used to pick up, move, and tilt the virtual paintings. The first two images are video stills from the experiment. The third is a staged closeup.*

The 3D environment was projected in 2D on the wall of the experiment room in a forced perspective that corresponded with the position where the interviewer would tell the participant to stand when entering the room. The paintings were shown lying on a (virtual) wooden table. On the projection was a white cube acting as a cursor hovering over the paintings.

The participants were given a smartphone and instructions on how to use the smartphone to interact with the paintings. The smartphone could be used in a manner similar to a laser pointer: When pointing the top of the smartphone toward the projection, the white cube would follow the movements of the phone. By pressing with their thumb on the screen, participants could "pick up" a nearby painting, which would attach itself to the white cube. Pointing the phone upward would move both the white cube and the painting closer to the virtual camera so that the painting could be inspected more closely. The orientation of the painting would map to the orientation of the phone, allowing the participant to tilt and rotate the painting to allow for examination from various angles. If the participant removed their thumb from the screen, the painting would fall down. If the image fell toward the ground, it would disappear outside of the projection and reappear on the table. In this setup, the frames and canvases were 3D-modeled, and the paintings were added as textures to the 3D models.

This interface was also created in TouchDesigner as a 3D environment with a bullet-solver engine to simulate gravity and other forces. The smartphone interface was based on the Google XY-Fi project (Uglow et al., 2017). The smartphone ran a website that records device orientation and touch events and passed it via socket.io to the webserver that forwarded it to the TouchDesigner instance running the simulation. The "pick up" mode is not a part of the original XY-Fi project but was programmed by the first author, extending the original JavaScript program.

7. Results

We now present our observations and insights from presenting the study participants with each of the three setups.

Physical setup

As the participants entered the room for the physical setup the experimenter would give the following instruction: "Please have a look at the artworks and rank them according to what you would like to have in your own home. Let me know when you have made your choice." The participants moved to the rack, many hesitating a bit before picking up the artworks. Almost all participants asked the experimenter whether it was okay for them to touch the artworks, either right before or right after taking one from the rack.

Most participants then proceeded to pick up the artworks one by one, studying each one for five to 15 seconds before putting it back in the rack. Others held a painting in each hand next to the one left in the rack, comparing all three at once. A few participants picked up some of the artworks a second time. One participant held the artworks against the wall of the experiment room. From the video recordings, it can be seen that the participants spent between 25 to 90 seconds (median: 54) before indicating that they had made their choice.

In the interviews, most of the participants brought up the physical qualities of the artworks. They mentioned weight, texture, tactility or tangibility, materiality, and the ability to feel the paintings as qualities that were significant. One participant expressed it like this:

> *I like that I was able to pick up the paintings and feel it, and look at it in the light, and look at it pretty close and study some of the details, and then be like: "That was nice to see." It gives you something, when you are far away and close to paintings, I think.* (Participant 11)

In addition to holding the artworks up close, participants mentioned the options of turning them around and moving them back and forth, and one highlighted the feeling of having control of the handling of the paintings. A few participants mentioned that it was difficult to handle the paintings in this setup, "[…] because I could only hold two at once, it was hard to see all three at the same time. So, I had to remember to hold one in my mind and then look at the others" (Participant 17). Another participant mentioned being anxious about accidentally breaking the artworks.

As compared to the other setups, half of the participants mentioned that only the physical setup gave them the full impression of the painting, especially with regard to colors: "I prefer having them physical because then I can just see more and I can trust my perception more, because if it's like I'm shopping in an online shop, I don't actually see the color. If I'm checking it out in real life, then I know exactly what I will get" (Participant 15).

In this setup, some participants talked about the importance of the frame for making their choice: "For me it's very important how the frame looks on the paintings, so I also investigate how old they are, and whether they are worn, if they are new, and how much they look like they have just been printed on laser printer and put in a black frame. But I am sure none of these are" (Participant 13). Another participant found a specific frame enticing, "It weighed heavily in my decision of what I wanted, that there was a name I could recognize [S. Engelbrecht, ed.], but also that it was a nice painting, and that it was heavy and a nice frame" (Participant 10).

Several participants made comparisons with the act of browsing through artifacts in commercial settings, such as posters in an art museum gift shop, paintings at a flea market, or records in a record store. For some, this was a positive, fun experience:

> *It's like crate digging in a record shop. You're kind of fiddling through them. You can look, you can stand it. You know, it feels more like you're kind of taking a cultural artifact in a different kind of mode. That's sort of exciting. You know, there's joy to holding a painting. It's something almost naughty.* (Participant 19)

However, others felt unease when handling the physical paintings. One participant mentioned that it devaluated the artworks being presented in this way:

> *I felt that it was like when exiting a museum, and then there's this thing where you browse through the posters. My immediate experience was that I really felt that I was in the gift shop of a museum. I also think, that in relation to other things, this took away much of the feeling of quality.* (Participant 2)

In general, participants found that this setup gave them the best impression of the paintings. The paintings were evaluated for more than their pictorial content, such as the frames and their weight, yet the presentation was unfamiliar, causing a level of unease.

Digital 2D setup

Upon entering the room for the 2D setup, the experimenter gave the same task instructions as for the physical setup, but this time added: "You may use the mouse on the table." With no further instructions, almost all participants would walk to the mouse and start clicking, figuring out by themselves how to enlarge the paintings. Participants spent 19–160 seconds (median: 40) before they indicated that they had made their choice. All participants went through the images at least once, spending 1–7 seconds looking at each enlarged picture for the first time. Most participants looked at the enlarged images multiple times.

Most participants said that this setup was easy and straightforward and felt like an everyday interaction: "It was easier because everything was just lined up, instead of having to make that somewhat cumbersome movement of lifting the paintings up. […] So, it was a faster decision to decide what you like, but with less opportunity for investigation" (Participant 13). One participant noted that the ability to see the three images at the same time made it easier: "Even if the paintings weren't that big [when not enlarged], I already kind of saw what they were portraying" (Participant 15). Many participants talked about how it was easier to get an overview or compare the images in this setup. Participants also said that it was more efficient and had less distractions than the other setups, and some remarked that it was easier to investigate details in this setup. Several compared this setup to an online image experience, such as Google Image Search.

In contrast, a few participants said that it was difficult or even impossible to make a proper decision in this setup because necessary information was missing from the presentation of the paintings. Over half of the participants talked about missing information aspects, such as the physical dimensions of the paintings, texture, and the exact colors. Curiously, four participants furthermore stated that the images in this setup did not have frames (even though frames had in fact been added digitally, as described above).

One participant said this setup was just like images hanging on a wall. Another compared it to a slideshow:

> *I felt it was like a slideshow that I had to click through, and it pulled me out of the world where I am supposed to be immersed in the art. You feel that you have a mission and that is to be done with it. You kind of have to see it to the end, and then proceed with the next instead of immersing yourself.* (Participant 12)

In general, the participants seemed less enthusiastic about this setup than the other two. Some participants said it was boring, others used the term static, and a few used the term distanced in comparison with the other setups. The task was solved quickly and efficiently, but the images in this condition were not talked about as having any sort of physical or spatial properties.

Digital 3D setup

When entering the 3D setup, the experimenter would hand the participant a smartphone and ask the participant to stand in the middle of the room in front of the projected image. Then, the experimenter would help the participant to calibrate the phone interface and explain the functionality: "You can move the white cursor around by pointing the phone. You can press on the screen to grab a painting, and if you point the phone toward the ceiling, the painting you have picked up will come toward you. You can then tilt the phone to orient the painting you have picked up." Then, the experimenter would repeat the task and step back to let the participant use the interface on their own while answering any clarifying questions.

In this setup, participants spent between 62 to 250 (median: 94) seconds after entering the room before they indicated that they had made up their mind. The instruction and calibration phase took 23–46 seconds. The participants would pick up the paintings one after the other and tilt the phone to make it come closer. The participants kept standing in the same place while holding the phone in one hand extended from the body. They spent between 4 and 26 seconds looking at a picture zoomed in when looking at it for the first time. Some participants picked up one of the paintings one more time before revealing their choice. One participant played around with the paintings for another two minutes after explaining his choice.

At the beginning of their interaction with the setup, many of the participants experienced chaotic interactions. Participants often accidentally dropped the paintings, knocked them off the table or sent them flying out of the screen:

> *You had to get used to it and find out how to maneuver the painting. [...] Sometimes the painting moved a bit fast and ended in the top right corner. It was a bit hard to keep the painting in focus, which made it difficult to analyze the painting you were looking at. But it was a fun way of doing it.* (Participant 10)

Many participants said that this was a different or novel way of interacting with art, but many also remarked that the interface involved a learning curve since they needed to learn how to use the tool before they could focus on the paintings. About half of the participants used the word fun about this setup, and a few more talked about it as being playful. One participant, however, found the interaction difficult, making it a "stressful" and somewhat "humiliating" experience (Participant 16). Some also experienced a certain unease about handling the paintings in this setup: "I felt that I was treating the art a bit badly by accidentally throwing it around and by

rotating it. In any case, I would find it awkward if I ended up doing that with [the artworks in] my own hands" (Participant 7). Another participant had a similar experience but appreciated that the artwork had lost a bit of its authority:

> *There were some times when you dropped the precious paintings and those kinds of things. And then you go like, it's not normal to be out looking at art, holding some priceless artwork and then, whoops, dropping it or it flying away. But I actually think that gave it a really cool playful approach, that you dare more to look at it and do something with it. You don't dare that when you're in a museum, then you just go: Okay, I can look at things […] maybe it makes the art less authoritarian [sic] that you can throw it around like that. But I actually think that's very cool.* (Participant 11)

Some participants talked about this setup being playful or like a game. While being playful and fun, one participant found that it was "just feeling like a gamified distraction from the task at hand" (Participant 16). Participant 8 also felt this way: "For a long time, I had much focus on just controlling it, and I found it fun, and that was where my focus was. I forgot the task a bit." An additional two participants mentioned this.

Similar to the 2D setup, a few participants said that they found it hard or impossible to complete the task because the digital image of the paintings did not give them all the information they needed. A few participants talked about a missing materiality or tangibility; however, others talked about this setup being more material, tangible, or physical than the 2D setup. Other factors that were mentioned as missing were weight, real size, and exact colors. One participant talked about this setup being a tradeoff between the two others:

> *[the 3D setup] seems like it's sort of awkwardly in the middle. There's something that's material that's happening there that is nice, but it's also fiddly and it's also occluded in some sort of image sense. [...] It's harder to see, but it does kind of give you a sense that you're semi-present, which I don't know if that's a good trade off yet.* (Participant 19)

In this setup, the participants also talked about frames. One participant said that the frame did not play a role, "[…] because you could not feel the image in the same way, even though there is a frame" (Participant 10). On the other hand, another participant said:

> *[…] it really did do something, that there were frames on. […] It gave me more the feeling that they were actually paintings existing in real life, instead of just being a Google image you had downloaded and put into the same system. Here, I have a feeling that these paintings exist somewhere.* (Participant 6)

Several participants found that the 3D setup did have some qualities to it that the 2D setup lacked. Three participants said that this was more like holding a real painting than the 2D setup. One said that it had "objectness" (Participant 1), and another that it was easier to imagine it on a wall. Another three participants talked about the 3D interface as a room, implying a sense of spatiality.

8. Discussion

Remarks made by the participants seem to indicate that the 3D setup did succeed to some degree at facilitating an experience that afforded a sense of handling the artworks. Participants also noticed the frames of the paintings more in 3D than in 2D. It is particularly interesting to note the unease felt by some participants in not being able to treat 3D artworks with appropriate care. However, participants still noted a lack of materiality, and problems with the 3D interface and image quality seem to have reduced the vividness of the experience for some.

To explore how the 3D setup affects the aesthetic experience of the artworks, we will consider the insights from the experiment in relation to Kiran's (2015) four suggested dimensions of technological mediation: practical, ontological, epistemological, and ethical. For each of these dimensions, we offer some thoughts on how designers might further explore the experience of virtually handling digitized artworks.

In each setup, the form of the artworks afforded different practical ways for the participants to handle them. The three setups demanded three very different ways of bodily engagement, from the careful handling of a heavy physical painting, to the fine flicks of the wrist when using a mouse, to the somewhat unfamiliar movements needed to control the smartphone interface. The movements in the 3D setup land somewhere in between those of the 2D and the physical setups: The participants were lifting, pulling, placing, and tilting the paintings, although it was done via a tool for remote control and with much smaller and lighter movements than in the physical setup. These affordances allowed the participants' bodies to play a role in the art experience. In future work, designers might explore how to further prompt and enhance the affordances for practical handling to extend the ways bodily movement might affect aesthetic experience.

Designers might explore (at least) two different aspects of this design space: the control interface and the type of display. Regarding control, one might experiment with interfaces that facilitate more natural movements, thus mapping more closely to the handling of physical artworks. For instance, one might create a tangible interface with a form like that of a physical painting that could be mapped to the digital image to allow participants to use natural movements to lift and turn the digital image. To bring the experience even closer to the physical, one might move away from the digital projection on the wall and instead simply use a tablet computer embedded in a frame. However, this would require that the images be reduced drastically in size and adapted to the aspect ratio of the tablet display, which would run against the artistic intentions of many artworks in which size is an important aesthetic factor. A different solution might be to move the experience into a substitutional reality environment in which a virtual reality environment is combined with physical props to facilitate the experience of handling objects physically, as demonstrated in Tennent et al. (2020). Furthermore, designers and artists might be interested in experimenting with interfaces that offer types of interaction that do not match closely to the experience of handling a physical painting, such as introducing elements of discomfort (see Benford et al., 2012), for example, through sensory misalignment (see Marshall et al., 2019). One might also consider the degree to which the participants should control the experience—perhaps experimenting with degrees of contested or negotiated control (see Benford et al., 2021).

Considering the ontological dimension, both the 2D and the 3D versions of the artworks are virtual representations, but participants felt that the handling of virtual 3D has more qualities associated with physical objects. When going from the physical to the 2D setup, the experience of "objectness" seems to disappear. The participants called the physical paintings "the real thing,"

whereas the 2D paintings seem to be treated more as a reference to an object existing in some other realm. Interestingly, when encountering the 3D paintings, a level of "objectness" seemed to return as some participants said that the experience of engaging virtual space is a bit like handling real paintings.

Designers might explore designs that would enhance the experience of "objectness" in relation to the digitized artworks. In the past, museums have experimented with ways to facilitate more personal encounters with artworks, such as through Cooper-Hewitt's "The Pen," which allowed visitors to digitally collect objects that interested them in the museum (Chan & Cope, 2015). In Blast Theory's design "Gift", museum visitors are invited to collect objects digitally and to use them to craft gifts for their loved ones (Spence et al., 2019), setting up an experience that is "interpersonalized" (Ryding et al., 2021). Petrelli et al. (2017) introduced the concept of "tangible data souvenirs," which are created on the basis of data collected during a museum visit and that serve as a connection between a physical and a digital experience. Benford et al. (forthcoming) used a similar approach in a design in which emotion-capture techniques were used to craft personalized experiences based on the visitors' emotional responses to artworks in the Munch Museum in Oslo, Norway. At the end of the experience, visitors were given a postcard showing the painting that had prompted their strongest emotional response, with their own emotion data printed on the back. Future designers might build on such approaches to further experiment with ways of turning digitized artworks into "objects."

Considering the epistemological dimension, it is notable that the physical artworks seem to contain important information that becomes unavailable in the two digital setups. Some of this loss—blurry images, low resolution—is due to inefficient display technologies and might easily be mitigated using a screen or a better projector. In fact, by using high-resolution images such as the "gigapixel" images created by the Google Cultural Institute (St. John, 2016), one may display an even larger and sharper representation of the paintings than can be seen directly on the physical canvas. Information about physical size can also be communicated digitally. In the 2D display, it is easy to imagine scaling the images 1:1 to their physical counterparts. With the 3D interface, this is less trivial since scale is determined by the distance to the virtual camera lens as it moves back and forth. Other information, such as weight, is simply lost due to the nature of digital representations. The 3D version, however, does convey the sense of being an object since participants can look at it from the front, sides, and back. Using better display technologies, it might even be possible to see the artificial light bouncing off the texture of the 3D canvas.

Considering the ethical dimension, it is worth noting that participants drew parallels to experiences that have similar interactional qualities. The physical setup was likened to the act of browsing posters in a gift shop, the 2D setup was compared to browsing images on the web, and the 3D setup reminded participants of the Nintendo Wii controller. These three examples are very different in their cultural status and refer to contexts in which artworks are given very different roles. Posters in a gift shop are commercial products, stereotypical examples of art as a commodity. In contrast, images that appear in google searches are deprived of their monetary value (other than the indirect monetization of the platform enterprise). Meanwhile, in the 3D setup, paintings regain some of their "objectness," but they tend to lose their status as art, becoming instead merely quasi-physical objects that get tossed around like toys.

The change in form also affects the social status of the artworks and even devaluates them. An important question for further research would be to search for ways to present the digitized artworks that do not devaluate them. One possibility would be to design an interface that to a large degree affords careful treatment of the paintings, simulating the care and respect that

such physical objects require. For instance, the physics of the simulation could be constrained so that all movements would be slow and smooth and that the paintings would find their way back on the table when let go. Another approach could be to integrate consequences of actions in the software. If the artworks were to break or disappear for good when dropped, this artificial fragility might affect the role of the paintings in the participants' perception. Alternatively, the reckless treatment of paintings could instead be turned into a theme for the experience and explored further in the design, using the experience of unease to explore the role of digitized artworks.

9. Concluding remarks

Can the experience of handling digitized artworks be used to enrich the art experience? The experiment presented here did not aim to offer a viable prototype for such an experience, and indeed the participants' responses indicate that the setup would need to be further developed to be experienced as appropriate for an art-viewing experience. However, the experiment did demonstrate that there is potential for facilitating art experiences that afford a dimension of "objectness" to digitized paintings.

While the digitalization of artworks may seem to lead to art experiences that are immaterial and disconnected from the physical reality of our bodies, this also makes it possible to bring back a dimension of the art experience that was lost with the development of modern museums such that spectators can experience artworks by holding them, tilting them, turning them around, lifting them up, and even throw them away. This opens up new avenues for further research in the intersection of somaesthetics, HCI, and sensory museology.

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Object and Soma: Remarks on Aesthetic Appreciation of Design

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Abstract: *In this paper, we examine the object of aesthetic appreciation in discourses on design. While this object is usually considered an external one, somaesthetics focuses on the body of the person doing the appreciating. Based on this duality, we propose a general account of appreciation of the design object through an evaluation of the subject's soma. We provide reasons and examples to explain why our thesis on somatic encounters with embodied designs is, to a high degree, intuitively based on the relational nature of such objects. We conclude by showing how our findings can inform both design theory and practice and potential implications for the latter.*

Keywords: *aesthetic appreciation, body, design, function, design aesthetics.*

1. Introduction

In social reality, humans are constantly surrounded by various kinds of objects. Desks and coffee machines are essential parts of most offices, armchairs and sofas make homes comfortable places, and smartphones and other advanced technological devices have become part and parcel of everyday life. In modern society, it is difficult to imagine living and managing without these objects (although every such object could be relatively easily replaced by a substitute). We treasure them for their functionality, stability, and ergonomic features. They make accomplishing our work, leisure activities, and domestic chores convenient, efficient, and straightforward. Notably, most—if not all—of the abovementioned objects are *designs*.[1]

An effective design is commonly praised for its functionality; however, it is quite rare that such functionality is explicitly linked with design aesthetics. In fact, there is an allegedly strong tension between functionality and the aesthetic in design research, as the latter could somehow harm or distort the former (see, e.g., Folkmann, 2010, p. 40, 2015). Recently, there have been noble attempts to overcome this apparent dichotomy by showing how functionality

1 For the sake of simplicity, we limit our inquiry to design understood as a set of 3-D objects. The aesthetics of design is here invoked upon to investigate the aesthetic appreciation of those objects that we commonly discern from art, which are considered 1) non-utilitarian and requiring an informed hermeneutic analysis and 2) craft objects that are evidently handmade and unique for that reason. For a thorough analysis of this ontology, see Forsey (2013, pp. 9–71. Moreover, in this paper, the issue of design as a process or practice is intentionally left uninvestigated; nevertheless, we believe these findings can inform both design theory and design practice with valuable insights from contemporary aesthetics, following the proposals of several design scholars who emphasize the central role of a deep aesthetic sensibility in design methods, research, and practice (e.g., Friberg, 2013; Buwert, 2015; Folkmann, 2010; Höök, 2018; Dixon, 2020).

and aesthetics go hand in hand (Parsons & Carlson, 2008; Forsey, 2013; Parsons, 2016; Feige, 2018). However, although these theoretical views on design appreciation are very illuminating and theoretically ground-breaking, they lack a somatic perspective and localize the aesthetic in purely intellectual pleasure. Defining aesthetic appreciation in psychological terms can undoubtedly capture essential factors for design theory, such as how to aesthetically code design objects, drive designer's intentions, and test users' competence in identifying the object's function. However, daily encounters with functional objects often occur in more informal and somatically imbued ways, and understanding these factors is an equally valuable task.

Following in the footsteps of these novel attempts in the aesthetics of design and focusing on things in use, this article aims to provide a novel framework for the aesthetic appreciation of design, starting from the concept of the aesthetic understood as essentially embodied. One possible way to include this dimension in the aesthetic theory of design is to adopt the perspective of somaesthetics, which champions the body as the locus of aesthetic value. In doing so, we argue that we might need not only to reconsider *how* we appreciate design but also to reconsider *what* is actually appreciated. Our thesis is as follows: when we aesthetically appreciate design, we also evaluate our body as using and responding to certain objects. In other words, we suggest that what is appreciated is, in fact, a specific *conglomerate* consisting of our body in relation to the body[2] of the object, where the attention is turned both outwards and inwards. The goal is, therefore, to understand in terms by which we can define this inter-body relation as aesthetic.

It is worth mentioning that the proposed thesis is not *universal*. We do not claim that every design must be evaluated in a certain way but rather that objects designed to have a relationship with our body are *also* evaluated based on this relationship at the moment in which this relationship is in place. The thesis here is rather a *modest* one, namely that we wish to point out that there are gradations of appreciation depending on what is addressed: there can be discrete appreciations directed to singular objects, but there are also complex appreciations directed to compound situations. We therefore aim to present a set of reasons explaining why it is worth adopting such an understanding of aesthetic appreciation (at least regarding a specific group of designs) and suggest how this might open up a new perspective for the aesthetics of design.

The paper develops according to the following structure. In §2, we provide a basic overview on the philosophical debate on design to highlight the research gap into which our proposal fits. In §3, we provide reasons and examples to explain why our thesis on the somatic encounters with bodies of designs is highly intuitive. In §4, we address potential challenges to the thesis. Finally, in §5, we draw several conclusions about the implications of our claims.

2. Aesthetics and Design

Numerous contributions have recently addressed the question of the relationship between philosophy and design. A debate involving different philosophical disciplines has originated from the opposing nuances that the notion of technology has assumed along its etymological journey that began with the Greek term *techne*. On the one hand, *techne* refers to expertise: specific know-how that in contemporary discourse is linked to new technologies but, above all, to the cognitive involvement these technologies require. On the other hand, the Greek word *techne* has acquired an artistic nuance in its Latin translation (*ars*), which has opened up this historical area of interest to a precise set of practices known as the *fine arts*. This schism has

2 We do not intend to problematize the ontology of things in everyday life, but we assume that like any limited portion of matter, they possess a body that could come into sensuous contact with the human body.

conferred a particular advantage to the philosophy of technology over the debates on design because of the technical aspect behind the production of everyday objects. At the same time, with its focus on the fine arts, aesthetics has prejudiced design practice due to the latter's historically anti-artistic conditions: its link with industry, the unlimited reproducibility of its products, but above all, its concreteness and functionality. As a direct consequence, philosophical aesthetics of the early twentieth century, apart from some sporadic writings,[3] has dismissed the design object as lacking conceptual depth relative to the work of art. For this reason, before this dismissal by philosophical aesthetics, the cognitive sciences (Norman, 1988, 2002, 2005) approached the category of design to investigate the mechanisms of the relationship between design objects and their users, highlighting how the communicative and emotional functions play a fundamental role in consumption.

We can summarize by saying that at a meta-theoretical level, contemporary philosophy has explored the merits of design mainly within a technological (see, e.g., Verbeek, 2005; Vermaas, 2008; Houkes & Vermaas, 2010; Galle & Kroes, 2014) rather than an aesthetic model. The aesthetic perspective has here been assigned a secondary role due to a simplified understanding of its theoretical potential for design. The aesthetic in design theory, which is often reduced to a measure of how appealing a product appears,[4] feeds fears that the same discourse will be directed toward the illusionistic space of marketing and advertising: in other words, toward the phenomenon of aestheticization. Recently, however, scholars in the field have realized that the spectrum of aesthetic influence is not limited to formal refinement and taste. Instead, aesthetic theory can assess how design shapes the world, validating that its aesthetic impact reaches further than institutional art renders possible. Design is, as has been suggested by John Heskett, "an essential determinant of the quality of human life" (Heskett, 2002, p. 4).

The recent debate around everyday life (so-called *everyday aesthetics*) provided a fundamental contribution to shifting aesthetics from art toward the object of use and the analysis of its mundane aesthetic impact (see, e.g., Saito, 2007, 2017; Naukkarinen, 2017). More generally, everyday aesthetics focuses on traditionally overlooked areas of life (such as food, fashion, gender, or aging, to name just a few) and researches these phenomena from the viewpoint of their regularity and relational character with respect to the everyday (Naukkarinen, 2013; Melchionne, 2013).[5] It is worth mentioning two cases from the recent literature that focus specifically on the relationship between design and everyday life: Daniel Martin Feige's *Design* (2018) and Jane Forsey's *The Aesthetics of Design* (2013). Both proposals highlight the aesthetic aspects of the performance of daily practices and objects' functionality but assign them different roles in their respective theories.

According to the recent hypothesis put forward by Feige, functionality should be recognized as the aesthetic form of design objects and should become an aesthetic category in its own right. Such a form of aestheticity is embedded in the processes of quotidian interaction with objects. In contrast with the contemplative attitude attributed to the experience of works of art and nature,

3 We have here in mind a series of articles investigating the mysteriousness lying behind the object of everyday use by Georg Simmel, Ernst Bloch, Martin Heidegger, and Theodor W. Adorno, collected for the first time by Andrea Pinotti (in their Italian translation) under the title of *La questione della brocca* (The question of the pitcher). It is hazardous here to talk about design as we understand it today. Still, it is undeniable that these writings have left a legacy of inquiry on which we draw today precisely to explain the phenomenon of design.

4 As Folkmann notes, "the pervasive attention paid to aesthetics can be annoying to designers, as it implies that they work solely with artistic matters of surface, appearance, and styling as opposed to, for example, functionality" (Folkmann, 2010, p. 40). This confirms the general tendency to equate the aesthetic with the artistic and, consequently, to find the aesthetic and the functional incompatible.

5 In this paper, we adopt the relation-oriented account of the everyday: it sees the everyday as a relational feature, which entails that any object or event can become ordinary and part of the everyday. This account treats the everyday as a relational concept that refers to the relation between the subject and her environment (see Highmore, 2011).

this practical form (*Praxisformen*) stands out as the aesthetic peculiarity of design objects. As Feige observed, "Design objects are aesthetic objects in that they are each singular embodiment of functions" (2020, p. 59).[6]

An alternative perspective is offered by Forsey, who draws attention to the traditional category of the beautiful against the backdrop of Martin Heidegger's notorious *tool analysis*. According to the Heideggerian framework, in the horizon of our experience, the object of everyday use is apprehended in two modalities: disguised and transparent in its function or striking and noticeable in its malfunction.[7] Forsey rejects Heidegger's approach and claims that "it is not only when they break down that [tools, design objects] come to our attention" (Forsey, 2013, p. 241), noting that they also become conspicuous when they perform their function excellently. She holds that

> *[the design object's] beauty comes to light only through everyday use, and only when it succeeds in performing its function to a degree that merits our approbation*" (p. 242).

By engaging with the Kantian tradition,[8] Forsey maintains an understanding of pleasure prompted by beauty as a purely intellectual pleasure. Feige also considers the aesthetic as purely mental and defines it as "a special exercise of our conceptual faculties that make us the living beings that we are" (Feige, 2020, p. 58).[9] In other words, both philosophers belong to the school of thought that does not consider hedonic pleasure to be aesthetic; therefore, within *this* framework, we are left with no clue about the aestheticity of such sensual experience.

Richard Shusterman's somaesthetics presents a viable alternative. It provides a more holistic theoretical approach to the "aesthetic," reintegrating the original meaning expressed by the Greek term *aisthesis*—sensual perception—into the debate. At the same time, with the prefix "*soma-*," it endorses an embodied intentionality that denies the body/mind dichotomy. Such a theoretical approach consolidates the intellectual with the sensual in "somaesthetic mindfulness."

In the next section, we formulate a set of reasons for asserting that the soma, endowed with sensual intentionality, enters into a direct relationship with the object's body, creating a novel tangible compound object to be appreciated.

3. Being Together: Soma and Design

In this section, we propose a general account of appreciation of the design object through a valuation of the *recipient's soma* and put forward the thesis that what is appreciated is simultaneously the soma, the function, and the object. Far from denying the availability of a critical aesthetic theory applicable to design, we intend to complement it. By paying particular attention to the somatic experience of designs, we might illuminate how we build "the amount of experience and knowledge brought to bear on the [aesthetic] judgement [of designs]" (Forsey, 2013, p. 189). In other words, we believe that somaesthetic sensations and the resulting cognition contribute to our experience of the functional beauty of design, that is, the appreciation of

6 Translation by the authors; emphasis omitted.

7 In Heidegger's theory, tools' mode of being as present—*Vorhandenheit*—is more complex. Tools are revealed to us through un-usability but also through cognition and anxiety (*Angst*).

8 In the debate on the proper methodology of everyday aesthetics, Forsey defends the continuity thesis concerning the aesthetic tradition. For this reason, she refers back to Kant rather than formulating new interpretative notions for the everyday.

9 Translation by the authors.

design objects. The starting point of this proposal is the structure of somatic consciousness as understood by Shusterman.

As we have already mentioned, Shusterman extends the aesthetic experience's conscious aspect to the body intended as "a living, feeling, sentient body rather than a mere physical body that could be devoid of life and sensation" (Shusterman, 2008, p. 1). The strength of such an approach is that it allows a theoretical transition from a transcendental subject to an embodied consciousness, which encourages, in turn, the possibility of investigating the inter-corporeality between the user and the design object. This is possible for two reasons. First, this theoretical approach reverses the starting point of the aesthetic analysis, giving body consciousness primacy in the relationship with an object but without losing sight of the object. As Shusterman himself writes, "any acutely attentive somatic self-consciousness will always be conscious of more than the body itself" (p. 8).[10] Secondly, in line with the phenomenological tradition and the thoughts of Edmund Husserl and Maurice Merleau-Ponty, Shusterman considers the sensation of one's body as that experience which highlights the fundamental ambiguity of human beings, who not only *have* a body but *are* that same body. The body then emerges not only as "the transparent source of [our] perception or action" but also as "an object of exploration, . . . an object of awareness, . . . as something that I *have* and *use*" (p. 3). Acknowledging this ambiguity leads us to see how we are both subjects experiencing the world and, at the same time, can perceive our body instrumentally[11] as an object in this world. More generally, we experience our body as part of the world, and we experience that part of the world that we act upon. For example, we experience our body as sitting and the armchair we sit upon.

In the scheme of the aesthetic experience of design, we can now introduce the third element of the compound: the function. In most theories, functionality is understood strictly as the identifying criterion of *kinds* of objects: e.g., those with proper function (Parsons & Carlson, 2008) or intentional function (Forsey, 2013). However, the notion of functionality countenances the aesthetic theory of design to explore the practical aspect of interacting with the world more generally. For instance, in comparing her coffee pot to that of her friend Bill, Forsey provides the following reasons to justify appreciating a Bialetti more than an Alessi coffee pot. We believe these are compelling somaesthetic reasons not strictly related to the proper function:

> *his coffee-pot, I want to claim, has flaws that are hidden behind that newness and shine, that detract from its beauty. First, brass conducts heat, and each time you reach for the handle, or put your finger on the lid, you burn yourself. Bakelite remains cool. Second, the sleek rounded design makes it very hard to unscrew the two halves, especially if you already have soapy hands. My octagonal pot turns as easily as a nut in a wrench, whether wet or dry. Third, the conical shape of his means the opening of the top pot is too narrow to fit even a small hand in to clean it, whereas mine, as wide at the top as at the bottom, welcomes a quick scrub. These are perhaps minor quibbles: both pots make very good coffee and both perhaps do it equally well (if I hesitate here it is, I am sure, out of prejudice alone that I prefer mine). And his is, admittedly, better looking* (Forsey, 2013, pp. 181–182).

10 Emphasis omitted.

11 It is not our intention to argue for or against such objectification of the body. We simply acknowledge that this instrumentalization occurs daily, for example, when we look in the mirror or take care of our body.

From our perspective, the "minor quibbles" Forsey mentions assume primary importance. First of all, they introduce a range of possible interactions with the object not limited to its proper function (in this case, "making coffee"). Secondly, these minor criticisms call attention to the somaesthetic dimension of the interaction. Many of us are acquainted with the somatic sensations of impotence in the face of contact burns or a stubborn jar of jam. These are somatic perceptions that, after settling in our memory, inform the value of our judgment. If we do not consider all of these aesthetic factors as deserving our attention, we will end up getting our coffee at a coffee shop even if our Alessi makes excellent coffee. From a somaesthetic perspective, the ease/difficulty of use described acquires the characteristics we would attribute to comfort/discomfort in the sense of the object's contribution to our pleasure ("The object is comfortable").[12] Eventually, if cleaning that coffee pot is more of a nuisance than tasting its delicious coffee, we will abandon the coffee pot at the back of the shelf.

Another critical point to consider is the subject using the coffee pot. In this case, ease of use acquires the characteristics of an eased state of being ("I am comfortable"). In other words, the "minor quibbles" refer not only to something about the object but also something about the subject, about her state, which influences the appreciation/aversion toward interaction with particular objects.

We can try to analyze a more immediate interaction: imagine you are sitting in an armchair. In a comfortable position, the attitude of the body and its parts produces an intimate joy through the distribution of muscle tone. Technically, we say that the chair allows you to sit comfortably, but, as we have seen, comfort does not solely depend on the armchair but also on the body that occupies it. The same armchair can appear extremely uncomfortable to us if, for example, we have back pain. This is to say that such a negatively tinged experience does not exclusively depend on design errors that may emerge from using a given object. If we find it uncomfortable to sit in the armchair because we have back pain, we would not claim that the object is not performing its function well. Indeed, we might resolve this pain by adding a pillow between the lower back and the backrest. In other words, we regularly monitor and adjust our bodies to maximize comfort in a given situation, where bodily comfort is intended as a somatic state of being that is contextual, local, and situated in space and time and, as such, might change over the course of a lifespan.

We might look, for example, at the aesthetic explanations we give ourselves. After sitting, we might claim that the seat is too hard. The hardness of the seat, nevertheless, is not an absolute property of the armchair itself. The denotation "too hard" emerges from the relationship between one's own body and the armchair. The same armchair might feel too soft for someone with a different bodyweight than ours, and even for ourselves 20 kilos ago. To stay on the same line of reasoning, we can ask ourselves if we achieve the same level of appreciation as would the children we once were or the seniors we will become.

Moreover, countenancing somatic experience from the overall interaction with designs (including appreciation) allows us to personalize our encounters with these objects. We are surrounded by objects that are hardly distinguishable from each other: we use the same-looking smartphones, cars, kitchen utensils, tables, lamps, or armchairs, to name just a few. The only thing that genuinely makes our interactions with them special and unique is our bodily response to them. For example, everyone has their particular way of sitting relative to their somatic subjectivity. As we have already noted, our relation with these objects (and assessment of them)

12 In a recent article, Mark Tschaepe (2021) outlines the various ways in which the idea of comfort is perceived in everyday discourse, referring to both the phenomenological and somaesthetic spheres.

is not temporally fixed: I like sitting in my armchair, being that I am about 34 years old and weigh 63 kg, but this might (and probably will) change as I age and experience other changes. What is changing here is not only the object in itself but also, and most importantly, my body and the relation I have with it.

The question is now this: Do we still appreciate the armchair, or is it that we appreciate ourselves sitting in the armchair? Or, do we appreciate a compound consisting of two bodies held together by a relation (sitting)?[13]

To capture all these elements of the experience of human interactions with objects, we put forward the notion of "place." This proposal is intended to shift the aesthetic attention from the identification of isolated objects to the object in association with its user, thus defining the smallest unit of *place* the user can experience as larger than the body alone. In other words, the category of place can designate what we intend by the compound of object and body involved in quotidian and familiar situations. It should be added that the binomial of place and familiarity draws upon Arto Haapala's (2005) existential characterization of quotidian experiences and mundane objects in terms of familiarity bound to the notion of place. This binomial conveys how, by interacting with objects and getting acquainted with them in our day-to-day lived dimensions, we make the surrounding environment our own place (Haapala, 2005, p. 45). This lived "placement" always starts with familiarization with simple elements, such as objects,[14] and expands to larger-scale environments, such as rooms, buildings, cities, and regions.

We would like to point out that what we are describing should not be understood as an extension of our body via the object like, for example, an armchair, but rather as bodily responsibility (and response-ability) toward the armchair. While we often think of our favorite armchair as the one upon which our traces are imprinted, we can think as well of sitting on that particular armchair as shaping our body, leaving its impression through bodily sensation. This double sedimentation of impressions creates a situation of use in which the two polarities do not imply division: the armchair is an object to sit *together with*. That is to say, our body and the body of the armchair are separate entities, yet, when we sit on it, we enter into a somatic relation with it; this tangle becomes a complex object of aesthetic appreciation. During use, objects can be appreciated as an integral part of an intimate situation with our body, which can be pleasant or unpleasant.

In our opinion, an example of such a somaesthetic stance in design was put into practice by the University of the Arts students in Poznań (Poland), who developed an age simulator imitating physical limitations related to old age. This tool helps young designers, by allowing them to literally walk in seniors' shoes and identify with an older body, to familiarize themselves with somatic limitations that they would not consider if they used their own body as a reference point for the project. This case allows us to see how designers direct their attention to an object in use *and* their somatic response to understand and assimilate the old age somatic experience. In other words, to aesthetically experience the bodily discomfort that comes with old age, the attention must be directed to the compound. These experiences, in turn, become valuable know-how and, as Mark Tschaepe has suggested, "have the potential for contributing to moral imagination and tools that foster empathy in others" (Tschaepe, 2021, p. 1).

13 This function is relational in nature since it consists of at least two components: the human body and the body of the design object.

14 For modern digital nomads, whom we can define by their locational independence and lack of a fixed place, we could identify the sense of familiarity advocated by Haapala in their relationship with, for example, their laptop, as that relationship that creates the smallest unit of place.

4. Objections and Replies

As we have seen, Kantian theory and somaesthetics differ in that the former, assuming a mind-body distinction, considers the aesthetic as predominantly psychological. Kant's distrust of sensible experience is well known from the *Critique of Judgment*, where he declares that "in order for me to say that an object is *beautiful*, and to prove that I have taste, what matters is what I do with this presentation within myself, and not the [respect] in which I depend on the object's existence" (Kant, 1987, p. 46).

Along these same lines is the charge Jane Forsey leveled at Arto Haapala's idea of the familiar as the condition for everyday aesthetics, namely, that it lacks aesthetic significance. She traces this deficiency in the examples of quiet and familiar experiences provided by Haapala. While they should act as guarantors of the aestheticity of the everyday, they instead highlight a confusion and conflation of aesthetic and bodily pleasure (Forsey, 2013, p. 233). As we recall, for Forsey, and, in general, for all judgment-based theories, the aesthetic pertains exclusively to the psychological sphere. However, this criticism loses its validity within the framework proposed by somaesthetics since its fundamental principle is the rejection of the mind-body dualism that underlies most of the Western aesthetic tradition.

Somaesthetics does not discriminate between bodily and intellectual pleasure, giving ample space to the perceptual present that involves "not only the more familiar teleceptors or five traditional senses, but also more distinctively bodily senses such as those of proprioception and kinesthesia" (Shusterman, 2012, p. 116), the latter referring to an awareness of one's position in the world. However, we can draw a parallel between Kantian theory and somaesthetics. Both are "phenomenological" investigations that acknowledge the aesthetic mainly as humans' response to the world. In other words, both theories involve an *attentive* aesthetic attitude as the standard feature of the aesthetic experience even if they involve the subject in diametrically opposing ways: disinterestedly in Kant and somatically entangled in somaesthetics.

Forsey says: "Form and function are symbiotically related in our judgements of design, and both contribute to a given object's beauty" (2013, p. 184). We can reinforce this claim by adding that form and function are symbiotically related because they are related in reference to the soma. Better still, the soma becomes the criterion for establishing a fruitful symbiosis between form and function since when we aesthetically appreciate certain design objects, we also evaluate our body as using and responding to these objects. An example clarifying this position is the difference between sleeping in a single versus king-size bed. Although these objects are both beds and, let us say, even very similar in appearance, the qualification we will assign to our sleep will depend primarily on the somatic relation afforded by the given bed. If we are used to sleeping in the starfish position, we will not appreciate sleeping in a single bed, which will expose us to unrest. In other words, it is precisely because our attention is directed to the conglomerate that we can evaluate concrete activities with concrete objects.

It is essential to remember that despite being characterized by a rich and complex perceptual involvement, the somatic subject can also experience itself as an object. In other words, to deploy the notion of soma as an experiential unit of bodily and mental pleasure does not imply flattening the distinction between perception and awareness of this perception. We can still talk of object-oriented appreciation because the attention is directed toward the objective dimension of the soma according to the precept: "I thus both *am* body and *have* a body" (Shusterman, 2008, p. 3).

Continuing with the list of potential criticisms stemming from "purely aesthetic" theories, one might argue that our proposal lacks universal validity and that in the absence of this fundamental criterion, we cannot speak of proper aesthetic appreciation. As mentioned above, these remarks, seen from the somaesthetic perspective, have less force. First of all, from our point of view, appreciating design is not a question of recognizing what everyone likes but what makes us feel good. However, in the specific case of the compound, we can argue that rather than referring to a shared understanding between individuals, we can instead refer to an inter-corporeal (between soma and object) validity that only our well-being can (intersubjectively) confirm. However, disagreements about design arise that we believe are based on the somaesthetic experiences that comprise the instrumentalized subjective element, which is inaccessible to others. We can also see how such disagreement works in reverse: if we disagree with someone about the experience of sitting in a particular chair, we have probably generalized their judgment without considering the other person as part of the compound rather than ourselves. In the end, we do not dispute that it is challenging to discuss somatic experiences theoretically; however, it seems difficult to deny that we ourselves are the experts on our somatic responses.

5. Conclusions

Forsey, among others, has shown, against the prevailing post-Kantian tradition, that there is no point in maintaining beauty's independence from functionality. This provided the outlines of a systematized aesthetic theory of design that is normatively grounded in the situated knowledge of an experiencing subject. For its part, somaesthetics, intending the soma as a privileged place for appreciating aesthetic sensations, allows a pragmatic turn in the aesthetic theory of design. This turn configures the aesthetic potential of design objects on the user's side and allows for clarifying the local conditions of experience, which builds the normative grounds for aesthetic judgments of design objects.

We have brought to the reader's attention that by their nature, everyday objects are designed to serve a function. In their use, our body is often involved. Fashion is the clear exemplification of this somaesthetic relationship. However, as with fashion, this relationship can be seen as frivolous self-care and discarded as mere aestheticization. To the contrary, from a somaesthetic perspective, appreciating design implies a responsibility toward oneself, that is, a call to be responsive toward what one's body feels and go beyond the mere visual appearance of objects. In fact, the experiencing subjects delineated by this approach are able to pass judgment on the practical success of objects *and* are aware of which artifacts improve the conditions of their life. They are (broadly speaking) responsible consumers. Consequently, the so-called "user" (as, for example, in user-centered design methodology) ceases to be perceived as a sort of corporeal statistic. If such an approach were incorporated into design theory and practice, it could reveal unconventional challenges in setting novel standards of use and functional improvements; however, above all, it would extend the scope of design aesthetics beyond formal concerns or visual appeal.

Moreover, our proposal distances itself from questions of how formal and aesthetic properties affect the use of products from an ergonomic perspective, which provides quantified generalizations, and instead embraces how two bodies enter into relationships and the aesthetic (qualitative tone of the) experience that emerges from this encounter. Such an approach, characterized by reference to a complete and intimate interconnection between bodies, is about not only usage but also the way we feel and think during usage.

With this article, we have provided an alternative reading of the aesthetic dimension of product design; what is at issue is a mode of aesthetic response to the body of objects by means of somatic contact. By emphasizing the decisive difference between an object-based and place-based aesthetic experience of design objects, we provide a novel framework for further analysis. Future research could assess whether this notion of the compound as a place can be analyzed in architectural terms[15] or even through the categories of ambiance and atmosphere proposed by Gernot Böhme (1993). For our part, we have shown that if aesthetic appreciation is addressed neither to the object nor to the soma but to the compound of object and soma, a prolific perspective opens up. On the one hand, the object's body does not disappear from the perceptual horizon but rather co-constitutes the aesthetic experience; on the other, the soma benefits from participation with the external environment and the constellation of material objects that compose it.

As we have seen, the operational modalities of a somaesthetic approach might be limiting for an aesthetic theory that aspires to a universal normativity of its precepts; however, they underline the physiological limits of the human[16] that are fundamental for the appreciation of design objects, which, for their part, are conceived precisely to overcome such limitations. This aspect remains fundamental for an aesthetic theory of design that considers the anthropological foundations of design practice and the user experience as critical factors for the discipline.

In conclusion, we would like to remind the reader that our thesis about the aesthetic appreciation of design is *not* a universal one in nature. That is, we have tried to show that at least with certain objects of design, it is plausible and potentially fruitful to think of their aesthetic appreciation as not solely related to their form and function. In other words, we claim that the somatic aspect of design might contribute to our understanding of design, but we do not claim that we always have to pay attention to this aspect: sometimes, we approach objects in a purely disinterested way. Design is often enhanced in this way, for example, in advertising, shop windows, or museums, where objects are placed on pedestals to be appreciated from a distance.[17]

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15 Ritu Bhatt (2013) has edited a collection of essays on the philosophy of embodied aesthetics, investigating the role of the body in architectural design.

16 There is a long anthropological tradition that sees the human being as a deficient being. For example, Ref. Gehlen, A. (1988). *Man, his nature and place in the world.* New York: Columbia University Press.

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Book Review

Ars Erotica and *Scientia Sexualis*

Alexander Kremer

If we are interested in sexuality, then we are lucky because Richard Shusterman has presented two recent writings for us to read. One of them is his book, *Ars Erotica: Sex and Somaesthetics in the Classical Arts of Love* (2021), which will surely be a guide for future generations of scholars, since it has achieved much more than Michel Foucault's *The History of Sexuality* (1984). The other is an article by Shusterman, "Pragmatism and Sex: An Unfulfilled Connection" (2021), which will be valuable for people who are interested in pragmatism and its hitherto unexplored connection to sex and erotic love. Shusterman has explained why he initially steered away from devoting somaesthetic study to the topics of sex and food because those stereotypical fields of bodily pleasures would distract from his aim of showing the cognitive and spiritual dimensions of somaesthetics. But in recent years he has written about both these topics, while continuing to develop somaesthetics not merely as an aesthetic orientation but as a philosophy more generally.[1]

Ars Erotica is a book for everybody, but it is primarily directed to academic readers, and this can be deduced from two perspectives. On the one hand, it offers a very detailed and complex description of premodern cultures—from Greco-Roman, Chinese, Japanese, Islamic and Indian cultures to those of medieval and Renaissance Europe— that we cannot find in Foucault's above-mentioned four-volume work. Foucault confined himself to ancient Greco-Roman culture only before explaining the ancient Christian epoch and modernity, including the emergence of *scientia sexualis*. On the other hand, the complexity of each chapter is also exemplary in Shusterman's book owing to his intention to approach the analysis of each ancient society with clear, unified principles and criteria. We can find these principles in the introductory part of the book, where Shusterman shares his general, methodological presumptions with the reader.

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Shusterman's *Ars Erotica* contains eight parts:

1. *Ars Erotica* and the Question of Aesthetics (which serves as an introduction);
2. Dialectics of Desire and Virtue: Aesthetics, Power, and Self-Cultivation in Greco-Roman Erotic Theory;

1 See Shusterman (2014) and Kremer (2022).

3. The Biblical Tradition: Desire as a Means of Production;
4. Chines *Qi* Erotics: The Beauty of Health and the Passion for Virtue;
5. Lovemaking as Aesthetic Education: Pleasure, Play, and Knowledge in Indian Erotic Theory;
6. Fragrance, Veils, and Violence: *Ars Erotica* in Islamic Culture;
7. From Romantic Refinement to Courtesan Connoisseurship: Japanese *Ars Erotica*;
8. Commingling, Complexity, and Conflict: Erotic Theory in Medieval and Renaissance Europe.

Most people are curious about sexuality. While many could go to Freud's theories and how he exaggerated the role of sexuality in our lives, it is undeniable that sexuality has a significant influence in everyday life. Freud's scientific approach belongs to *scientia sexualis*, contrary to ars erotica. Foucault formulated this opposition of the two different approaches to sexuality in his famous book, *The History of Sexuality. Vol. I: An Introduction* (1984). It is worth quoting here a more extended passage from Foucault to better understand this opposition:

> Historically, there have been two great procedures for producing the truth of sex. On the one hand, the societies—and they are numerous: China, Japan, India, Rome, the Arabo-Moslem societies—which endowed themselves with an *ars erotica*. In the erotic art, truth is drawn from pleasure, understood as a practice and accumulated as experience; *pleasure is not considered in relation to an absolute law of the permitted and the forbidden, nor by reference to a criterion of utility, but first and foremost in relation to itself*; it is experienced as pleasure, evaluated in terms of its intensity, its specific quality, its duration, its reverberations in the body and the soul. Moreover, this knowledge must be deflected back into the sexual practice itself, in order to shape it as though from within and amplify its effects. In this way, there is formed a knowledge that must remain secret, not because of an element of infamy that might attach to its object, but because of the need to hold it in the greatest reserve, since, according to tradition, it would lose its effectiveness and its virtue by being divulged. […] On the face of it at least, our civilization possesses no *ars erotica*. In return, it is undoubtedly the only civilization to practice a *scientia sexualis*; or rather, the only civilization to have developed over the centuries procedures for telling the truth of sex which are geared to a form of knowledge-power strictly opposed to the art of initiations and the masterful secret: I have in mind the confession. (1984, pp. 57-58)

In contrast, it is clear that Shusterman defends *ars erotica*, and he explores the classical cultures where he can find elements of this aesthetic approach to sexuality. Shusterman already had this standpoint in 2012, when he published his book *Thinking Through the Body*:

> If the painting of Gerrit van Honthorst (1592-1656), *The Steadfast Philosopher*, "reminds us of the familiar ancient quarrel between philosophy and the mimetic arts, it should also recall philosophy's traditional hostility and neglect regarding erotic arts, extending back to Socrates' condemnation of sex as "a savage and tyrannical master," and despite his provocative self-definition as "a master of erotics." Making a case for the aesthetic potential of lovemaking means

> confronting the problem that modem Western philosophy has tended to define aesthetic experience by contrast to sexual experience. (2012, p. 263)

As he explains in the postscript, this difference between aesthetics and *ars erotica* became more pronounced after the work of Kant, Schopenhauer, and Nietzsche:

> From Plato through the Renaissance, we find the familiar ladder of love that rises from the sexual desire for union with a beautiful body to more spiritual forms that desire spiritual union with beautiful souls or ideas and ultimately with the most beautiful and radiating source of all beauty (identified by monotheistic thinkers with God). Today, the conceptual linkage between beauty and eros is no longer a philosophical commonplace. Instead of defining beauty primarily through desire and love, we now conceive it in terms of the aesthetic, while the aesthetic is essentially defined in terms oppositional to desire and erotic love. *The Oxford Handbook of Aesthetics* thus confidently claims that an acceptable definition of aesthetic experience should exclude "sexual experiences and drug experiences" because the notion of aesthetic pleasure "clearly does not apply to the pleasures of sex or drugs." (p. 391)

Although Shusterman admits his debt to Foucault for his pioneering studies on sexuality, he intends his study of *ars erotica* to be a "complement" rather than a replacement of Foucault's *History and Sexuality*, a complement from a broader cultural perspective but also from a different erotic orientation.[2] It is clear that Shusterman's achievement is noteworthy, as his descriptions and analyses (the product of more than ten years of research), exceed Foucault's analyses in their cultural breadth and erotic detail. I am convinced that Shusterman's *Ars Erotica* will be a manual and a guide for future research for decades to come, since he not only approached his topic with a strict methodology but also carried it out in his brilliant analytic style. As he explains in the preface:

> The book is a blend of philosophy and cultural history of ideas because I think we cannot properly understand the philosophical meanings and arguments concerning *ars erotica* without setting them in their historical, cultural context, even if our viewpoint on that distant context is inextricably that of our own time. My immense debts to historians of philosophy and culture I register in the book's bibliography. (p. xii)

Shusterman clarifies six criteria of his investigations in *Ars Erotica* in the book's introductory chapter. Without these criteria, he could not create a unified aesthetic approach toward a defense and nuanced exploration of *ars erotica*. Shusterman introduces these criteria by asking: What are the general aesthetic principles that govern erotic arts? Do they form a coherent system, or are there conflicting aesthetic principles in different genres, styles, or traditions of *ars erotica*? Properly addressing such questions calls for an exploration of the culturally diverse theories of *ars erotica*. I offer here an introductory outline of some key aesthetic features that those theories display:

2 Shusterman writes: "Because my erotic experience has been mostly heterosexual, this book presents a somewhat different perspective than Foucault's, but one that hopes to complement rather than replace his impressive work." (p. xii)

1. First is the "incorporation of fine arts and other paradigmatically aesthetic activities into the practice of ars erotica." (poetry and music, culinary arts, arts of design, arts of fashion and grooming) (pp. 5–6)
2. "A second key aesthetic feature of *ars erotica* is its emphasis on beauty and pleasure rather than mere utility." (p. 6)
3. The third key aesthetic feature of *ars erotica* is "its highlighting of form. What distinguishes a performance of erotic artistry from mere sexual performance is attention to formal and structural qualities." (p. 6)
4. "Beyond these formalist concerns is a fourth aesthetic feature: the drive for stylization. *Ars erotica* is distinguished from mere sex by the careful attention it gives not simply to which erotic acts are performed – a kiss, caress, cuddle, or love moan – but to how one performs them." (pp. 7–8)
5. "Symbolic richness is a fifth aesthetic feature of *ars erotica.*" (p. 8)
6. "A sixth aesthetic aspect of *ars erotica* concerns its evaluative dimension: a concern with distinctive achievements of beauty, performative virtuosity, or superior taste that finds expression in critical judgments, connoisseurship, rankings, and competitions. In *ars erotica* we see this dimension in the classificatory rankings of different types of women and men in terms of their sexual desirability, but also in rankings of different pairings of men and women." (p. 8)

Shusterman provides such a tremendous amount of knowledge to readers and researchers that it would be difficult to surpass. Moreover, the complexity of the seven historical chapters is significant. Each begins with a socio-historical overview of the given culture, followed by a narrower description of the main social layers and gender relations contained therein. Only after presenting these descriptions of the socio-historical background does he begin to analyze the sexual life and customs of the chosen tradition. Each chapter, however, is not an isolated unit. Shusterman smartly orders them to draw connections and fruitful contrasts between the different *ars erotica* theories. This provides a thoughtful sampling of the complexity to be found in the examination of *ars erotica* from a global perspective.

* * *

For most Europeans and myself, the most exciting parts were the descriptions of the sexual practices of the ancient, far-Eastern societies. For example, in Chinese *ars erotica*, where Foucault had previously misunderstood it to involve a glorification of pleasure. Shusterman provides evidence that, "*pace* Foucault, Chinese *ars erotica* was very deeply motivated by health issues and crucially concerned with medical matters and sexual science (albeit not in the dominant forms of modern Western medicine)" (p. 155). The sexual culture of ancient Indian society is also fascinating because the *Kamasutra* is a familiar text to most Westerners; however, most people do not know that this Indian text contains not only sexual but also educational and artistic instruction:

> Beyond social roles and practices, Indian *ars erotica* demands and promotes psychological knowledge – proficiency in grasping the particularities of the individual person one seeks to win, please, and keep as one's lover (or, instead, to

> employ effectively as a go-between in one's pursuit of love). India's erotic theory (far more than China's) focuses on knowing the beloved's mind (with its anxieties as well as its desires and inclinations) rather than simply knowing the beloved's bodily state of arousal and physiological sensations of pleasure. The artistic activities that initiate the play of lovemaking performance promote psychological insight by revealing (as they shape) the beloved's aesthetic inclinations and mood so that the lover can harmonize with them before engaging in the more carnal harmonies of sexual arousal. (p. 242)

However, Shusterman, remarks the following in connection with ancient Indian culture:

> While China's sexual theory drew most heavily on medical texts and derived its concern for pleasure from the key medical aims of health and progeny, Indian erotology drew most heavily on the fine arts and their sensuous aesthetic pleasures, especially the traditional Indian art of drama, which was also an art of dance. Nonetheless, Indian sexual theory cannot fully support Foucault's sharp distinction between esoteric *ars erotica* and *scientia sexualis* because it defines itself in essentially scientific terms as providing knowledge about empirical matters based on observation. Moreover, this knowledge was openly published in texts articulating principles and rules rather than focusing on recondite skills secretly transmitted by an expert master to carefully chosen pupils. (p. 202)

A similarly precise but essential remark can be found in the evaluation of the *ars erotica* of Japanese courtesan culture, which developed in the Edo period (1603-1868) in comparison to the sublime and spiritual Islamic Sufi tradition:

> None of Japan's classical ways of love, however, attains the ethical uplift or spiritual sublimity of Islam's Sufism. By comparison, they seem philosophically shallow, and their aesthetic apotheosis in Edo courtesan culture ultimately rings hollow – with no real spiritual substance beneath the richness of ritual. Such conclusions (provisional as they may be) suggest a provocative thesis: that an aesthetic education through lovemaking requires an animating spiritual, ethical dimension to inspire and guide its project of self-cultivation so that it does not degenerate into decadent connoisseurship or self-indulgent, tawdry sensuality. A dimension of ethical and spiritual uplift can render erotic culture more nobly and compellingly aesthetic. (p. 314)

From Shusterman's comparative, interdisciplinary analysis, it becomes evident that he is much more gender-sensitive than Foucault since he depicts the dialectical relationships between pleasure, sex, gender, politics etc. The ugly realities of misogyny and sexism in these ancient cultures, for instance, never escapes his study, and Shusterman always maintains a nuanced and critical perspective regarding sexist practices. (pp. 33, 60, 112, 115, 217–219, etc.).

* * *

The "speculative postscript" was the most edifying part in the book for me. In Shusterman's opinion, beauty became detached from *eros* in European culture following the "flourishing union in Renaissance Neoplatonism and in reaction to the growing power of materialist philosophies

in the seventeenth and eighteenth centuries." (p. 392) It is true that the role of *scientia sexualis* in contrast to *ars erotica* is dominant in European culture. Shusterman cannot destroy or neglect the socio-historical tendencies that led to the birth of *scientia sexualis* in European culture. However, he hopes that by exploring the diverse *ars erotica* practices of ancient cultures worldwide, we can come to unify *eros* and beauty to the benefit of the study of aesthetics and, especially, an improved appreciation for sexual arts.

> To the extent that our modern philosophical tradition continues to define the aesthetic in opposition to the erotic, it will remain difficult to do proper justice to the beautiful aspects of sensual desire and to the rewarding arts of sexual fulfilment. A look at other cultures and other times can provide, as this book suggests, ample resources for a broader, deeper erotic vision to enrich the field of aesthetics and our art of living. (p. 396)

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Book Review

A new somaesthetic approach to Renaissance art in Florence

Else Marie Bukdahl

In her research, Dr. Allie Terry-Fritsch has focused primarily on different forms of cross-cultural and multidisciplinary exploration with a somaesthetic perspective. Uncovering the embodied creation and perception in significant aspects of art history and analysing different modes of viewership has been one of her key endeavours. She is particularly interested in describing how the medieval and early modern communities acted as participants and interpreters of events and how they imbued these events with new meaning. She has published many articles and several books with original, stimulating and significant contributions to this topic.

In collaboration with Erin Felicia Labbie she has—among others—been both editor and contributor to the impressive book *Beholding Violence in Medieval and Early Modern Europe* (2016), where the concept of beholding and the experiences of individual and collective observers of violence during the two periods are explored in new ways.

In her research, however, she has primarily been interested in the viewer's embodied and performative experience of both art and architecture in fifteenth- and sixteenth-century Florence and in other parts of Northern Italy. Particularly the analysis of the political significance of embodiment in the viewers' perception of, and engagement with art has a central place in her investigations of these two periods. Another important publication in this field is *Fra Angelico's Public: Renaissance Art, Medici Patronage, and the Library of San Marco* (2012). In this book, she interprets Fra Angelico's frescoes at San Marco from the viewpoint of the Humanist community that once lived at the Observant Dominican Convent during the time of Cosimo de' Medici, between the 1430s and 1460s. She reveals the physical pathways—what she calls "a "humanist itinerary"—for the secular users of the library.

Somaesthetic Experience and the Viewer in Medicean Florence

Her latest book, *Somaesthetic Experience and the Viewer in Medicean Florence, Renaissance Art and Political Persuasion, 1459-1580.* (2020), provides not only a very nuanced interpretation of the theme indicated in the title, but also has a detailed account of the various philosophers' and Renaissance scholars' concepts of embodiment as a valuable source for shedding new light on the Florentine Renaissance. She shows how the body's epistemology and the embodied experience have gradually occupied an increasingly prominent place in Renaissance research.

In introducing her book, she starts by narrating two small, dynamic events that show the reader how art in the modern era has evoked a powerful experience in the viewer's mind and body.

She relates an incident that took place during a visit to the Uffizi Gallery in Florence with a group of her students. One of her students, who had been looking at Masolino's and Masaccio's expressive Altarpiece of Saint Anne, was so moved that she fainted.

She also quotes the renowned French novelist Stendhal's account of a very emotional encounter in Santa Croce in Florence with the powerful interpretation of Sibyl by Baldassare Franceschini, also known as Il Volterrano. Stendhal described this encounter as follows:

> *I had attained to that supreme degree of sensibility where the* divine intimations *of art merge with the impassioned sensuality of emotion.*[1]

These two sensory narratives serve as a stimulating prelude to the book itself and arouse the curiosity of readers.

1. Somaesthetics as a methodological practice in Renaissance art

She has organised her book in such a way that the overall theoretical considerations and the central aspects of her four interpretations of the embodied experience of Medicean artworks and the essay about live experience in the digital world are presented in the introductory chapter entitled *Activating Renaissance Viewer: Art and Somaesthetic Experience*. She rightly notes that "a comprehensive study of Renaissance somaesthetics is beyond the scope" of her book.[2] It would have been helpful to readers if her own aims, the theoretical discussions and the short useful presentation of the content of her book had been separated a bit more. They are presented as a result of the discussions of the art theoretical and art historical methods she uses and of the short presentation of the book's five rather original case studies. But this approach, in turn, provides readers with a nuanced insight into the origins and developments of the book's always precisely formulated theses.

The detailed presentation of her interpretation of somaesthetics both as a philosophical and art-historical methodological practice is placed first in this chapter. One of her central views is that during the Renaissance, which was surrounded by culturally-established boundaries, "viewers were encouraged to forge connections between their physical and affective states, when they experienced art". They were stimulated by both visual art and architecture on an almost daily basis. She thus focuses mainly on an in-depth analysis of "how viewers in Medicean Florence were self-consciously cultivated in somaesthetic experience." She alludes here to Richard Shusterman's somaesthetics, which is without a doubt one of her most important philosophical foundations (A.T., 22-23). This is particularly true of his concept of "the soma as a living, purposive, sentient, perceptive body" and of the embodied experience. She is also inspired by one of the basic concepts of his somaesthetics:

> *"Somaesthetics offers a way of integrating the discursive and nondiscursive, the reflective and the immediate, thought and feeling, in the quest of providing greater range, harmony, and clarity to the soma – the body-mind whose union is an ontological given but whose most satisfying units of performance are both a personal and cultural achievement."*[3]

1 M. De Stendhal, *Rome, Naples et Florence en 1817*, Paris: Deluna, 1817, 302.

2 *Allie Terry-Fritsch Somaesthetic Experience and Viewer in Medicean Florence* 2020, hereinafter abbreviated AT., 29

3 Se Richard Shusterman, Thinking through the Body. Essays in Somaesthetics,New York: Cambridge University Press: 2012, p. 141 and "Somaesthetics and the Revival of Aesthetics", Filozofski Vestnik , volume, letniks XXVIII number/Stevilka 2, 2007, p. 149.

And like Shusterman, she has a vital focus on lived experience and its influence on self-knowledge. She also interprets, in her own way, his perception of the aesthetic experience never being passive, which means that an artwork cannot be completed until the viewer has experienced and interpreted its particular qualities.[4] This is why it is important for her that there is always an intense interaction between the artwork and the viewer and the viewing experience.

This means that art as experience requires both the artist and the person experiencing the works to operate on an open platform with a high level of visibility. And her thinking through aesthetic experience "as an active and self-reflective practice (..) draws attention to the dynamic interplay between the self, sensory stimuli and societal conditions and aspirations" (A.T, 23). By providing these important insights into the embodied creative process, she has been able to reveal new aspects of Florentine Renaissance artworks and to focus on new values of aesthetic experience and interdisciplinary perspectives.

In constructing her somaesthetic methodological practice for Renaissance art history, she has also been inspired by the theory and practice of contemporary performance art. This especially true of the fruitful collaboration with contemporary performance artist and theorist Scott Magelssen. She learned a great deal about the production and use of space in the interpretation of visual art through a cross-listed Art History and Performance Studies seminar on visual culture and social justice at The Bowling Green State University in Ohio in Fall 2011. This knowledge and practice was deepened through the collaboration with the very experienced site-specific installation artist Leigh Ann. In collaboration with her, she has inspired a group of students to work with large-scale immersive installations with bodily and emotional engagements. In doing so, Allie Terry-Fritsch has gained first-hand knowledge of the process of performing in all its details. She also gained an insight into how performance artists often challenge the audience to think in new and unconventional ways and disrupt the conventions of traditional art in many surprising ways. This insight also resulted in her being able to uncover new aspects of the somaesthetic experience in the Florentine Renaissance. Or in her own words:

> *"her book draws on scholarship from the fields of ritual and performance studies to consider embodiment as both ´an act of doing' and a way of 'knowing'. She quotes J.L. Austins's famous dictum 'saying is doing'"*(AT., 25-26).

However, the somaesthetic experience of art during the Renaissance does not factor in worldviews of Shusterman or the performing artists.

The study of the relation of the body and mind has, however, always been—and continues to be—a prominent theme for generations of Renaissance scholars such as Michael Baxandal and Ernst Gombrich, among other outstanding researchers. These researchers do not always use the word "somaesthetic", but Terry-Fritsch chooses to apply it to their interpretations of the body-mind relation because these interpretations contain so many of the features characteristic of somaesthetics. This includes the concept of art that is rooted in various ways in an embodied and interdisciplinary experience and focuses on interactive dialogue with viewers and their surroundings.

The general aim of her book is to provide a critical analysis of a select group of works in Medicean Florence that were activated by the performative participation of the viewer. It is through a very precise analysis of the "environments in which somaesthetic experience occurred

4 Shusterman, Richard, "Intellectualism and the Field of Aesthetics. The Return of the Repressed?" *Revue Internationale de Philosophie*, 220, 2002, p. 331.

and reconstruction of embodied scenarios of viewer engagements took place herein", that the book is able to consider "art through embodiment and suggests an art-historical somaesthetic of style" (AT, 29).

In addition, the somaesthetic experience that she analyzes in her book is not spontaneous, but carefully developed by both the patron and the artist. She thus seeks to show how "certain Renaissance patrons tapped into the performative potential of art" and uses "the somaesthetic experience as a means of constructing Political Communities in Medicean Florence"(AT, 29). Therefore, the body-mind is not only reinserted into the historical process of viewing, but highlights at the same time the various persuasive strategies that Renaissance patrons used.

She has chosen to analyse four somaesthetic experiences of works of art in Renaissance Florence. They are "arranged chronologically to provide a broad view of patronage tactics in Medicean Florence between the mid-fifteenth century and the end of the sixteenth century" (AT, 40).

And precisely this focus on the somaesthetic experience of Renaissance viewers and the consistency in Medici patronage means that she has been given the opportunity to present new interpretations of several of the famous Renaissance projects in or in the proximity of Florence.

2. Somaesthetic experience in the *Chapel of the Magi*

Her first new interpretation of the somaesthetic experience in Medicean Florence emerges clearly in her analysis of *The Chapel of the Magi*. This chapel was created by Michelozzo inside the Palazzo Medici and decorated lavishly by Benozzo Gozzoli and Fra Filippo Lippi in the 1450s. Although the amount of detail in her new interpretation of the *Chapel of the Magi* is overwhelming, she has nevertheless managed to recreate the historical context it was once a part of, but which has so far been rather overlooked. She reveals the often surprising connection between the decorations of the floor, the ceiling and the walls and Cosimo de' Medici's political appropriation of the cult of the Magi in Florence together with his highlighting of the ideals of the city and the supreme place and authority of his own family. She has revealed previously rather hidden relationships between patronage and style in all the decorations in the chapel. This includes her nuanced analysis of the eastern wall of Benozzo Gozzoli's painted cycle of the sumptuous *Procession of the Magi*. It visualises the processional drama, staged in Florence on the 6th of January to honor the manifestation of Christ to the Gentiles as represented by the Magi, also called the three holy kings, the wise men (Matthew 2:1–12) or the Florentine Epiphany celebrations.

In this part of the cycle, the mighty Cosimo de´ Medici (1389-1464) appears as the pious and righteous ruler, riding in the foreground of the picture on a brown mule (Figure 1). It is obvious that "the brilliance of the shimmering surfaces of the breastplate and bridle signals" him as the most important of the citizens behind the Magi. He is the key to the decorative and dynastic program and is surrounded by his family, government officials and holy men. They are dressed in costumes of costly material and the inclusion of gold draws the eye of the beholder to the important part of the narrative. It is not only the Medici's wealth and power on display here, but also their dedication to the ideals of the city-state, religious piety, their pride over their victory, over tyranny and their resultant freedom. It is another example of the way the somaesthetic experience of the visitor functions as a strategy for political persuasion. The three Holy Kings, also called the Magi, wear glittering costumes and precious crowns on their heads. They ride majestically on the right side in the foreground of the picture.

Figure 1 *Benozzo Gozzoli.* View of the eastern wall of the painted cycle of the Procession of the Magi. *1459. Mixed media. Chapel of the Magi, Palazzo Medici Riccardi, Florence.*

The unity of the artistic decoration in the chapel has emerged first and foremost because it was designed in every detail with the somaesthetic experience of visitors in mind (AT, 57-58). The visitors, who came mostly from the upper classes, are key players in the sensory and embodied experience of the artistic interpretation of the Magi procession and the other elements of the decoration of the chapel. The sumptuous floor tiles function as standing markers for the visitors and guide their movements through the chapel's space. They are encouraged to walk the same path as the Medici. Allie Terry-Fritsch's unveiling of the coordination of the serpentine composition of the wall paintings with the movement of the viewers, which actually inspired them to follow the very powerful procession in fictional reality, is an original observation. This observation stands in contrast to many interpretations of the "Renaissance spectator, who is given spectral dominance over a spatial continuum from a fixed position"(AT, 94).

Through the Epiphany rituals represented on the walls – for example in the *Procession of the Magi* – the visitors get both an intense religious experience and a sensuous understanding of the Medici family and its power and authority, but also of its ethical and social values. The Medici colours of red, white and green supplemented by layers of gold create an intense impression of vibrant life, which also appeals strongly to the visitor's mind and body and strengthens their perception of the ideals of Florentine civic humanism. This secular point of view is the very well-documented and largely original main theme in Allie Terry-Fritsch's interpretation of the decorations in the chapel.

Her analyses of the religious aspect of the somaesthetic experience is especially linked to her description of the rituals first and foremost in the procession of the Magi in the piazza of San Marco with about seven hundred participants and which appears as a kinetic drama. But the actual content of the contemporary understanding of Christianity is only included in short form. Marsilio Ficino and his attempts to connect Neoplatonic and Augustinian theology could possibly be part of the Medicean concept of Christianity. Cosimo de' Medici supported Marsilio Ficino's tolerant, and humanized Christianity. "Plato was introduced as a gateway to St. Paul."[5] And many Renaissance artists, including Titian, were influenced by Ficino's theology, particularly his concept of the relation between celestial and terrestrial love.[6] Titian visualises the "Neoplatonic belief that love, a principle of cosmic 'mixture', acts as an intermediary between heaven and earth."[7]

The unity in not only the *Procession of the Magi*, but in all the other decorations on the walls and on the floor in the chapel has emerged first and foremost because it was designed in every detail with the somaesthetic experience of visitors in mind. Allie Terry-Fritsch's nuanced descriptions of how visitors' bodies and minds are activated by the decorations in the chapel are inspired not only by her studies in the various theoretical and case studies in somaesthetics experience in art, but also by her engagement in contemporary installation art.

Donatello's bronze sculpture entitled *Judith* (1457-1464), was centrally located in the garden of the Medici palace on Via Larga (fig. 2) during their period of government. Allie Terry-Fritsch's somaesthetic interpretation of Judith is more tightly structured and has therefore a clearer profile than her analysis of *The Procession of the Magi*. The statue was raised on a column, which had two inscriptions. Historians have traditionally interpreted the statue of *Judith* as a symbol of Cosimo de' Medici and his son Piero's efforts to highlight their political identity in the 1450s and 1460s. Judith proudly swinging the lethal sword over Holofernes's head to deal the final blow, has consequently been understood as "the embodiment of mal Medici political power" (AT, 117). Such an interpretation may be correct, but the sculpture contains several layers of meaning. Allie Terry-Fritsch uncovers one of these and she manages to find a new analysis of both the statue of Judith and its many visual connections with the surroundings – both in the present and in the future. She takes her starting point in the interpretation of the Jewish heroine suggested by Lucrezia Tornabuoni de' Medici. She was the mother of Lorenzo de´ Medici and was both a poet and a prominent intellectual and administrator, who her son described as being "an instrument that took great many hardships away from me" (AT, 119). Several scholars have – albeit briefly -– pointed out that there is a connection between Donatello's statue of Judith and Lucrezia's description of the Jewish heroine in *The Story of Judith, Hebrew Widow*, written in the 1470s. However, through a closer analysis of Lucrezia's sacred narrative of Judith, Allie Terry-Fritsch succeeds in presenting a new interpretation of Donatello's sculptural interpretation of Judith. She perceives it as "an embodiment of female Medici political power and a tool for the construction of political communications through somaesthetic cultivation" (AT, 120). Lucrezia's description of Judith has a performative and visual character and appeals directly to the senses and the romantic imagination of readers or listeners. It was probably read aloud

5 Fenlon, Dermot, *Heresy and Obedience in Tridentine Italy: Cardinal Pole and the Counter Reformation, Cambridge University Press* 1972, p. 2. On Ficino's theology generally see: Marsilio Ficino: *His Theology, His Philosophy, His Legacy,* ed. M. J.B. Allen and V. R. Rees, Leiden - Boston - Cologne 2002

6 Gabrio Pieranti, *Il neoplatonismo nell'arte rinascimentale*, in «*Arte e artisti*», vol. 2, cap. 3, Istituto Italiano Edizioni Atlas, 2011, pp. 2-11.

7 Panofsky, Erwin, *Studies in Iconology. Humanistic Themes in the Art of the Renaissance* (1939) Torchbook edition, 1962, pp. 151-152) and Else Marie Bukdahl, "Art and Religious Belief: 25 Lessons for Contemporary Theory from Renaissance and Baroque Painting, *The Journal of Somaesthetics* ,Volume 3, Numbers 1 and 2 (2017), p. 36-39.

in the garden of the Palazzo Medici where it activated the audience and revealed new aspects of Donatello's statue, which could be seen from several angles and therefore revealed different sides of the new interpretation.

Figure 2 *Donatello.* Judith and Holofernes. *1464. Bronze. Located between mid 1460 and 1495 in the garden of Palazzo Medici, today in the Sala dei Gigli, Palazzo Vecchio, Florence.*

By placing Donatello's statue of *Judith* in the Garden of the Medici, which symbolised their power and influence, and by incorporating Lucretia's narrative of her courageous action for her country, Judith becomes an "agent of civic authority" and an embodiment of justice and liberty in Medicean Florence. In the interplay between Lucretia's verbal and Donatello's sculptural interpretation, the active engagement of the audience was stimulated and they were able to see a connection between past and present. Judith's struggle for the liberation of Israel also became a

symbol of the Medici's efforts to maintain power in Florence and to ensure peace and justice. But it is now a woman who is exalted as a symbol of these ideals. Through Lucretia's performative text, Donatello's *Judith* is enlivened as a heroine who possesses nothing less than what Lucrezia calls "a manly heart", but who at the same time uses her feminine strengths, particularly her beauty, in her fight for justice, which "inspires a form of collective witnessing that would reinforce communal values"(AT, 149). She is therefore an early and courageous example of the "crossing of normative gender boundaries" (AT, 141). This correct view deserves a more detailed analysis.

3. Somaesthetics and Holy Land Devotion at San Vivaldo

Somaesthetic experience as a strategy for political persuasion has played a central role in the interpretations of *The Chapel of the Magi* and of *Judith* by Donatello. But in the analyses of the somaesthetic experience of the New Jerusalem of San Vivaldo, the religious aspect is highlighted and the understanding of performative Renaissance culture is therefore expanded. Throughout the fifteenth century the concept of the "New Jerusalem" focused on the celebration of the three Magi, the three Holy Kings. And there was also a close spiritual and political relation between the Holy Land and the Medici family. A "New Jerusalem" was, however, not constructed by the Medici family.

In 1494 the Medici were deprived of power and Girolamo Savonarola became the new ruler. He made Florence "the literal site of the New Jerusalem" and relegated the Pope and Rome to the background. The pope was angered and in 1498 Savonarola was convicted as a heretic and burned at the stake. In the years that followed, Florence gradually lost its influence. It was only when the Medici again regained power that its influence was restored. However, the dream of founding a "New Jerusalem" was already in progress in 1499. Franciscan friars led by Fra Cherubino da Firenze began building a pilgrimage site of a "New Jerusalem" in the dense forest of Camporena, located about 30 miles southwest of Florence at this time.

Allie Terry-Fritsch has succeeded in creating a finely structured analysis of this monumental project. In particular, she has managed to portray in a nuanced and original way the pilgrims' diverse and often very strong somaesthetic experiences during the encounter with the Holy Sites and works of art that the "New Jerusalem" comprised.

The Franciscan founders of the "New Jerusalem of San Vivaldo" had both visited and carefully studied the topography of the holy sites of the real Jerusalem. During these studies, they experienced both bodily exertion and mental strain, which have always been highlighted as important components of a pilgrim's participatory devotional practices. But the Franciscans recreated the holy sites in ancient Jerusalem in an improved version, characterized by local stylistic features and materials. These interactive and contemplative spaces, which contained lifesize wooden or terracotta sculptures of biblical figures, were incorporated into the local romantic Tuscan landscape.

In four of the chapels located on Mount Calvary, the local Renaissance features emerge clearly. These are the frontispiece in the Chapel of Pie Donne, the framed portici in the Oratorio of the Madonna dello Spasimo (the fainting Madonna) and the semicircles over the doors in the Chapel of Andante al Calvario (Figure 3).The "New Jerusalem" was therefore also imbued with a local character and was completed in 1516. Only seventeen of the original thirty-four holy sites still exist, but archeological excavations have made it possible to get an impression of the remaining sites.

Figure 3 *To the left the* Chapel of Pie Donne*, in the middle* Oratory of the Madonna dello Spasimo *(Fainting Madonna). Far right* Capella dell'andante al Calvario *(For the pedestrian to Mount Calvary). San Vivaldo.*

The Franciscans had the task of guiding the pilgrims through the sacred sites in the "New Jerusalem" in the same order as their counterparts in the ancient Jerusalem. In her meticulous descriptions of the pilgrims' encounter with the architecture and the works of art in the individual holy sites, Allie Terry-Fritsch succeeds in portraying their vivid, sensual and very intense experiences in such a committed and visual way that the reader becomes almost as moved as the pilgrims and feels as if they are almost physically present in the artwork. This is due to the fact that artworks such as the sculpture group, *Thomas and the Disciples* (Doubting Thomas) were designed precisely "to foster somaesthetic experiences that heightened awareness of the pilgrims as a participant of the event" (Figure 4) (AT, 178). However, a more nuanced explanation is missing regarding the aspects of Christianity that not only this sculpture but also the other works of art in the "New Jerusalem" visualised. This is the aspect of the theology of the Franciscan friars, who at that time, despite discussions about the correct Christian goals, focused on poverty, humility, charity, prayer, simple living and following in the footsteps of Christ. It was precisely through the intense experiences of these pilgrims in their encounters with the many holy places and the works of art that were placed there, that these ideals and requirements became a living and demanding reality.

Figure 4 *Agnolo di Polo. attr. ad.* Thomas and the disciples *(Doubting Thomas). Groupe with lifesized terracotta sculptures. Mount Zion. San Vivaldo.*

To provide the reader with a contemporary impression of the very complex forms of active experiences that the pilgrim was afforded during meditations on the works of art in the ”new Jerusalem”, Allie Terry-Fritsch creates parallels with the sensory immediacy and physical participation inherent in contemporary installation art. She quotes Claire Bishop's description of the key aspects of the somaesthetic experience that installation art can create:

> *installation art creates a situation into which the viewer physically enters, and (..) addresses the viewer directly as a literal presence in the space (..) installation art presupposes an embodied viewer whose senses of touch, smell, and sound are as heightened as their sense of vision* (AT, 189).

Allie Terry-Fritsch also reveals very compellingly how the mental and physical meditation in the holy sites of the “New Jerusalem" provided pilgrims with a somaesthetic experience that was even more powerful than the one they had the opportunity to encounter in the actual holy land.

4. The game *calcio* as a cultural artefact of somaesthetic experience

She chooses to conclude her thorough analysis of the somaesthetic experience and the viewer in Medicean Florence with a description of *calcio*, which functioned as a performative game in the social world of the Medici and in society as a whole. It was a ball game, which was an early version of football. It started in the *Piazza Croce* in Florence, which has always been its most famous playground, but it was also played in *Piazza Santa Maria Novella* (Figure 5). The basic objective of the game was to find a way to score a caccia, which was achieved by kicking the ball across the goal line of the opposing team (AT, 218).

Figure 5 *Giovanni Stradano.* View of a Calcio Match in Piazza Santa Maria Novella. *1561-1562. Fresco. Sala del Gualdrada, Palazzo Vecchio, Florence. I*

Her interpretation of this game is mainly based on the description that Giovanni de Bardi has presented in the *Discorso sopra il giuoco del calcio fiorentino* (Discourse on the game of Florentine *calcio*) (1589).

She is the first to present an in-depth analysis of Bardi's treatise and the imagery associated with it. Through this interpretation, readers are provided with not only a very nuanced depiction of the ball game, but also an accurate description of how it was used to highlight the ducal authority and ideals and the influence of the nobility in the sixteenth century in northern Italy. The book thus functions as a sort of performative space for the reader and an interactive tool.

A central premise of AliceTerry-Fritsch's analysis of the ball game *calcio* is her emphasis on Bardi's highlighting of its close connection with the archetypes of the ancient games in Athens and Rome, where precisely the bodily and mental dimensions of human beings were inseparable and where the goal was to improve the quality of our lives. According to Bardi, the game of *calcio* is based on the same body-mind relation and the same goals. It stimulated full-bodied, mindful viewer engagement that conveyed "an image and function of the well-ordered state", embodied the Grand Duke's noble authority and "inspires a love of *patria*" (AT, 235, 261).

Through the detailed analyses of Bardi's descriptions of the game of *calcio*, Allie Terry-Fritsch uncovers another aspect of the relationship between the viewers' somaesthetic experience and the political persuasion in Medicean Florence.

5. Renaissance Somaesthetics in a Digital world

In the epilogue to this book, Allie Terry-Fritsch changes track. She leaves the vivid historical space and enters the digital world, where she finds "a somaesthetic turn in contemporary, pedagogical tools", which can be used to interpret the Renaissance and engage virtual viewers (AT, 273). She is convinced that digital media have the remarkable capacity to represent – and render present – the parts of the art world that are not immediately accessible to the human eye. The digital media produce images in the context of more or less shared visual regimes that direct the gaze of the beholder, shape sensation, and create presence. She discovered the special capacity of digital media during the study of the often extremely poor conditions of viewing original artworks - for example Mona Lisa - in the Louvre, where masses of individuals are gathered waiting to get some glimpses of the original painting. First-hand somaesthetic experience of art is, of course, always preferable, but when the chances of realising these are so low, highly developed virtual technologies can create high-quality digital versions that can animate both works of art, the environment in which they are situated, as well as the people who go there, in many surprising ways. Such digital recreations of the original works can "offer viewers a time-based, sensuous understanding of the work of art that is streamlined and personalized" (AT, 283). Allie Terry-Fritsch adds:

> "*ironically, twenty-first century digital applications have the capacity to enable viewers to access a sensory driven understanding of these works that more closely resembles Renaissance experience than a visit to the real thing*" (AT, 287).

This is due to the ability of digital projects to transport the viewer to surprising and alternative positions within the space both in the artwork and its surroundings. She opens up a fruitful new discussion about the original works and the digital recreations.

Conclusion

It is impossible to do justice, in the limited space of a review essay, to the richness and depth of the ideas in this book. But I have tried to highlight and interpret some of the main themes and make some critical and also more in-depth observations. But the majority of Allie Terry-Fritsch's methodological considerations and her interpretations of the complex interplay in Medicean Florence between the artworks, the viewer and the surroundings, emerges very powerfully and convincingly. This also applies to her analyses of the renaissance somaesthetic in the digital world.

I thank *Wikipedia.org* for the publishing rights to Figures 1-5.

Book Review

Meliorate Meliorism: A Review of *Somaesthetics and the Philosophy of Culture: Projects in Japan* (ed. Higuchi, S.)

Kyo Tamamura

Somaesthetics and the Philosophy of Culture: Projects in Japan serves as a guidebook on Japanese somaesthetics. It was edited by Satoshi Higuchi—a leading theorist and researcher of aesthetics in Japan—who introduced somaesthetics into the country. In this book, Higuchi describes the history of somaesthetics in Japan, its development (when and the circumstances under which it began and how it developed), and its current state. The book presents an overall picture of "Japanese somaesthetics."

Two questions will arise. Is it possible to grasp the overall picture of Japanese somaesthetics? If so, is it necessary? Although not explicit, Higuchi's answer to both of these questions is yes. With regard to the first question, we should first examine whether somaesthetics can be found in Japan. Of course, somaesthetics was not originally present there. As is well known, somaesthetics was introduced at the end of the 20th century by Richard Shusterman, who wrote in the foreword of his book that he "first arrived at the idea of somaesthetics in 1996" (p. vii). Higuchi arranged for him to come to Japan in 2002. He subsequently served as visiting professor at Hiroshima University for two years and introduced the concept of somaesthetics there. Somaesthetics did not exist in Japan prior to Shusterman's arrival, and it has not spread much since then. However, people have always been curious about the potentiality of the human body, akin to somaesthetic researchers in this century.

This book illustrates how Japan was a suitable, though not optimal, place for somaesthetics to take root. First, people in Japan have always emphasized "praxis" over "theoria." In other words, they have valued doing over just seeing and thinking. For instance, traditional Japanese art, which includes paintings and music, is not merely viewed or heard, but is drawn and played. Art is not a special activity performed only talented artists, but an everyday one. In addition, Japan has a long tradition of emphasizing "acquisition" (*taitoku* in Japanese)—a deep understanding obtained through bodily practice and actions, as opposed to a shallow understanding of the theory. The importance of bodily understanding is taught not only in Zen monasteries, but also in common people's houses.

Unfortunately, modern Japanese "physical education" in schools does not properly inherit this tradition. In the latter half of the 20th century, there were some books related to body theory, but they were influenced by the Western philosophical tradition that tends to disregard the body.

However, trust in bodily knowledge is sound in itself. In fact, significant philosophical research on the capability of the body has been conducted. Books by Hidemi Ishida, Yoichi Yamada, and Akeo Okada are examples of such research.

Why did this happen in Japan? It is likely that Japanese people felt a sense of discomfort with the modern concept of "art" imported into Japan in the late 19th century. *Bugei* (martial arts and sports) were traditionally considered a form of art in Japan, but they came to be excluded because they did not fit the Western concept of "fine art." Since then, in a sense, people have regularly questioned what art truly is and whether sports can be considered art. This may have led to the maturation of the concepts of beauty, art, and sports.

Third, how to handle one's body has always been a central topic in Japanese school education. In Japan, serious incidents have long occurred at school that have been related to the human body. Higuchi provides two examples: "*tsumekomi kyoiku*" (rote learning; literally means "knowledge-stuffing education") and corporal punishment. We should feel ashamed that such problems have frequently occurred in Japanese schools. However, it can also be argued that such circumstances presented the opportunity to think about the body, which facilitated the maturation of the discussion about the somatic existence of human beings.

Regardless, is it useful to examine Japanese somaesthetics? In recent years, the reformation of aesthetics has gained momentum worldwide, and aesthetic research appears to be entering a new stage. Shusterman argued that Western philosophy needs to be renewed and that Japan and its ideological traditions offer hints for thinking about the future of philosophy. Higuchi has also been working on renovating modern aesthetics, but his perspective is not necessarily the same as that of Shusterman. Looking back on their efforts to examine the problems encountered and how they overcame them will help us gain insight into future of aesthetics and philosophy.

In fact, this book addresses topics that have rarely been touched upon in previous studies on somaesthetics. The topics include the relationship between physical and theoretical knowledge, the involvement of language in improving bodily capabilities, and the role of language in acquiring knowledge and trying to grasp meaning through the body. These issues are examined from a new perspective in this book, which refers to and introduces recent studies in Japan (e.g., the study by Masaki Suwa). Referring to such research is expected to deepen discussions on somaesthetics.

Some may argue that most of the content in this book merely consists of Higuchi's personal history. It does, in a sense. It would not be out of line to say that his career almost overlaps with the history of Japanese somaesthetics itself. However, this does not mean that Higuchi is the only person to practice somaesthetics in Japan. Researchers from various fields have made efforts that resonate with his inquiries (note that the subtitle of the book contains the pluralized term "projects"). Additionally, the number of younger researchers in the field are growing. The second half of this book consists of articles by his young colleagues, which illustrates that Japanese somaesthetics is being passed down to the next generation. Japan can thus certainly play a part in the future of somaesthetics.

Before closing, I would like to express a possibly superfluous concern. There is no doubt that somaesthetics will help us to conceive "a better body." It is no mistake to call it meliorism, as even Shusterman defines somaesthetics as "the critical, meliorative study of the experience and use of one's body" (p.xiii). However, what does it mean to make better use of one's body? Is there anyone who can do it in the truest sense? If there is, who is it?

Higuchi focuses on the somaesthetic experience of the sports performer in Chapter 2. He possibly uses the word "sports performer" and not "athlete" because the latter tends to imply someone who is proficient in physical exercise. In other words, the latter term implies a professional sportsperson. This can be seen as a reflection of his anti-elitism. This is also reflected in Chapter 3, where Wolfgang Welsh's attempt to expand the object of aesthetics from traditional fine art to topics in daily life is introduced. On the other hand, Higuchi also appears to be interested in the use of the expert's body. In his previous work, he analyzed the body theory of Yoshinori Kono—a renowned researcher and practitioner of *ko-bujutsu*, a traditional Japanese martial art (Higuchi 2017, 2019). It is also well known that Shusterman is an enthusiastic practitioner of the Feldenkrais Method and is a certified instructor who undertakes workshops and demonstrations that include practical exercises. We are thus prompted to think that paying attention to our body requires a proficient skill or a method that would be found outside our daily life. I recall that when I introduced the idea of somaesthetics to a student at my college, he said he was interested in the somatic experience of athletes. He wanted to study Ichiro's body use (Ichiro—a major league player—is mentioned several times in this book, albeit in different contexts). This example may be too mundane, but it would be reasonable to admit that there is a danger that meliorism can bring back the elitism that Higuchi and Shusterman were trying to avoid (Satoshi Masuda (2000)—a Japanese musicologist—once criticized somaesthetics' elitist tendency by stating that Shusterman's meliorism failed to capture the true value of rap music. This criticism may appear a bit too harsh, yet I do not think it is completely off the mark).

Asa Ito, a Japanese aesthetician, published a series of studies concerning the body use of the disabled. She stated that "while we tend to think that the world we see is everything, there should be a world that you can grasp with your ears, hands, and so on" (Ito 2015: p. 5). According to her, "the blind are the specialists who can sense 'another face of the world'," because "they perceive the direction of the floor mats with the feel of the soles of their feet, and they know whether or not the curtain is open by the echo of the sound" (Ito 2015: p. 6). Of course, here she uses the term "specialists" in a figurative sense.

Some researchers (including myself) have started to study the behavior of amateurs in Japanese traditional arts (e.g., Pellecchia 2017). Although amateurs do not have extraordinary talent or special skills, they know themselves and their bodies well. They always pay attention to their physical condition, because their relative incompetence encourages them to think about how to live with their own bodies and how to cope with their (im)possibilities.

Paying attention to groups such as amateurs and the disabled, who thus far may not necessarily have been the subject of philosophical research, will broaden the horizons of somesthetic research. "Projects in Japan" is still now going on.

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