



Article

# Reflection through Inner Presence: A Sensitising Concept for Design

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**Abstract:** Although our embodied dimension has been recognised as a generative source of imagination through movement and gesture, the notion of the body as a generator of more symbolic and descriptive expressions of knowledge remains mostly unexplored in human-computer interaction (HCI). This theoretical paper introduces the sensitising concept of *reflection through inner presence*, in contrast to *reflection in action*, as a way to differentiate two modes of embodied reflection generating distinct types of materials for design ideation, inspiration, and information. The relevance of this distinction, and the recognition of *inner presence* in somatic-oriented design, appears as a way to fill the gap of the reported elusiveness in the description of inner experience for design use. Different than design approaches that use reflection in action, reflection through inner presence generates detailed accounts of somatic and aesthetic qualities, which can be potentially incorporated into the design of artefacts.

**Keywords:** HCI-oriented design; sensitising concepts; inner presence; ideation

## 1. Introduction

The role of the body is fundamental in our meaning-generation process, therefore, influencing human creativity [1] and language [2]. The fact the body shapes symbolic knowledge inspires the distinction between two different embodied approaches in the generation of design ideas. Whilst embodied action (or *thinking through making*) has been acknowledged as one of the ways through which designers reflect [3–5] the goal of this theoretical paper is to introduce the sensitising concept of *reflection through inner presence*. The notion of inner presence understood as *paying attention* to the inner self as a generative source of knowledge has not been adequately explored in the context of HCI-oriented generative design methods. Inner presence as a sensitising concept offers a possible starting point to look at a different dimension of human reflexivity that can potentially shape design practice. The concept of inner presence is inspired by the field of *somatics* and its invitation to deliberately connect with our embodied awareness, including our proprioceptive system [6]. Inner presence can also be linked to the concept of *filtering out through the body* [7] where bodily sensing *directs* the outcomes in the ongoing dialogue between mind and body, and our relationship with the environment. As a result, tacit information encapsulated in the enactive body becomes explicit and conceptual [8], generating detailed information for design use.

In the context of HCI-oriented design, although third-wave HCI has noticeably contributed to a more rigorous take on the importance of embodiment in interaction [9], when referring to the body, most design methods tend to overlook some particular aspects that will be discussed through the literature review of this paper. Some of these gaps are: (1) dynamics associated with design practice sometimes neglect subjective experience as a valid source of information for design use; (2) despite the claims situating the body and experience as crucial, the majority of existing views interpret the body exclusively in its *physical presence*, externalising the focus from the bodily awareness of itself to

interaction; and (3) when the body is acknowledged, the physicality of the body (namely movement and its relation with space) or expressions of material thinking (such as the generation of drawings and prototypes) are seen as the main material for design contribution. Designers generally pay less attention to the potential dialogue that could take place between body and mind, which is the liminal space where the generation of insights and self-discoveries take place [10]. As a result (4) *bodily knowing* is assumed to remain non-linguistic. As I will discuss later in this paper, the focus on knowledge exclusively through action keeps its articulation tacit, an aspect that was also noted by Schön [11] when he describes the type of knowledge generated through design practice. He exemplifies the tacit nature of this approach as follows.

*“When I ask bicycle riders which ways they turn the wheel in order to keep from falling, for example, many give the wrong answer, although they perform the right actions. Their knowing-in-action is incongruent with their descriptions of it.” [11] (p. 3)*

If knowing-in-action is somewhat incompatible with descriptions, and these can constitute relevant materials for design information, then to temporally suspend action when reflection takes place can put us a step closer to more detailed articulations of aesthetic qualities of experiences. As a result, knowledge emerging from embodied inner presence can be *effectively* acknowledged and described in linguistic forms, as the focus on the body functions as a door for the emergence of insights and discoveries [10]. This assertion is important, as it responds to some voices emerging from somatic-oriented HCI, who have identified the difficulties of articulating the nuances of somatic and aesthetic experiencing [12–14]. Although *action* is effective in the generation of distinct design ideation materials (such as sketches, movement and ideas themselves), the attempt to describe embodied experience from the standpoint of *inner presence* can generate *detailed* experiential content for design exploration. This perspective on reflection has been normally overlooked by our insistence to enact experience as the only way to access embodied imagination. However, by discarding embodied reflection as a valid somatic response, the integration of somatic qualities into design would be limited to the description of actions and associated physical responses, placing less emphasis on what makes the experience meaningful or aesthetic.

As a point of clarification, by advocating for inner presence to access design materials, such as ideas, information, and inspiration, I am not suggesting to discard the importance and usefulness of enactive design techniques and their effectiveness to generate ideas and design artefacts in their context of action. Rather, the goal of this paper is to introduce a sensitising concept exploring alternatives to enaction as a possible tool to integrate somatic sensibility in the design process. Informed by the literature review and discussion of emerging gaps, I will justify the recognition of *inner presence* as a sensitising concept for reflection, to finally offer some considerations for the application of this perspective. At the end of the paper, I will also discuss some considerations of this kind of reflective engagement. It is important to note that although this paper mostly focuses on ideation methods, reflection through inner presence could also be applied as a tool to access aesthetic experiences for inspiration and information, potentially shaping of ideas for design.

## 2. Embodied Language and Encapsulated Meaning

Bodily experience has an important role in shaping the way we make sense of the world. The body-minded brain, as described by Damasio [15], or the sentient and sapient *soma*, as referred by Shusterman [16], is not a mere receptacle governed by the brain as culturally regarded by Cartesian thinking. The lived body, the one that moves, feels, and responds, contributes to guiding our reasoning, imagination, and linguistic expression [1], therefore, it actively shapes the way we understand the world. According to Polanyi [17], our knowledge about our surrounding world actually surpasses what we are able to describe. This tacit knowing is accumulative, and is being captured through our bodily experience. Our bodies contain information that somehow ‘know’ the next step of our actions [18]. For instance, riding a bicycle or driving a car is something we do without having

to recall the steps needed to perform the action. Merleau-Ponty [19] recognised this same type of phenomenon in the expression of language, as something that emerges directly from embodied experience. For Merleau-Ponty, our pre-reflective bodily perception contains intentionality and shapes reflection. Despite the fact we interact with the external world through perception, our bodies already contain information about its living which is embedded in its inner dimension [20]. However, this *implicit meaning* cannot exist without having a language to express it [20]. For instance, metaphors, which are linguistic devices that emerge from everyday language, are multimodal and grounded in how we physically perceive experience [2,21]. Lakoff and Johnson [2] (p. 235) claim the following:

*“(A) metaphor is not merely a matter of language. It is a matter of conceptual structure. And conceptual structure is not merely a matter of intellect—it involves all natural dimensions of our experience, including aspects of our sense experiences: color, shape, texture, sound, etc. These dimensions structure not only mundane experience but aesthetic experience as well”*

Language is important in the acquisition of embodied self-awareness, as it has the power to “evoke, sustain and amplify” it [22]. This means that linguistic descriptions can act as a mirror of the self, augmenting the domain of bodily experience from automatic action to becoming aware, opening the door for self-discoveries or insights [10]. An example of how self-awareness leads to self-discoveries can be found in the study of the use of wearable props and the somatic technique Focusing [7]. In this study, participants acknowledged aspects related to their emotional states and personal stories, which were directly shaped by the presence of gentle heat or vibration on the body (Figure 1). This concept of facilitating the emergence of insights by providing reflective *handles* for embodied self-dialogue has been explicitly explored through some somatic-oriented therapeutic techniques [10,22], yet it appears less predominant in the design realm. Whilst design methods have focused to exploit the body *in action*, less attention has been given to how language captures the nuances of aesthetic experiences for design use. Eugene Gendlin’s view of consciousness as bodily, and sentience as consciousness, is useful to understand the role of bodily experience in the generation of meaning [23]. In one of his most paradigmatic examples, Gendlin describes the struggles of a writer trying to come up with a precise word for a particular poetic verse [18]. When writing, an inner negotiation starts taking place as the writer has an implicit sense of what to say, yet the formation of the precise word remains elusive to her consciousness. She comes up with different, elegant terms to somehow compensate this feeling of incompleteness, however, these just do not feel right after revising them. Somehow, the implicit *knows* and makes it clear by generating this physical, unsettling mix between frustration and a strong craving for answers. In terms of body language, she closes her eyes and fidgets on her chair. Something is coming to awareness—something is actually *on the edge* of its articulation [24]. When the word finally reveals itself to her consciousness, it comes with a sense of relief that is not only cognitive, but also perceived, bodily. In that moment of brief discovery, the word *carries part of its implicit meaning forward*, generating a change in the ongoing process of living [18]. In other words, the writer can continue to ideate new verses having the certainty the words she came up with carry a meaningful sense. In addition, a series of descriptions, failed attempts of articulation, and interesting, nuanced descriptions are generated as a result of this dialogue.



**Figure 1.** Props on the body as tools to shape participant’s stories.

### 3. Bodily Knowing as a Representational Tool

As discussed, the process of symbolic meaning-making is tightly coupled with bodily experience [1,2,18,23], an aspect that has been explored from the standpoint of emotion [25], therapy [26], language and metaphors [27], and embodied cognition [28], amongst other disciplines. In line with this concept, I refer to *representational bodily knowing* as the process of meaning-making shaped by bodily self-awareness, and lately expressed through linguistic forms. Regarding the use of the term *representational*, I adhere to Hall's [29] high-level definition, which refers to the generation of meaning through language, images or symbols that facilitate the description of things. A piece of knowledge becomes representational in the sense it can be *described* through language. Everyday language is generally inadequate to articulate the nuances of bodily knowing [30], which would also explain the difficulties of transferring embodied qualities into the design process. In addition, purposely focusing on the body as a generative source of knowledge does not necessarily represent an exercise of everyday awareness as we tend to place our attention on action [31] instead of on our bodies [22]. Even skilful action or expertise implies the total suspension of representational thinking while performing in the world [31]. As a result, conceiving the body as a door to access representational knowledge implies suspending our everyday attitude, which generally links bodily experience to action and external performance.

In the design process, bodily knowing is relevant, however, it is generally regarded as *tacit*, as opposed to *representational* or symbolic. In HCI, the concepts of bodily knowing as material [32–36] and meaning-generation [37,38] are discussed in regard to corporeal activity particularly seen as *movement*. To elaborate on a few examples, Larssen, Robertson, and Edwards [32] explore the notion of experiential bodily knowing by reframing interaction design as a movement discipline; or Hummels, Overbeeke, and Klooster [38], who point out that physical interaction is key to access meaning for the design of movement-based interaction. Tacit knowledge generated through bodily engagement is also seen as contrasted to verbal paradigms [4,39], a reason that makes evident why engaging in somatic connoisseurship is important for the articulation of tacit knowledge applied to design practice, as it allows making self-knowledge specific and, therefore, transmissible [40]. One of the salient issues in the integration of somatic knowledge into the design process is the difficulty to articulate aesthetic qualities, as well as transfer those values [12–14]. The importance of body-centric practices is generally acknowledged in HCI, yet a focus on documenting felt experience [41], and tacit and embodied knowledge [42], requires further consideration. The challenges of documenting the ephemeral qualities from bodily movement [43] can be extended to other somatic manifestations, which require our heightened attention towards the self to purposely unearth somatic qualities for design practice.

The introduced theoretical notions are aimed to describe the body's fundamental role in the construction of language and meaning, an aspect that has not been adequately explored through design methods. In the next section, I will introduce different methods categorised as *enactive* or *action oriented*, in other words considered as practical and situated. Later on, I will discuss how these methods interpret the concept of bodily knowing, uncovering the gap in the lack of attention paid to inner experience.

### 4. Enactive Design Methods

During the last decades, a broader access to tangible technologies has directed the attention of HCI designers and researchers towards the development of new frameworks and techniques based on bodily interaction and gestures [9]. This has opened up the emergence of different research projects valuing the importance of subjective experiencing as a design material [34,43–45]. In this section I briefly describe some design methods—mostly focusing on ideation—that use the body and situated experience as the central ground for knowledge construction, inspiration, and meaning-making.

#### 4.1. Sketching

Sketches can be considered one of the most ubiquitous methods of enactive thinking in design. Sketches are helpful to quickly articulate thoughts without having to commit to any specific idea, an aspect that is particularly relevant at the beginning of every design process. Sketches do not demand closure, allowing revisiting and reformulating [46]. Amongst different functions, sketches enable exploration, quick documentation, and discussion, whilst prompting designers to think creatively [47]. The act of sketching or drawing can be considered as an active conversation between the designer and the material [11]. As designers communicate ideas during the act of sketching, speaking and drawing merge as a unique, designerly way of thinking [11].

Sketches allow designers to articulate ideas and features that are generally too complex for revision, reducing cognitive load [46]. In a way sketches are descriptive as language; however these have the advantage of displaying dimensional and visual aspects of the idea, an aspect that facilitates a better communication of details associated with the designed object [46].

#### 4.2. Bodystorming and Experience Prototyping

Drawing on performance techniques previously explored in the context of design by Burns et al. [48], *bodystorming* is an ideation technique that can be defined as a variant of brainstorming, yet one which explores ideas through observation and interaction in the context of action [49]. Design questions emerging from observations prior to the bodystorming session are bodily explored and evaluated in the wild, which facilitates an immediate understanding of existing affordances and constraints. Physical presence on the site facilitates idea-generation, without having to rely on memory, therefore, reducing cognitive effort. As a variant of traditional bodystorming, *embodied storming* [50] replaces emerging 'ideas' with 'scenarios', enacting different scenes as a design troupe in order to support continuity and flow.

Serving the purposes of ideation, prototyping, and evaluation through recreating experience, *Experience prototyping* [51] is a method that acknowledges the existence of artefacts as embedded in the environment. By following this principle, the design of artefacts should be accompanied with a sound understanding of how experiences unfold. Enacting with artefacts allows interpreting the design problem from a more holistic standpoint by taking into account context and experience. Experience prototyping is performed through three stages: "Understanding existing user experiences and context, exploring and evaluating design ideas, and communicating ideas to an audience" [51] (p. 425). Similarly, approaches such as *empathic modelling* [52] use props and suits to enact and simulate the everyday challenges of people with reduced physical capabilities as a way to gain empathy and help designers to question the taken-for-granted-ness of our physical senses.

#### 4.3. Artefacts, Materials, and Props on the Body

Although these are more design tools than methods, per se, the use of artefacts and props has been used as embodied strategy to access new ideas and to defamiliarise existing thinking. In a framework for the discussion of embodied ideation methods that use estrangement as a strategy, Wilde, Vallgård, and Tomico [53] introduce and analyse methods created by different researchers and explored during their workshops. A total of seven out of eight of the discussed methods used artefacts, props, or prototypes as mediators for idea-generation, except for Collaborative Somatic Inquiries, a method developed by Fdili Alaoui, which uses movement as the core material. Beyond the traditional approach to cultural probes to access people's narratives, the integration of artefacts can also be intended as a resource for defamiliarising everyday experience. For instance, in their presentation of their Experience Modelling method, Schiphorst and Andersen [44] show how the exploration of gestures can create affordances for interaction. A series of workshops where different performance techniques and placebo objects, props and other artefacts were manipulated, eliciting the



generation of rich descriptions and patterns of gestures, which were later used as a material informing the creation of the electronic art installation *whisper*.

Placebo objects can also be used to stimulate imagination, later informing the creation of new technology. The use of the Placebo Sleeves by Koefoed Hansen and Kozel [39] explores the affective dimension of network communication through the utilisation of techniques inspired by theatre and performance. Their placebo sleeves were intended to assist participants in the suspension of their preconceptions about technology, facilitating the generation of affective responses through interaction with the artefacts. In a similar vein, the OWL project by Wilde and Andersen [54,55] explores the use of lumpy props on the body, as well as defamiliarisation techniques as materials to question the nature of methodologies commonly employed to create technology. In their method, they start their inquiry from the body before focusing on a specific brief. As an approach to the design of soft wearables acknowledging the importance in meaning-making, Tomico and Wilde [56] offer a set of situated strategies to design and ideate through direct explorations, placing the focus on material, body, and context. As a result, designing with the focus on material allow the designer to explore different ideas, although not in depth; a focus on materiality and body reduces the importance of context, whereas a situated approach smoothly integrates augmented bodily sensing in context.

Another example in the use of props or artefacts to scaffold ideas is the method of interaction relabelling developed by Djajadiningrat, Gaver, and Fres [57]. This ideation and reframing method focuses on exploring aesthetic possibilities offered by interaction rather than the ease of use of the designed artefact. As a result, artefacts are designed to elicit enjoyable and rich interactions, where richness is interpreted as having a variable and interesting flow. In interaction relabelling, designers use existing artefacts pretending these are the product to be designed. The idea of this approach is shifting the focus from usability and functionality towards devising different interaction paths [57]. Artefacts are used to scaffold fresh meaning beyond established social conventions. Even though relabelling artefacts is useful in generating new connections, beyond being enactive, this exercise is more artefact-oriented than body-centric.

Performative photography can also be used as tool to scaffold the generation of ideas for the design of technology, as described by the ideation method created by Kocaballi and Yorulmaz [58]. This method uses the body of a performer and a photographer, who stage different scenarios depicting possible relationships between body and environment. Resulting photographs are later analysed and annotated, later inspiring features and properties to be embedded in wearable and ubiquitous computing. Although emerging relationships are open ended and even poetic, the body is placed as an object of the landscape, whilst its reflective and sentient dimension remains hidden.

#### 4.4. Somaesthetic-Inspired Ideation Methods

Capturing principles from theatre and practical somaesthetics, *embodied sketching* [43] is a composite of methods that uses play and playfulness both as means and ends for ideation, taking advantage of the opportunities granted by co-located social play. The authors engage in a discussion on how the game dynamics tend to misrepresent the importance of natural gestures and somatic responses happening as a result of the interaction itself. This misrepresentation also includes the lack of acknowledgement of space as a rich resource for design. The authors highlight that the method is activity-centric, in contrast with being '*artefact, technology, or service centred*' [43] (p. 6022).

Embodied sketches comprise a series of design activities placing somaesthetic experience as a main material for the exploration and design of physical interactions. It can be used as (1) bodystorming (to explore ideas through movement on space [59]); (2) participatory embodied sketching (where games are created and modified); and (3) sensitisation, where designers participate in physical sessions to better articulate embodied experience [43].

Functioning as a catalyst for ideas grounded in bodily sensibility, Lee, Lim, and Shusterman [60] incorporate aspects from pragmatist and practical somaesthetics into the design process, particularly by assessing its potential impact in product ideation. Their material of choice is what Shusterman [61]

identifies as *somaesthetic reflection*, which draws upon Feldenkrais and functions as an introspective technique based on body scanning sessions intended to enhance bodily self-consciousness. Based on Shusterman's description, Lee et al. [60] summarise the steps of somaesthetic reflections as follows:

*"Questions:* Asking questions about different aspects and relations of what we perceive.  
*Division into parts:* Subdividing the body and directing our attention to each part, one by one.  
*Contrasts of feeling:* Discriminating the different feelings in one part from those in another.  
*Associative interests:* Making the noticing of what we are trying more precisely to feel a key to something we care about.  
*Avoiding distracting interests:* Warding off competing interests to what we are trying to attend to and feel.  
*Pre-perception:* Preparing our attention to notice what we are trying to discriminate in what we feel." [60] (p. 1056).

Somaesthetic reflection is used as a tool to sensitise designers to notice the small changes happening in the body, later informing design ideas developed in small teams. After sharing their impressions and insights experienced during the training sessions, designers enact design ideas by selecting materials and means of their choice. As a result, these ideas reveal unconscious aspects of bodily movement, as well as make explicit the merits of verbalisation as a tool for revealing somatic experiences for design application (ibid).

Having briefly referred to different HCI-oriented ideation methods using enaction to access design materials, in the next section I will discuss with respect to their gaps, informing what is missing in these techniques in order to facilitate a richer and more detailed access and articulation of somatic experience in design.

## 5. Reflection through Inner Presence as a Sensitising Concept

Sensitising concepts are constructs emerging from empirical studies, intended to offer researchers some suggestions to look at data from a particular perspective [62]. These concepts also provide a starting point to understand and organise experience [63]. The sensitising concept of designing from inner presence aims to fill the gap emerging from both the review of the literature, as well as from empirical studies on the somatic technique Focusing as a material for design use (see [7,64]). This paper focuses particularly on the analysis of existing generative design methods using embodied reflexivity as a way to access design materials. The previously-described ideation methods access tacit bodily knowing to facilitate and explore ideas, for instance, through direct interaction with artefacts, prototypes, spaces, and sites. In the majority of those methods, the materialisation of aesthetic aspects of interaction is assumed to be later embedded in the artefact design or design idea. As a result, the tacit component contained in this embodied knowledge does not need to be described through language. The step between the tacit and the explicit remains unspecified.

By reflection through inner presence, I refer to the focus on the dialogue occurring between the self-aware body and the mind. It is accessed through inwardly sensing, in contrast to turning the attention towards the environment. Some of the methods described in the literature, such as experience prototyping [51], bodystorming [49,50,65], embodied sketches [43], and props to some extent [57] mostly place their focus on the external environment as a source of ideas. As a concept, inner presence might not be situated as action, however, as it aims to temporarily suspend the influences of the environment, it generates distinct qualities of design materials, particularly in terms of (1) rich descriptions of feelings and personal stories, and (2) the generation and description of insights or discoveries, qualities that are sometimes incompatible with more everyday modes of awareness [30]. There are some techniques from somatics, such as body-mind centering [66] and Focusing [10], which require deliberately stopping, sensing, reflecting, and articulating meaning as inherent to their practices. The applicability of some elements of those techniques might sound

removed from the design realm, yet the introduction of the Focusing technique into different stages of the design process shows how the spirit of the protocol is applied beyond its original domain, including the use of props and Focusing as a way to inspire the emergence of aesthetic qualities [7], potentially inspiring the generation of ideas for artefact design [64].

There are different ways of understanding how experiences unfold. Ideas emerging from direct engagement with our environment make evident issues related with the context of interaction that we otherwise might take for granted [49]. Enactive approaches can enable us to access social embodied patterns [43] and to take into account the aesthetics of interaction and the *primacy of experience* over more functional and artefact-centric considerations [57]. As demonstrated in the description methods, our physical bodies find their ways to generate ideas by directly perceiving, manipulating, moving and exploring. Yet, enacting has some limitations, as while we immerse ourselves through *acting* in the world, we might stop noticing the subtleties of our bodily experience. Heidegger called this mode of awareness *circumspection*, when we not only stop being aware of the *equipment* we manipulate, but we lose our grasp of the surrounding environment [67]. In the middle of this state of absorption in the task it is actually difficult to describe subjective experience accurately [68]. Circumspection, which is an everyday mode of autopilot awareness [67], is defied through enactive techniques, as groups of designers purposely make an effort to act and reflect at the same time. From that point of view, although enactive techniques put us in the middle of the familiarity of our actions, they also *defamiliarise* our existing mode of being by requiring us to *reflect-in action*. As a result, in some cases designers tend to focus on the prop, the prototype, the actor or the situation to be enacted, placing the awareness of the body as a tool for meaning-generation in a secondary position. Paying attention to the body is neither encouraged by culture, nor straightforward [22,69]; therefore, it is important to generate spaces directly designed for the purpose of connecting with the self.

The generation of ideas acknowledging a more comprehensive role of the body requires distinguishing *reflection in action* (as already done by most design techniques described previously) and *reflection through inner presence*, which is the sensitising concept I aim to distinguish towards the recognition of symbolic meaning-making granted by embodied awareness. When either action or embodied awareness is attended, the other dimension goes to the background of our consciousness. Enactive approaches generally use the body's tacit responses towards the environment, whereas inner presence uses *the body's awareness of the self* as a tool for accessing experience for design.

In the following section I will discuss the importance of subjective experience for ensuring that inner presence is incorporated as a design tool. Without acknowledging subjective qualities of experience as relevant, the focus on the inner world gets diluted by the dynamics associated with the practice of design, particularly when it comes to sharing information and ideas with others.

## 6. Inner Presence within the Design Practice: Putting Subjective Experience in the Centre

Table 1 briefly shows the predominant focus of each design method. According to this table, three ideation methods show the application of some features of inner presence. These features refer to deliberate use of embodied awareness as a tool for design use. For instance, embodied sketches use practical somaesthetics as a strategy to sensitise designers [43], meaning they use awareness of the body as a tool to influence design later in the process. Somaesthetic reflection, on the other hand, integrates elements from the somatic technique Feldenkrais directly in the design ideation of body-centric artefacts [60], whereas props and materials on the body are deliberately used to get participants to pay attention to the sensory aspects of embodied awareness, to then inspire lateral thinking, enabling the design of body-centric artefacts [53]. Following this lateral perspective, empathic modelling [52] uses the designer's awareness of the self as a way to connect with the needs of users with physical disabilities. This reflective awareness is heightened by the use of props and suits to restrict the body's usual mobility, or to limit the use of the senses. This connection with the aware body is intended to facilitate empathy and connection with others, shaping the generation of design ideas.



In the case of sketches as tools for enhancing imagination [46], these contain some elements of inner dialogue, yet sketching happens without having to actively engage in embodied self-awareness.

**Table 1.** Ideation methods and their focus.

Method	Object	Activity	Body-Centric	Inner Presence
Sketching		x		
Bodystorming, experience prototyping	x	x	x	
Interaction relabelling	x	x		
Performative photography		x		
Embodied sketches		x	x	x
Artefacts, materials and props on the body (including empathic modelling)	x	x	x	x
Somaesthetic reflection		x	x	x

Embodied reflexivity is regarded as important by some of the referenced methods, however, the description of emerging qualities sometimes misses its relevance along the process. The limitations of some of these perspectives allude to how the description of somatic qualities gets diluted in the dynamics of design practice. Additionally, action and reflection are not recognised as generating different quality of ideas; therefore, reflective instances tend to be overridden by action-oriented activities. For instance, in the case of the embodied sketching method [43], the materiality of bodily movement and its location in space are used as tools for design. For this method, the articulation of experiences is mostly focused on action-description and emerging tasks to support playfulness instead of sensory accounts grounded in bodily exploration. It might effectively serve the purposes of ideation, however, by reflecting through action, representational bodily knowing remains in the tacit realm. Additionally, the authors actually argue for the need to separate sensitisation strategies from ideation, as this would allow designers to enact directly [43]. In that case, it is not made explicit how somatic reflexivity and insights emerging from those sessions are actually incorporated in the designs.

One of the common issues emerging from ideation methods is the tendency to discard subjective experience by diluting emerging qualities in the dynamics of teamwork. For instance, on the case of *somaesthetic reflection* as a material for design ideation [60], the role of verbalisation of experience after the training sessions is recognised by the authors as fundamental for the extraction of qualities for design, allowing making explicit the experience of tacit bodily movement, presence and coordination [60]. Recognising the importance of somaesthetic reflection, as well as the philosophical and practical tools that somatic practices can offer to the practice of design, one of the noticeable gaps existing in the way this practical approach has been applied is the ‘missing’ link between the meaningfulness of body introspection and the process of ideation itself. Although the authors recognise the power of verbalisation as a way to unearth insights, these are shared, and later shaped, to serve as design materials, potentially diluting the articulation of subtle qualities for the sake of team exploration.

*“Once subjective experience (at least some aspects of it) is put into words, the words become a strong conceptual tool for communicating and reprocessing the experience; with the words, a design team can easily share an idea about the experience, relate other ideas to it, and make sense of it within their ideation context. Through the verbalization, we could also ensure that those experiences were shared and reviewed as design resources.” [60] (p. 1057)*

In contrast to this tendency that overlooks an explicit articulation of the subjective, a good example of how subjective experience is articulated in full before the generation of design ideas is described by Françoise, Candau, Alaoui, and Schiphorst [32], who use Petitmengin’s *explicitation interview method* [68] to access deep qualities of movement and rich descriptions. This method was used as a way to allow participants to carefully describe their personal process in the context of an art installation supporting kinaesthetic awareness of micro movements. Some of the strategies

described by Petitmengin are: (1) stabilising attention; (2) turning the attention from *what* to *how*; and (3) moving from general to particular experiences, alongside other additional steps to ensure specificity of accounts [68]. Françoise et al. [32] have highlighted the importance of using such a method as it facilitates the description of the participant's personal process rather than the expected walkthrough of the task at hand.

To illustrate the importance of articulating subjective experience in full, during my participation in one of Shusterman's workshops held in Sydney during February 2016 (and also as an occasional attendee of Feldenkrais lessons) I decided to combine the somaesthetic reflection method with Gendlin's Focusing technique, which uses self-awareness as a tool to access insights. As my body was feeling the pleasure of rocking from one side to the other side, I started asking myself 'what about this situation is making this experience so meaningful and enjoyable?' After a long session of self-dialogue, including the act of paying attention to the changes my responses generated in my body, I came to the realisation that 'small is significant', a phrase that resonated as a mantra throughout the rest of my practice. The slightly-increased suppleness acquired through the exercises, the small increase in flexibility, I felt my insight was complex, packed, and unalterable in its coherent sufficiency. At the moment I shared my impressions with my design partner to develop an idea based on our experience, our shared idea became a Frankenstein, a strange hybrid resulting out of camaraderie and respect (or perhaps disdain) towards each other's personal insights. Something became unnegotiable, and our ideas resented from that. Our idea ended up being something quite large, luminous, exuberant, and public, in contrast with the personal materiality of my discovery grounded in smallness. Favouring the integrity of my insight, I ended up keeping the idea to myself, as I did not want to subject it to any sort of contamination. If both *action* and *inner presence* would have been more explicitly acknowledged as different paths for inspiration, the execution of the method would have possibly recognised more carefully the uniqueness of the outcomes emerging from personal experiences, therefore, facilitating spaces for expression, in the same way teamwork and negotiation are taken into account.

There might be some cases where consolidated design teams can combine the uniqueness of their ideas by preserving the flow and meaningfulness of their insights. Such a situation can be inferred by taking into account the experience of Höök and her team, who engaged in weekly practices of Feldenkrais, allowing them to slowly incorporate these somatic lessons into design [14]. Even acknowledging this possibility granted by sustained cultivation and commitment, another gap from the current use of somaesthetic reflection resides in the incompatibility of objectives motivating the practice of somatics and the practice of design itself. As a result, the body scanning sessions and the design sessions might seem unrelated for those with little experience in somatic practices. In his book *Thinking Through the Body, Essays in Somaesthetics*, Shusterman provides an example of a body scanning session (pp. 115–117), which is later analysed in regard to the different steps of somaesthetic reflection (the same as described above by Lee et al.). Although some steps in the interaction suggest somaesthetic reflection can be performed by having a general topic in mind, there are not clear indications on how to frame the use of objects for reflection. For instance, in his first step 'questions', Shusterman starts by pointing out: "*We can better sustained attention to a given topic of thought, including a somatic object or perception, by considering different aspects and relations of it in turn to avoid monotony that destroys attention. One useful technique of doing this is by asking a variety of questions about the object on which we want to fix continued attention. Such questions provoke renewed interest in the object by prompting us to reconsider the object in order to answer the questions*" [63] (p. 118). He then proceeds to give examples grounded in his body scanning exercises only. Outside the context of the body scanning, it is difficult to understand which kinds of 'variety of questions' need to be asked. The instructions given by Shusterman [70], including the body scanning session he describes in detail, are centred in the moment-by-moment bodily exploration of proprioceptive and tactile sensations; however, without acknowledging the existence of a possible dialogue with our thoughts as we sense them it could divert us from the focus on the corporeal dimension of his somatic agenda. As a result, changes might be profoundly felt,

however, their particular qualities get absorbed in the practice of the body scanning, mostly staying in the tacit.

## 7. Scaffolding Meaning with Props

The use of props, suits and other design tools used to interrogate bodily experience incorporates elements of inner presence into enaction. When reflecting through inner presence, these design tools and artefacts are used to keep the stories grounded in bodily sensing, towards articulating the experience symbolically to finally transfer those captures into design ideas. The use of props and tools deliberately alternate the attention between artefacts and body, in order to purposely facilitate the articulation of somatic qualities, as done by Jonsson et al. [71] in their study of thermal guidance for the practice of Feldenkrais, or Feltham et al. [72] with their *Slow Floor* and the study of walking as an expressive and creative activity. In the domain of ideation techniques, Wilde and Andersen [54,55] use of props as tools to facilitate the emergence of magic thinking through defamiliarisation, particularly to ideate technology that has not been created yet. Defamiliarisation can also take the shape of sensory or movement deprivation, such as in the case of the empathic modelling technique [52], which is also facilitated through props and suits. As part of my work, the use of props on the body and Eugene Gendlin's Focusing technique [7] has also inspired the generation of various stories revealing detailed aesthetic qualities, by allowing participants to focus on their bodies. One of these stories was used as an ideation material for an art installation called *Soul*, exploring the concept of blissful experiences as a distributed phenomenon [64].

## 8. Other Design Tools to Access Inner Presence

There are other design tools useful to access reflection through inner presence. For instance, body maps are, in a way, similar to sketches. However, body maps are more prescriptive and eminently body-centric. Whilst sketches stimulate the dialogue between the designer and his/her own ideas, and the designer and stakeholders [47], body maps use inner presence by focusing not only on embodied awareness and the assessment of how the experience is perceived through the body, but also on the description of stories related to the imagery [73]. Body maps are expressive tools conceived for storytelling, only making sense in relation to the participant's stories [73]. When used as data collection tools, body maps tend to be generally completed *before* verbally describing the experience, to keep the focus on bodily sensing and to facilitate the articulation of experience through their description, as explored in *The Heart Library* artwork [74]. Body maps can work as both mediators and scaffolds of descriptive accounts, placing the focus on the participant's subjective experiences. In that way, embodied qualities of experience are revisited, influencing the way stories are described, and potentially offering inspiration and information for design. Depending on the topic of exploration, generative techniques such as mood boards, which rely on expressive images to communicate ideas and values, can also serve as design tools for inner presence. For instance, Lucero [75] describes the case of a mood board created to explore the idea of a multi-sensory augmented reality (AR) system, expanding the interaction to the use of the five senses, instead of only focusing on the primacy of sight. The mood board piece described in the paper contained a series of evocative images intended to guide the communication, starting from the evident layers of dialogue concerning visual features, to then explore the emergence of other sensory experiences and their related stories, as inspired by the evocative quality of the images, suggesting aromas, textures, etc.

## 9. Challenges for Inner Presence

There are some challenges associated to the adoption of inner presence as a concept for design use. As discussed, the focus on the body as a source of symbolic meaning-making might seem foreign for most designers and researchers in the area, as the idea of *thinking through making* has, in part, defined the role of knowledge generation as embedded in the generation of artefacts and models [76]. In addition, bodily knowing is generally interpreted as non-linguistic in nature [4,39].

In terms of operationalising inner presence, this reflective state involves engaging in conscious efforts to pay attention to subtle changes occurring in the body and emotions given a particular scenario. On the other hand, one of the reported advantages of action-oriented approaches to ideation—such as bodystorming—is the reduction of the cognitive workload [49]. This is because designers do not need to bring situations to mind during the ideation sessions, as they are immersed where the situation happens, or at least in simulated scenarios they recreate with their bodies and props. Although stating that a focus on inner presence might demand some effort, there are two aspects to consider:

- The term cognitive load referred by Oulasvirta, Kurvinen, and Kankainen [49], suggests a focus on *mental* effort. In the case of inner presence, reflection is conceived as a holistic activity involving embodied sensing, in line with the ideas of Gendlin [10], Johnson [27], Damasio [25], and others. Although referring to an increase of cognitive load through inner presence might not be semantically accurate, it is also true that this mode of somatic-oriented reflection demands the designer to defamiliarise habitual modes of being, as previously discussed. One of the challenges emerging from the adoption of this sensitising concept resides in the acquisition of somatic sensibility as a design skill, therefore, a more conscious inclusion of embodied content into the design process. For instance, Loke and myself [77] describe some strategies for somatic pedagogy as emerging from the workshop titled *The Body as a source of aesthetic qualities for design* [78] where materials, such as props with electronics, and the somatic Focusing technique were applied to interrogate the role of the senses in technology. Schiphorst [40] argues for the application of somatic connoisseurship, towards the consideration of somatic sensibilities in the design of experiences. Höök and her colleagues [14], who engaged in the practice of Feldenkrais sessions to inspire design ideas, materialised their explorations in the shape of somaesthetic artefacts. These projects demand researchers have an active involvement in somatic practices, including, in some cases, the role of facilitating these skills.
- As one of the limitations of inner presence, it could be discussed that the creative focus is placed on reflection, in some cases resulting in ideas that might be influenced by idealisations of the experience rather than inspired by captures from everyday life. Here, it is important to consider that inner presence might not be the most effective way to recall specific steps of an action-oriented situation. Rather, this kind of embodied reflexivity is intended to access deep meaning through the act of stopping and paying attention to qualities of experience that might go unnoticed otherwise, such as in the case of the personal example given with the Feldenkrais session and my personal realisation, where reflection revolves around the *significance of smallness*. In a different example that uses inner presence, Akner-Koler and Ranjbar [79] use material sensitisation techniques as tools to incorporate into the design process of haptic interactions. As part of their method, they focus on haptic communication as a source of non-verbal and emotional expression, going beyond the mere focus on the technicalities of haptic interactions.

In sum, although there are some traces of inner presence already incorporated into the generative qualities of some design methods, I consider a more explicit adoption of inner presence as a sensitising concept to be necessary, as a way to differentiate this kind of reflection from enactive and situated approaches to generate ideas and inspiration for design. Design activities are generally linked to the latter, as knowledge appears as encapsulated in the making of artefacts, including prototypes and products [80]. However, taking into account how tangible technologies are getting closer to the body, the use of new methods recognising more somatically-oriented accounts become necessary. In that sense, designing from inner presence aims to extract the representational content from our bodily dimension, which has been generally regarded as tacit, as opposed to descriptive.

## 10. Conclusions

This paper offered an analysis of the literature review on HCI-oriented ideation techniques, and other design tools useful to scaffold meaning-making. From this review, it was concluded that

although some ideation techniques integrate elements of embodied reflexivity, the very existence of the concept *inner presence* as a sensitising concept could aid in more purposeful design, keeping subjective and aesthetic qualities in mind. The sensitising concept of inner presence as a source of design ideas distinguishes itself from enactive thinking, as it places its interest in the dialogue between body and mind, instead of action or environment. As a result, to design from inner presence requires subjective qualities to be acknowledged in full before its integration in the design process. Inner presence also finds its applicability in the use of props as tools for scaffolding the generation of meaning-making grounded in bodily exploration.

This discussion is not intended to put the largely-proven effectiveness of enactive approaches in question, which help us develop a situated understanding of the interaction itself, yet the gap my research aims to fill has not been adequately addressed by existing methods. A body-centric design approach requires expanding our strategy and focus. Although not all bodily knowing can be articulated [17], focusing exclusively on action discards the possibility to dig deeper into our motivations, taking its valuable and subtle information for granted. Even though some of the introduced ideation approaches place their attention in how bodily sensibilities inform design, their articulation process mostly remains both in a tacit form (materialised as ideas informed by somatic sensibility) or focused on information emerging from the explicit realm (through description of actions performed). Shusterman's criticism to Merleau-Ponty's insistence to consider the body as a silent source of non-representable knowledge [81] is somehow inherited by most design approaches. By introducing the concept of reflection through inner presence, I hope to contribute to the recognition of our bodily knowing as a source of rich representational meaning, beyond its already recognised silent efficacy.

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