

Designing for Aesthetic Experiences from the Body and Felt-Sense

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Dr. Lian Loke, 28 August 2017

Statement of originality

This is to certify that to the best of my knowledge the content of this thesis is my own work. This thesis has not been submitted for any degree or other purposes.

I certify that the intellectual content of this thesis is the product of my own work and that all the assistance received in preparing this thesis and sources have been acknowledged.

Claudia Núñez-Pacheco, 28 August 2017

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Abstract

Third Wave Human Computer Interaction (HCI) has opened the door for research agendas placing the lived body in the centre of discussion. However, aspects such as the articulation of aesthetic experiences, as well as the transference of somatic values into the design practice require more systematic methods to analyse, articulate and frame those values into practical design solutions. Recognising this gap, this thesis investigates the use of bodily self-awareness and subjective experience as a material for accessing discoveries, by integrating theoretical and practical principles from Eugene Gendlin's psychosomatic technique *Focusing* into the fields of design and HCI. Particularly important is Gendlin's notion of *felt sense*, which can be defined as a state; a complex bodily sense of implicit knowing, consisting of an implicit source of sensations, feelings, memories, thoughts and other manifestations difficult to label through straightforward definitions. These manifestations are carefully articulated and documented by those who experience the felt-sense, becoming the material capture of aesthetic experiences used for research and practice. The research questions are developed around how aesthetic qualities emerging from the interaction with the felt-sense, objects and technology assist in the meaning-generation process, and how these outcomes can be utilised in design practice. In terms of methodology, this thesis is inspired by phenomenological research, and follows the conventions of design-oriented research towards the generation of knowledge for design. Four studies were run, dealing with the exploration of novel design methods, and the use of sensory stimuli on the body during the practice of *Focusing*. As a result, this thesis contributes with a set of *Focusing*-oriented design methods dealing with different stages of the design process, ranging from inspiration, data collection, ideation, evaluation and prototyping.

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Chapter 1

INTRODUCTION

Designing aesthetic experiences from the body and felt-sense

This introductory chapter offers a high-level view on the directions and overall contribution of this research. It starts by defining what this thesis is about, research questions, and provides a brief contextualisation of how this proposal is situated in the existing body of knowledge. It also briefly introduces the research design and a view on contributions for design theory and practice.

1.1 Bodily knowing as a material for design

This thesis investigates the role of our *bodily knowing* as an active contributor of meaning making, including in which ways this knowledge can be articulated for design use. The governing principles of this research are mainly inspired by the philosophy of Eugene Gendlin, which informs both my methodological and theoretical stance. Particularly pivotal is Gendlin's concept of *felt sense*, which can be defined as a complex bodily sense of *implicit knowing* consisting of sensations, feelings, memories, thoughts and other manifestations difficult to label through straightforward definitions. The incorporation of the *Focusing technique* (Gendlin, 1978) in the design process deals with the articulation of these complex, somatic, unexpressed feelings residing in the verge between the conscious and unconscious. Thus, descriptions emerging from the felt-sense take the shape as instances of aesthetic experiencing, unearthing revelations and meaning.

In terms of research focus, when I refer to *bodily knowing*, I am not talking about those qualities such as patterns of movement or gestures, which have informed a myriad of methods and views in Third Wave Human-Computer Interaction (HCI). Instead of focusing on the phenomenological experience of the enactive body I am placing my attention on that kind of bodily knowing similar to what some might recognise as *gut feelings*, a kind of understanding residing in our tacit dimension that is surfaced effectively when needed in everyday experience. Although it is impossible to access all the information encapsulated in the tacit (Polanyi, 1967) the Focusing technique opens a door to insights and self-revelations, which are not only potentially useful for design but also meaningful for those involved in the somatic experiences.

The introduction of these concepts is intended to fill the gap in recognition of the role of our subjective experience and our bodies as active contributors in the process of meaning making. My focus extends beyond the idea of *bodily knowing* as something intrinsically tacit or linked exclusively to its more evident enactive dimension. Literature emerging from fields of embodied cognition (Damasio, 1999, 2012; Johnson, 2008, 2013) have already recognised the importance of the body in the generation of meaning. For instance, our linguistic patterns are deeply ingrained with our bodily interaction (Lakoff & Johnson, 2008), yet at this point the field of HCI has not adequately explored the full potential of our bodily knowing in the articulation of aesthetic experiences.

1.2 Research questions

These research questions are organised according to three perspectives:

Design Thinking and bodily knowing:

- Considering the body is fundamental in the process of meaning-generation, how can bodily knowing –beyond its tacit interpretation- assist in the generation of knowledge for design practice? How are these ideas different to those generated through other existent methods?
- Which qualities are engendered by ideas generated through the process of ‘filtering out’ through the body?

Explorations with wearable props and Focusing:

- How can we transfer aesthetic qualities from personal experiences to the design of artefacts, whilst avoiding the dilution of such qualities?
- How can Focusing, in conjunction with wearable/portable, stimuli shape the generation of personal narratives?

Intersecting both dimensions:

- How can the somatic technique Focusing contribute to the access of intimate stories and meaning in conjunction with designerly means?

1.3 Context

Experiential themes such as the concept of *embodied interaction* (Dourish, 2001; Klemmer, Hartmann, & Takayama, 2006), *meaning making* (Gaver, Beaver, & Benford, 2003; Hummels & van Dijk, 2015) and the generation of values through design (Friedman, Kahn, & Borning, 2002) are some of the central topics concerning our current phenomenologically situated Third Wave HCI paradigm (Harrison, Tatar, & Sengers, 2007). In this scenario, philosophies and approaches acknowledging the role of our bodies in interaction have emerged as a recent area of research. A few examples of these include phenomenologically inspired theory applied to design (Loke & Robertson, 2011; Svanæs, 2001), movement-based inquiry (Françoise, Candau, Alaoui, & Schiphorst, 2017; Hummels, Overbeeke, & Klooster, 2007; Loke & Robertson, 2007, 2010; Silang Maranan et al., 2014; Wilde, Schiphorst, & Klooster, 2011),

pragmatist aesthetics (Dalsgaard, 2014; Lim, Stolterman, Jung, & Donaldson, 2007; Locher, Overbeeke, & Wensveen, 2010; McCarthy & Wright, 2004; Petersen, Iversen, Krogh, & Ludvigsen, 2004; Wright, Wallace, & McCarthy, 2008), and Somaesthetics (Bergström & Jonsson, 2016; Höök, Jonsson, Ståhl, & Mercurio, 2016; Höök et al., 2015; Ip, Lee, & Schiphorst, 2014; Schiphorst, 2009; Sundström et al., 2011). These perspectives have contributed towards a more experience-centred and humanistic view on technology.

The *situated* nature of this paradigm is also reflected in the design methods utilised to generate ideas for design, and particularly from the standpoint of the body as a source of meaning making. Enactive and situated methods, such as bodystorming (Oulasvirta, Kurvinen, & Kankainen, 2003; Schleicher, Jones, & Kachur, 2010), experience prototyping (Buchenau & Suri, 2000), embodied sketching (Márquez Segura, Turmo Vidal, Rostami, & Waern, 2016) and other methods using artefacts and props on the body (Schiphorst & Andersen, 2004; Wilde, Vallgård, & Tomico, 2017), build knowledge by means of *reflection through action* (or doing) (Klemmer et al., 2006), which focuses on the body actively performing within a situated space and context. The *phenomenologically-oriented* paradigm has also brought the use of experiential methods to understand experiences more focused on the subjective and self-reported accounts (Gastaldo, Magalhães, Carrasco, & Davy, 2012; B. Gaver, Boucher, Pennington, & Walker, 2004; Neustaedter & Sengers, 2012a).

Yet, there are three noticeable aspects related to the gap this research aims to fill: (1) A focus on enactive perspectives has mostly bypassed the importance of a more reflective stance on bodily self-awareness and its knowledge for design, (2) when self-awareness is used as a material for inquiry, bodily knowing remains basically tacit, and (3) although methods to access experience can offer rich perspectives, there are few taking advantage of our bodily sapience in the meaning generation process.

1.4 Theoretical influences informing this research

This research is influenced by two main sources: (1) Gendlin's philosophy, particularly in terms of his phenomenology of the body and his understanding of experiences. For Gendlin, paying attention to the changes occurring in our bodily experience would open a door to access the richness of subjective meaning (Gendlin, 1962). This door or *felt-sense* is a state of consciousness where the body establishes a dialogical exchange with the mind, potentially

revealing new qualities characterised by a perceived sense of *meaningfulness* (Gendlin, 2004). Gendlin's understanding is also linked with (2) Dewey's concept of aesthetic and anaesthetic experiences (Dewey, 1934), which has already inspired a strong experiential movement in HCI research.

1.5 A high-level view on research design

Regarding the selected research methodology, this is mostly exploratory as a way to reveal potential opportunities of introducing novel theory into the HCI realm. From a high-level perspective, this research follows the *design-oriented model*, focusing on the generation of new knowledge by using designerly means (Fallman, 2003, 2007), whilst at the same time informing design through the generation of frameworks, methods and theory. This thesis's methodology is also highly influenced by phenomenological research, particularly by adopting the centrality of subjective human experience (Van Manen, 1984a) and through the use of research tools facilitating making space for inner dialogue. As the use of the Focusing technique is novel in our field, I have decided to test potential opportunities by focalising my interests in two main perspectives: (1) The creation of Focusing-oriented design methods and (2) The exploration of wearable props and Focusing. A total of four user studies were conducted, which are described below.

The first study entitled *Focusing-oriented bodystorming* (FOB) explored the potential opportunities for the applicability of Focusing in the design field. Participants were asked to reflect on different everyday situations with potential for design intervention, by following the principle of *filtering out concepts through the body*. Additionally, participants were also asked to interact with a random object, in order to potentially get some clues about what Norman described as our reflective emotional connection with artefacts (Norman, 2004).

Drawing from FOB, the second study *Focusing-oriented design ideation* (FOI) was designed to test a potential generative ideation method grounded in Focusing. Additionally, by running this study I wanted to elucidate which kinds of ideas could emerge from bodily self-observance to justify its application in the design field.

Meanwhile, I ran my third study throughout different stages of my research. *Wearable props and Focusing* comprises two modalities: (1) One to one Focusing sessions and (2) Focusing workshops. In these sessions, participants were asked to interact with props emitting heat or

vibration, while following a Focusing guided exercise. The aim of this study was to understand which effects the use of props would have on the felt-sense, and ultimately in the participants' meaning-generation process.

Influenced by the findings emerging from the explorations with props and Focusing, and by previous research studies dealing with the articulation of aesthetic experiences, Soul combines the design methodology and interaction design dimensions of my research. Soul is an art installation designed to elicit an inner dialogue with the audience, while trying to transmit the nuances of aesthetic qualities from a particular subjective experience. Through this study I wanted to elucidate if the subjective qualities of aesthetic experiences could be transferred through artefact interaction and in which ways.

The different studies find validation in two ways: Firstly, ensuring a rigorous application of theory into practice, particularly by making sure the Focusing steps make justice to Gendlin's contribution, still considering the design practice's dynamics. Secondly, as a phenomenology-oriented research, I have focused on how subjective experience can be truly transferred and transmitted for design use. In terms of validation chapter 8 describes how the developed design methods converge in the artwork Soul, where the design artefact is subjected to public scrutiny.

1.6 Contributions to design theory and practice

This research contributes with the following applications and adaptations of the psychosomatic Focusing technique to design practice:

1.6.1 Methodological contributions to design

- **Focusing-oriented bodystorming (FOB):** This method opens the door for the integration of Focusing to explore situations with potential for design intervention. FOB acts as a baseline to articulate aesthetic experiences from the contemplative exploration of everyday situations and our interaction with objects. Based on Dewey's conceptualisation of aesthetic experiences, FOB facilitates the extraction of aesthetic aspects of experience from apparently unremarkable situations, unearthing meaning from a perspective that tends to be generally overlooked.

- **Focusing-oriented design ideation (FOI):** Drawing on the findings from FOB, the FOI method uses the felt-sense to systematically document aesthetic and somatic qualities, which are materialised into design ideas. As ideas emerging from FOI are grounded in subjective experience, these sometimes defy social conventions.
- **Designing from the granter's experience:** A method to design from a particular subjective aesthetic experience, based on Gendlin's philosophical principles of embodied inter-connection with other agents from our environment. It is also drawing from FOB, this time focusing on prototyping and evaluation under the lens of 'who grants' an aesthetic moment to be materialised through design.
- **The Felt-sense Archetypical Analysis:** An evaluation method to assess participant's affect and engagement with the felt sense. This method emerged from the analysis of text emerging from the previous studies, which were represented through archetypes or *modes of being*. As felt-sensing narratives are difficult to analyse and require an understanding of Gendlin's theory, this tool aims to facilitate the analysis of felt-sensing traits, which are fundamental to understand if stories produced through the guided exercises are grounded in the principle of filtering out concepts through the body, and in which ways.

1.6.2 Theoretical contributions to design

- **Concepts imported from Gendlin's philosophy:** In terms of theoretical contribution, this thesis imports several contributions based on Gendlin's theory. In terms of embodiment, his *Process Model* (Gendlin, 1981) offers an alternative to traditional theories of perception. In this model interaction is understood as relations of *implication and occurrences*, which is somewhat similar to the concepts of *affordances* and *niches* coined by Gibson (1977). It also introduces the concept of *felt-sense*, which encapsulates meaning awaiting its articulation. This concept is particularly useful to identify a kind of bodily knowing that needs to be articulated to allow its own process to move forward.
- **Assertive embodiment and meaning-making:** Assertive embodiment is represented through three types of responses emerging from the studies with props and Focusing, described as *mirrors*, *scaffolds* or *handles*. These states represent different ways of sense-making and connecting with interactive experiences. In the first state, the use of sensory stimulus *mirrors the self*, generating spaces for self-identification and further connection with personal stories, particularly 'as being there'. The second state of *scaffolding* occurs when there is a

disagreement between the sensory experience granted by the prop and the generated meaning. It was observed that this disagreement becomes generative of meaning. Finally, the experience works as a *handle* when, without matching perfectly or generating strong disagreement, the use of the particular bodily stimulus and Focusing inspires connection with other personal experiences.

- **Reflection through action versus reflection through inner presence:** Reflection through action can be considered inherent to the activity of design (Klemmer et al., 2006). Enactive design ideation techniques are based on this principle, yet when reflection is focused on action we risk losing track of the role of the body in the interactive experience. To enrich the conversation on the role of somatic practices in the articulation of bodily knowing, the distinction between *reflection through action* and *reflection through inner presence* is introduced.

Figure 1 illustrates the contributions of this Focusing-oriented design system, including how each study informs one another, to finally converge in the last design method, called *designing from the grantee's experience*.

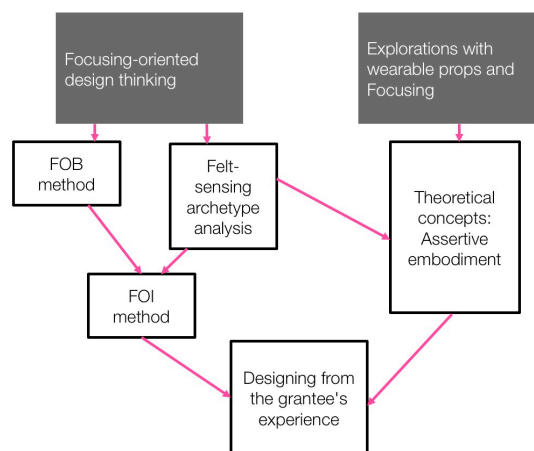


Figure 1 –Research contributions

1.7 Thesis structure

Before situating my research within relevant design and HCI literature, chapter 2 introduces Eugene Gendlin's philosophical principles, particularly his views on embodiment and meaning-generation, where the body has a primary role. These concepts are linked with Dewey's understanding of aesthetic experiences.

Chapter 3 comprises two parts. First, it offers a review on relevant HCI literature, particularly centred on concepts such as embodiment, bodily knowing, pragmatist aesthetics and

somaesthetics. In the second half of the chapter, I discuss current ideation methods that acknowledge the body in some ways, as well as methods to access rich experiences. The concept of what I understand as rich experiences is also discussed. At the end of the chapter, I offer a summary of gaps.

After contextualising my proposal in the context of design and HCI, Chapter 4 describes my methodology and research design. It offers a detailed description of how the Focusing protocol is composed, and how it is applied in this research. It also acknowledges the role of my experience as a Focusing trainee, and how it has permeated my research practice. It also describes the importance of some of the tools utilised throughout the different studies, including the role of writing in the articulation of meaning.

The description and analysis of my user studies are contained in chapters 5, 6, 7 and 8. Chapter 5 describes the exploratory workshop entitled *Focusing-oriented Bodystorming* (FOB), which in the light of its results became a method. FOB introduces Focusing-driven reflection on different everyday situations, unearthing aesthetic qualities related to those experiences. Chapter 6 deals with the introduction and evaluation of an ideation method called *Focusing-oriented design ideation* (FOI), which draws upon the previous experience with FOI, adding new design tools to facilitate the process of eliciting aesthetic experiences amongst a group of designers. Introducing the artefact-driven component of this research, chapter 7 describes the outcomes of *Explorations with wearable props and Focusing* (W&F), exploring how the application of gentle stimuli on the body could shape the generation of meaning. Heat and vibration were the stimuli used in these experiments. Finally, chapter 8 describes the development and evaluation of the public interactive installation *Soul*, including the type of embodied relations emerging from interaction with the artwork.

Chapter 9 offers a reflective discussion on the contributions of this research, including comparative studies to situate them in relation to existing approaches. Additionally, it discusses how the gaps have been addressed. Making sense of materials generated through research, chapter 10 articulates the contributions this thesis offers to design, including methods, frameworks and perspectives. Finally, chapter 11 closes the discussion by revisiting the original questions motivating this research, as well as tracing some future directions for the further development of this Focusing-oriented project.

Chapter 2

GENDLIN AND THE PHILOSOPHY OF THE IMPLICIT

Inner experience, meaning and body

This chapter introduces Gendlin's somatic philosophy, which is foundational for my work on the articulation and distillation of aesthetic qualities for design. I start by discussing his *phenomenology of the implicit*, and then briefly introduce his *process model*, which although continuing with the legacy of Merleau-Ponty, rejects traditional models of perception where the body and environment are split. Instead, Gendlin conceives the body and environment as a merged set of sequences connected by *implications* and *occurrences*. This generative view is later related with Dewey's concept of aesthetic experiences as encapsulating a sense of unity and flow. As a main contribution from this very condensed and brief review of philosophical work, Dewey's aesthetic experiences are seen as raw materials for further sculpturing through Gendlin's tools for meaning-articulation. As a result, the elusive and wholistic nature of aesthetic experiences is opened up for further analysis of use in the design realm.

2.1 Experience and meaning

It would be difficult to discuss the ongoing process of *meaning-generation* taking place in our humanness without referring to the concept of *experience* as the interactive mechanism staging the conditions for us to engage with everyday living. The process of *making sense* of the complexities of the world is interwoven with action, which is essentially performed through our bodies. The body-minded brain as described by Damasio (2012), or the sentient and sapient soma as referred by Shusterman (2009), 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 (Johnson, 2013), therefore it actively shapes the way we understand the world.

The fact that the concept of *experience* is hard to analyse and even explain, has become a prominent discussion point in HCI literature and practice (Bardzell & Bardzell, 2015). As an important part of what make things meaningful for us resides in our tacit dimension the intricate conceptual nature of experience extends to its very articulation. As recognised by Polanyi (1967) we know more than we are able to articulate through language, which also resonates with how different modes of awareness unfolding in our consciousness allow us to efficiently function in this world of perception, without having overwhelming us with possibly unnecessary information. For instance, we can easily recognise a familiar face amongst a million others, however we cannot easily explain what makes this face particularly recognisable (ibid). This lack of explanation does not prevent us to efficiently recognise subtle differences. Taking this example a step further, when we see a face that looks familiar yet we cannot remember where we have met this person before this recognition comes as a physical discomfort somehow telling us that we should know. There is a pre-cognitive knowing trying to jump out towards the explicit, and the bodily feeling appears as something that knocks the door from our inner labyrinth of existing, unarticulated knowing. The body is able to *feel* this situation directly, in non-conceptual ways (Dewey, 1934; Gendlin, 1993; Johnson, 2013; Merleau-Ponty, 1962), which gives everyday experiences part of their complexity. Without even noticing, our bodies perceive these experiences and respond accordingly.

Höök (2010) has already made a case for the importance of embodied descriptions as a way to define with further preciseness which kinds of aesthetic experiences we want to convey through design. The articulation of such richness to be used as a material for design, however

remains a challenge. Some attempts have been explored, particularly by means of the integration of Somaesthetic thinking and practice into the HCI arena (Shusterman, 2011b) which will be later on further discussed in my literature review chapter 3. Still, the application and exploration of additional methods and philosophies recognising the centrality of the body are needed to access the richness and complexity of aesthetic experiences and their role of meaning-construction.

In this chapter, I will introduce a very condensed review of the philosophical work of Eugene Gendlin and his valuable contribution to the systematic articulation of implicit experiences, starting by recognising the body as a source of meaning even *beyond and in spite of* its capacity to perceive. As an alternative to design approaches that use enactive tools to re-live experiences through the act of physical interaction, my contribution through Gendlin's phenomenology essentially focuses on finding strategies to articulate information *already encapsulated* in the richness of our inner body, which is one of the main premises of his philosophical proposal. I start by describing the basis of his thinking, particularly centred around the notion of implicit knowing as well as some concepts from his *process model*. Later in the chapter, I will link the concept of *felt-sense*, or bodily sense of the implicit with Dewey's aesthetic experiences (Dewey, 1934). Finally, I will discuss how this analysis contributes to the field of experience design.

2.2 Language and direct experience of 'sessel' as 'chair'

During World War II, Eugene Gendlin and his family moved from Austria to the United States, escaping from the Nazi regime. As the twelve-year old boy could not speak English, he was allocated to a first-grade class, where a teacher of good reputation was in charge. One day, the teacher noted how the young Eugene was repeating to himself the German word '*sessel*' before translating it into the English term '*chair*'. She asked him to not translate, but instead trying to understand the object as being a *chair* from the beginning. This particular story has been described by Gendlin (2016) as the beginnings of what could be considered as a source of his philosophy of the implicit. The invitation to directly experience the object *chair* in its wholeness, is also a way to distinguish the particular qualities emerging from that experience, compared to the ones granted by the object *sessel*. On a personal note, as a native Spanish speaker I can relate to Gendlin's experience in the way I perceive the differences between '*chair*' and '*silla*'. A *chair* automatically appears to my consciousness as an object that I find in my productive and personal space of silence, visualised as a piece of black furniture. However, the

word *silla* emerges as an object that I possibly find in a dining room, where family share their stories. Although the direct translation of both represents exactly the same thing, it is clear to me how our actions and experiences shape the way we understand and perceive our interactions with the world. For Gendlin (1992), these qualities are not only rational symbolisations, but these are also *bodily* perceived. If I pay attention, I might start noticing the subtle influence each word has in my body, and therefore the distinct qualities emerging from *chair* and *silla*. Articulating these differences is difficult, as these still reside in the implicit space of my consciousness. However, beyond describing those qualities, the first step is recognising that this subtle feeling of contrast exists.

In line with enactive models of cognition (Varela, 1996; Varela & Shear, 1999), for Gendlin, consciousness is *bodily*, and sentience is consciousness (Gendlin, 2012). As such, our bodies can experience *philosophical discomfort* (Levin, 1994), before being able to articulate how this information affects or influences the course of our actions. In one of his most paradigmatic examples, he describes the struggles of a writer trying to come up with a precise word for a particular poetic verse (Gendlin, 2004). 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 (Gendlin, 1992). When the word finally reveals itself to her consciousness, it comes with a sense of relief that is not only cognitive, but also *bodily* perceived. In that moment of brief discovery, the word *carries part of its implicit meaning forward*, generating a change in the ongoing process of living (Gendlin, 2004). In other words, the writer can continue to ideate new verses having the certainty the words she came up with carry a meaningful sense.

2.3 An alternative to perception: The Process Model

Inspired by Merleau-Ponty's views on how our pre-reflective *bodily* perception contains intentionality and shapes reflection (Merleau-Ponty, 1962), Gendlin takes this concept one step further by pointing out that our bodies are interactional beyond what he calls the *perceptual*

split, or the act of perceiving, which occurs when the gap between the here-and-there, or the inner and the outer is filled (Gendlin, 2012). 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 (Gendlin, 1993). However, this implicit meaning cannot exist without having a language to express it. Similarly, for Merleau-Ponty speech does not require thought as a precondition for its existence, but rather language accomplishes thought directly (1962, p.182). In that sense, language flows without having to be represented as it would occur with external objects. Although for Merleau-Ponty the body shapes meaning and language, the act of introspection is not considered as a relevant form of self-awareness (Romdenh-Romluc, 2010), which differs with Gendlin's philosophy. For Merleau-Ponty, our processing of language was self-evident, and the body could access meaning directly through its own gestural sense (Merleau-Ponty, 1962. p.189). As relying on this silent spontaneity bypasses the importance of somatic self-observance, Shusterman (2005) discusses and criticises this aspect of Merleau-Ponty's philosophy, as it actively dismisses the role of cultivation and self-improvement as part of human expression. Gendlin does not directly criticise this point, however his phenomenology relies on the articulation of inner movements and shifts, and an active use of tools for facilitating the search of meaning through active self-awareness. Representational language emerges in evocative ways to describe inner experiencing (Preston, 2008), as an attempt to access part of the uncountable facets of what Gendlin calls the implicit dimension (1999).

Merleau-Ponty's phenomenology of the body and the concept of unthematized bodily consciousness have set the foundations for the field of embodied cognition (Romdenh-Romluc, 2010), and influenced Gendlin to continue through the path of what he recognised as *gestural meaning*, residing in the body as a pre-reflective know-how (Levin, 1994). Gendlin however distances himself from the traditional concept of perception towards an interactional model that understands environment and body as engaged in a wholistic relationship. In his *Process Model*, Gendlin (1981, 2012) rejects the thesis that the body and environment are necessarily split, instead being related through sequences of *implying* and *occurring*, where organisms function as environment themselves. The *implying* and *occurring* sequence is in some elements similar to Gibson's (1977) concept of *affordances* and *niches*, where objects and environment coexist as complementary. However, Gendlin's process model goes beyond the

relationship with tangible objects in the environment, extending this domain to other symbolic dimensions of experience and interaction.

Referring to a simple example to explain the *implying* and *occurring* sequence, a bodied organism needs to breathe to keep living. Breathing *implies* that oxygen enters the body. When this occurs, breathing in also implies releasing carbon dioxide as a next step. This function has other implications and occurrences that develop as generative sequences (Figure 2). This carrying-forward process allows organisms to live. The separation between environment and body only occurs when the resources the body needs to live (for example, oxygen) are not accessible. In such a case, the body enters a process of *reiterated implying* or stillness, which prevents the organism from performing its role (Figure 3).

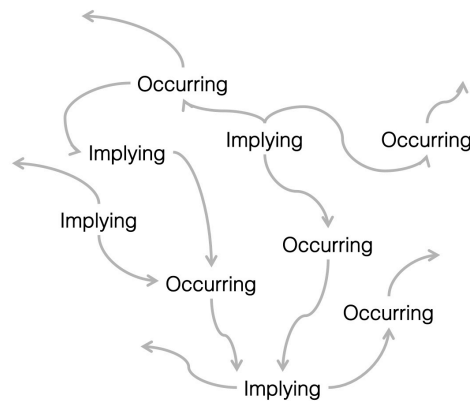


Figure 2 –Representation of the implying and occurring process

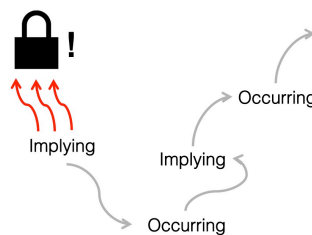


Figure 3 – Reiterated implying

The processes of *implying* and *occurring* can also be translated to the complexity of human symbolic patterns (such as language, art and music), which are also embodied. These patterns generate shifts in the human body that influence situational changes, offering innumerable behavioural possibilities or ways of interacting. In this respect, human interaction with symbolic patterns can change the body's situation, therefore differentiating its own

environment (ibid). From a more social perspective, this concept nicely relates with how paying attention to these patterns affects our overall implying and occurring process, changing part of the situation not only *in-us*, but also *around-us*. This process of becoming conscious of our embodied responsibility allows us not only to perform in our corresponding social world with enhanced assertiveness and congruence, but also through a more attuned sense of connection with others. In other words, Gendlin's legacy is also an invitation to engage in a political self-experience of personal responsibility and empathy towards others (Madison, 2016). Connecting the social with the personal, Shusterman (1999) has also pointed out how developing a refined connection with our bodies is not only important for accessing a better life quality at a personal level but also puts us a step closer to understanding social problems that might have their root in somatic discomfort. One example of such issues is the case of racism, where the recognition of the irrational rejection against the other appears as a first step to overcome this problem from a self-agent perspective (Shusterman, 2000). Inspired by Gendlin's philosophy of the implicit and Buddhist thinking, authors such as Ikemi (2014) suggest rethinking the use of the term *embodiment*, and consider *combodying* which he defines as the body pointing beyond itself, towards being altogether with the universe, in the same fashion as a school of sardines that move as a whole, or a field of sunflowers following the rays of light simultaneously (ibid). Although our relation with the universe is more complex and influenced by symbolic patterns and behavioural aspects, the premise behind the idea of *combodying* is that there is an essential shared quality amongst living beings related to the way we connect with the environment (ibid). In chapter 8 where I describe a user study involving a somatic storytelling artwork I will briefly exemplify how our bodies are sometimes able to connect with other embodiments, even when only having access to partial information about their living process. Embracing the idea that the body encapsulates a whole world of distributed meaning has certain implications in our field. For design, both the vision of personal cultivation as well as an implicit connection with others also imply a further focus on the richness of personal experiences as (1) these function as whole worlds of complex patterns and situations themselves, and (2) we are inter-connected with our environment, therefore there might be something essential in our humanness that surpasses representational differences. This concept will be discussed in more detail in chapter 4 dealing with methodology, and is reflected in some of my emergent methods for the design of experiences, described in chapters 6 and 8.

2.4 The Felt Sense

The sequence of implying-occurring and the process of carrying forward unfold naturally in living organisms, allowing them to perform their living. As previously discussed, these interaction dynamics can also be extended to matters concerning human experience, including people's interactional patterns and behaviours. Interested in the analysis of experiences in psychology, one of Gendlin's early works titled *Experiencing and the Creation of Meaning* aimed to fill the gap between two opposite views. At one end, without dismissing the fundamental role of science in the generation of knowledge, he described *orthodox positivist psychology* as open to investigate only facts serving the interests of the scientific paradigm, whilst discarding other aspects regarded as irrelevant. Aspects such as human subjective experience were discarded as its vagueness could compromise the validity and integrity of the scientific method (Gendlin, 1962, p. 16). From this positivist perspective, subjective experiences were considered as merely anecdotic, therefore dismissible as possible sources of knowledge. Lakoff and Johnson (2008) and later Johnson (2013) describe and critique a similar scenario in the context of traditional semantic theories, which tend to be dismissive of human experience, and particularly of the role of the body in the generation of linguistic patterns. At the other end of the spectrum, *existentialist-oriented psychologists* who opposed the scientificist view of orthodox psychology shared their rejection towards investigating subjective phenomena, however in this case the integrity of human experience could be taken away in the process of analysis (ibid, p.17), in similarity with Merleau-Ponty's disdain against representation. Gendlin on the other hand, regarded subjective experiences as potential material for the effective analysis of meaning-articulation. A decade before elaborating his Focusing technique, Gendlin already expressed his intention of transforming his philosophical principles into a method to articulate experiences through language, beyond objective and logical definitions (ibid, p.19).

Focusing is a technique that uses inward bodily focus to attend to issues internally, in order to find specific meaning around a particular situation (Gendlin, 1996). Although it is mostly used as a psychotherapeutic tool, the Focusing Technique is not considered therapy in itself (Gendlin, 1996), and has been adapted for other fields, such as qualitative research (Todres, 2007), non-representational geography (Banfield, 2016), business (Ikemi & Kubota, 1996), creative writing (Perl, 2004), movement-based performance (Bacon, 2007) and more recently through my work integrating Focusing principles to HCI and design methods (Núñez-Pacheco

& Loke, 2015, 2016, 2017). More details about how Focusing works in specific terms are described in my methodology chapter 4. Focusing practitioners learn how to get in contact with the implicit, attuning their senses to develop increased awareness of the changes and shifts occurring in the body when reflecting around a situation. By using the term *practitioner* I do not mean a therapist or an expert in a hierarchical sense, but more specifically the person who works in partnership, involving an horizontal relationship between someone that listens, and someone who is listened to (Cornell & McGavin, 2002). Still, the role of somatic cultivation, guidance and practice is important to develop increased sensibility (Schiphorst, 2011).

Through the practice of Focusing it is possible to access embodied meaning existing prior to language and representations (Gendlin, 1992), which can be experienced as a direct sense of the implicit zone (Gendlin, 1996, p.16), residing at the edge of the explicit. Going back to the example of the writer trying to come up with the precise word for her verse, the implicit and wholistic sense of *knowing-without-explicitly-knowing* can be considered as a felt-sense of the situation: the writer knows what she wants to say, despite the fact it remains in a non-conceptual form until discovered. When the correct word shows itself a *felt shift* is generated, and the writer can carry forward with her process (Figure 4). In another example, when having to make decisions I might decide to follow my logic and select one option over another. However, for a reason I cannot articulate I am not satisfied with my decision. This dissatisfaction makes me feel physically unsettled. This implicit sense of unconformity, guilt and at the same time incredulity by the fact a reasonable path does not convince me speaks of the complexities of felt-sensing this situation. In another example, I am an introvert that does not get along with people very easily, however I have met this person that makes me feel a refreshing sense of comfort, like I can trust her although I cannot explain why this is. This is also a felt-sense, which is more complex than a feeling itself, as I do not have any pre-existing specific symbolic pattern in my vocabulary to label it. When trying to articulate details about my experience through Focusing, the felt-sense takes me to dialogue with my implicit dimension, unearthing detailed and rich meaning, particularly through the use of evocative language. This technique centres on the use of somatic exploration and heightened awareness to access inner knowledge (Gendlin, 1978).

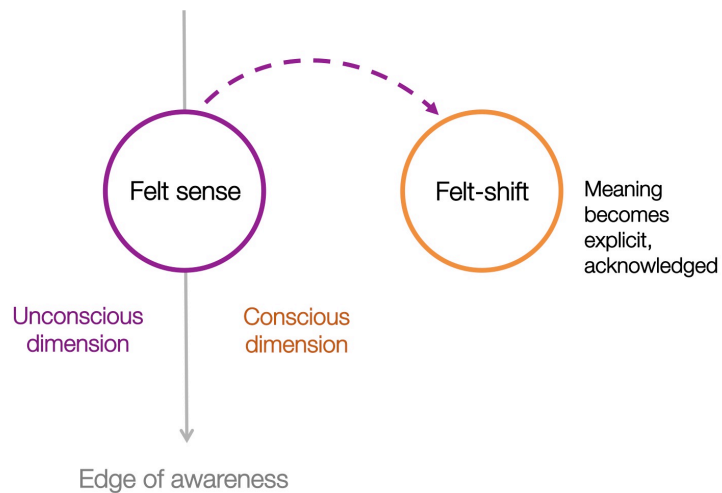


Figure 4 - Where the felt-sense and the felt-shift are situated

Felt senses are not to be confused with emotions or specific feelings. Emotions contain a set of characteristics that can be individualised and recognised as fitting to a particular term or linguistic representation. For instance, when I say ‘I feel nervous’, my autopilot mode of awareness has automatically identified the repertoire of characteristics encapsulating this nervousness: for instance, my hands are shaking, I am feeling thirsty, a pressure on my chest makes me want to escape from this situation, et cetera. My familiarity with these patterns makes me jump directly to use this label of being nervous, without having to think about the features composing my nervousness. The felt-sense on the other hand is composed by a series of manifestations which differ from emotions as these have not been framed under the constraints of a specific nomination; thus by accessing the felt sense we engage in an open dialogue with imprecise thoughts, memories, feelings and sensations in their free, unconstrained ways, carrying implicit meaning with no specific label (Gendlin, 1996: p.59). This natural phenomenon is physically sensed and does not remain static but rather changes and moves around the body, and particularly through the upper torso (ibid: p.24). Apart from its multifaceted quality, the felt sense leaves a general impression of *wholeness* and complexity, which tends to be translated into metaphors and evocative language, as well as through expressions such as ‘it feels like...’ or ‘it is similar to...’. Examples of how this style of phrasing can be used to frame aesthetic experiences for design use will be described later on in chapter 6 and 7. The complexity of the felt-sense can be interpreted as looking at the ‘big picture’ of a given situation, whilst attempting to define what makes this wholeness so relevant to the process I am experiencing. However, the way to attempt an answer is by stepping back

from our habitual ways of thinking, which means letting go our preconceptions (Rome, 2014), to then ask and feel directly through the felt body how situations are gauged. This practice is challenging, requiring us to suspend our certainty, as the temptation to jump into existing assumptions and definitions is quite predominant.

2.5 Aesthetic experience through Focusing and Dewey's somatic aesthetics

Gendlin's philosophy of the implicit, and particularly the idea of body and environment as a coherent whole of interrelations, can be integrated with Dewey's understanding of experience and meaning, particularly with regard to Dewey's definitions of aesthetics experiences (1934). In this section I will briefly link these visions, which as a theoretical framework will set the basis for the development of my work.

Accessing the implicit dimension is something that happens in everyday experience; flows of implying and occurring contain different qualities in terms of meaningfulness. Some of these sequences are indispensable for basic functional living, and as such –at least in privileged societies- we tend to take them for granted: for example, I am thirsty which implies drinking water; then its occurrence allows me to carry forward with my other living interactions. Other sequences concerned with our behavioural and symbolic dimensions function under the same logic. In some cases, these sequences seem more important and memorable than others. For instance, when a felt-shift or insight happens a sense of individualised meaningfulness is consummated and merged with the ongoing process of flowing, allowing the process of carrying forward to take place. This relates with the concept of *aesthetic experience* as merged with everyday living as defined by the Pragmatist John Dewey in his work *Art as experience* (1934). In chapter 3, I will further elaborate on the influence of Deweyan Pragmatism in HCI and design, particularly in terms of aesthetic experience, which also extends to my own work. At this point, there are two main dimensions of Dewey's work which are particularly relevant to this thesis: (a) his definition of *aesthetic*, as well as *un-aesthetic*, experiences, and (b) the fact that aesthetic experiences were conceived as embodied, interconnected with the environment and wholistic, which is the reason I relate them with Gendlin's process model.

2.6 Aesthetic and anaesthetic experiences

For Dewey (1934), aesthetic experiences were not necessarily relegated to art museums for appreciation by the elites, but were part of everyday patterns of living. The meaningfulness of

such experiences was determined by the relationship between the lived creature and the conditions offered by their surrounding environment (ibid, p.14). He described aesthetic experiences as flowing from one determined point to another (p.38), as well as showing an organised movement (p.40). An aesthetic experience (or having an *experience*) embodies a whole unity of events bringing a sense of fulfilment, where who is experiencing the flow looks forward for the final outcome to occur, while at the same time focusing on the process itself, including a series of events unfolding during the flow (p.41).

This sense of unity and the capacity to individualise aesthetic experiences is what we recognise when events in life contain some impact on our emotions. Embedded in the fabric of everyday events, we are surrounded by opportunities to interact with aesthetic moments. For example, sharing a cup of tea with someone you love, having a meaningful conversation with a random person, baking a cake that ended up being particularly delicious, or strolling under the blue sky can have a lingering effect on people's sense of self. Having said that, not all aesthetic experiences need to be positive to be meaningful, but rather need to show movement or to carry forward, which Dewey describes as *maturation*:

'I have emphasized the fact that every integral experience moves toward a close, an ending, since it ceases only when the energies active in it have done their proper work. This closure of a circuit of energy is the opposite of arrest, of stasis. Maturation and fixation are polar opposites. Struggle and conflict may be themselves enjoyed, although they are painful, when they are experienced as means of developing an experience; members in that they carry it forward, not just because they are there.' (Dewey, 1934. pp.42)

As in the case of Gendlin's concept of *reiterated implying* previously illustrated in Figure 3, for Dewey *stasis* or *fixation* are the sins that remove experiences from their meaningful quality. Having said that, it is common to see an erroneous tendency that interprets aesthetic experiences as being *necessarily positive*, and somehow linked with instant satisfaction. Sometimes, aesthetic experiences emerge from conflict or pain, bringing a sense of maturation, satisfaction and pleasure when carrying forward. It could be argued that conflict or suffering are ways in which the body is trapped in a situation of *reiterated implying*, and therefore the conditions are not met and the flow stops. However, the sequences of *implying-occurring* are generative,

and when conditions are not met, in some cases we adapt to the existing conditions, opening spaces for new networks:

‘A reiterated implying is always new and regenerating. And it is always open to whatever will carry it forward. Even if what does carry it forward is new in the history of the world, we can say that it ‘resumed’ what was implied but missing’ (Gendlin, 2012)

As we have experiences that are recognised as aesthetic and meaningful, Dewey also recognised everyday living as bringing anaesthetic experiences. Such non-aesthetic experiences are characterised as being the opposite of unity: these show loose successions of events, with no identifiable rhythm. On the other hand, instead of displaying a lack of definition, anaesthetic experiences can also show ‘mechanical connections’ (Dewey, 1934. P 41). Importantly, things occur, but these lack relevance (ibid, p.42). In other words, anaesthetic experiences are mostly meaningless due to the poor conditions offered by the environment where activities take place (Smuts, 2005).

‘Experience is the result, the sign, and the reward of that interaction of organism and environment, which, when it is carried to the full, is a transformation of interaction into participation and communication’ (Dewey, 1934, p.22).

Some similarities can be drawn between Dewey’s definition of aesthetic experiences and Gendlin’s interpretation of experiencing, which is illustrated in Table 1.

Table 1 - Characteristics of experiencing as discussed by Gendlin (1962. P.22).

<p>“Experiencing</p> <ol style="list-style-type: none">1. Is changing;2. Is not equivalent to [scientific] generalisations;3. Soon allows the creation of a new aspect that does not fit [in scientific terms];4. Is complexly and finely determined;5. Is such that whatever factors one isolates, they mutually interpenetrate and limit what we can say with any of them;6. Requires and provides the sensitivity of a human observer, and gives the phenomena the nature they have, which requires such sensitivity;7. Is currently better dealt with in literature and the humanities than in science;
--

8. *Is capable of endless further interpretations and ways of symbolising*
9. *Provides the significance not only of certain interesting areas of life, live and death, but of everything else;*
10. *Cannot be reduced to the units of any explanatory system*
11. *Is creatively changed by the application of symbols and inquiry*
12. *Is not the same in a participant observer as in an unbiased observer or in a spontaneous participant;*
13. *Actually gives us whatever hunches we get to select those behavioural variables which we think worth defining for use in predictive hypothesis”*

Although Dewey describes ‘unity’ as characterising aesthetic experiences, it differs from the concept of ‘unit’ described by Gendlin, which refers to the model used by science to “contribute to its knowledge (Gendlin, 2012). As in Gendlin the act of experiencing is a changing phenomenon that cannot be reduced to units of scientific interpretation, in Dewey’s proposition aesthetic experiences appear as flowing, which also involves movement as the opposite to fixation. These definitions of experiences in both cases refer to the significance of aspects of life that are not necessarily transcendent or sacred but also quotidian. In terms of generalisations, in both approaches experiences are emotional and embodied events which are subjectively perceived. However, I argue that although experiences are personal and cannot be generalizable there is something essential that connects them with the environment, as Gendlin suggests in later works (Gendlin, 2012). For Dewey, subjective qualities are recognised as *qualitative thought*, which are shaped by intuitions in contrast to more traditional cognitive reasoning or *noetic thinking* (Garrison, 2015), in similar fashion to Gendlin’s implicit knowing. Consequently, both approaches recognise an intrinsic complexity in the act of experiencing, which surpasses any attempt to represent it. However, in Gendlin’s point of view, experiences afford symbolisations and representations, which would shape the way experiences are perceived. Particularly in chapter 7, when dealing with the use of Focusing and bodily stimuli, I will exemplify how the use of external representations in the practice of self-observance can shape and influence the way meaning is generated and articulated. In the context of framing experiences, in chapter 6 where I introduce my Focusing-oriented design ideation method, I will also inquire on how the use of simple tools for assisting in the description of experiences allows designers to fine-tune their interpretations of self-reported data.

2.7 Aesthetic experience and the felt-sense

Beyond the similarities of both approaches to experience –which I do not take further as *Experiencing and the Creation of Meaning* is one of Gendlin’s earliest works- perhaps the most relevant link resides in the connections between the *sense of unity* granted by aesthetic experiences and the concept of *felt sense* and *felt shift* leading to a self-discovery. The intricacy existing in the *sense of unity* described by Dewey –or that pervading quality- is multifaceted:

‘An experience has a unity that gives it its name, that meal, that storm, that rupture of friendship. The existence of this unity is constituted by a single quality that pervades the entire experience in spite of the variation of its constituent parts. This unity is neither emotional, practical, nor intellectual, for these terms name distinctions that reflection can make within it.’ (Dewey, 1934, p.38)

The Focusing technique appears as a possible door to access the specific qualities that grant aesthetic experiences their sense of meaningfulness. Qualities can be defined as modes of interaction where we recognise and distinguish important aspects of the self and the surrounding world (Johnson, 2015). Aesthetic qualities would be those that afford values rather than representations of merely descriptive concepts or adjectives (ibid). Those symbolic affordances are complex to describe, as an important part of what makes aesthetic experiences meaningful resides in the domain of the felt-sense. Beyond the undeniable implicit richness of ‘that meal, that storm, that rupture’ recognised as pivotal amongst my personal stories, Gendlin’s Focusing allows us to describe, articulate, and re-live through inner-focus, and even sometimes discover *what is so meaningful* about these aesthetic moments. Following Gendlin’s idea of how experiencing can be symbolised and interpreted in infinite ways, each instance of looking-into our intrinsic source can potentially reveal new, fresh meaning about that particular experience, and therefore new opportunities for designers to understand the nuances and elusiveness of what makes interactions particularly meaningful and compelling. In my view, aesthetic experiences show themselves as raw materials awaiting for the body to filter out and symbolise. As a result of this distillation process, evocative descriptions and discoveries are generated for us either to translate into theory, or to articulate in the shape of artefacts.

2.8 Summary of main points

In this chapter, I have briefly summarised part of Gendlin's contributions in regard to his philosophical work, and suggested how it is linked to Dewey's concept of aesthetic experiences. The role of the body and the environment as a whole are fundamental, both in the perception of experiences, as well as in the construction of meaning. The following are some of the main points discussed:

- Our bodies carry implicit knowledge that accumulates as part of our ongoing process of living. Sometimes, this knowledge tries to naturally surface through everyday situations (for instance, when writing a poem, or when trying to recognise someone).
- As an alternative to what Gendlin calls "the perceptual gap" inherited from Merleau-Ponty's phenomenology, the process model discusses how our bodies relate with the environment in a process of implications and occurrences. This relationship surpasses biological processes, and can be evident in language and other representational manifestations of humanness.
- When the process of implying and occurring is not met as intended our bodies have the capacity to adapt and keep flowing.
- The felt-sense is a complex sense of bodily knowing that cannot be represented through straightforward, available language. To access its complexity and unearth meaning it is necessary to pay attention to its qualities.
- The sense of meaningfulness granted by felt-senses can be linked to the concept of aesthetic experience as articulated by Dewey. These aesthetic experiences do not need to be straightforwardly satisfying, but rather can be inspired by a sense of *carrying forward* or *maturation*, which is granted by succeeding over life difficulties.

In the next chapter, I will discuss how body, design and HCI converge, adding new elements of literature to further contextualise how this research is situated in an existing lineage of work dealing with aesthetic experiences in the field.

Chapter 3

LITERATURE REVIEW

Design perspectives and methods

This chapter comprises two parts. In the first one, I offer an overview of the literature concerning the understanding of experiences through the lens of embodied approaches in interaction design. In terms of philosophical principles, it will focus particularly on the influence that Pragmatist aesthetics and Somaesthetics have had in our field. In the second part of this review I will offer an overview of design methods to contextualise my Focusing-oriented practical take. At the end of both sections I will identify and discuss emerging gaps in light of the themes offered by the review on the literature.

3.1 Design Perspectives

This section on *design perspectives* introduces a theoretical review of the literature, as a way to contextualise my proposal. As theoretical referents, my Gendlian view is situated within theories of embodiment that values the fundamental role of the body in experience. It also identifies with some principles residing in pragmatist aesthetics, particularly Dewey's view on aesthetic experiences. Themes such as the importance of designing for open meaning to facilitate the emergence of affective interactions are discussed. Then, I will elaborate upon the role of Somaesthetics in design and HCI, which has in part compensated the taken-for-grantedness of the body in the way Pragmatist principles are adopted by our field.

This section is structured as follows. It starts contextualising the current views on embodiment, then discusses how the emergence of embodied emotion has been facilitated by some HCI approaches. Then I discuss the influence of pragmatist aesthetics and the role of experience. Before moving to a discussion of emergent gaps I offer a review of Somaesthetics applied to HCI and design.

3.1.1 Embodiment

As it is closely related to the nature of interaction itself, the term *embodiment* is quite ubiquitous in our field. Marshall and Hornecker (2013, p. 144) provide the following definition:

“Embodiment typically refers to our being living, feeling, bodily entities situated in a physical world. This contrasts with a view of human cognition as grounded in abstract information processing. Theories of embodiment focus on how our bodies and active experiences shape how we perceive, feel and think. However, rather than being a single coherent theoretical perspective, there are a number of different traditions and emphases.”

Several fields have recognised the importance of embodiment in the construction of our concrete and symbolic reality. For instance, the active role of the body in the meaning making process has been largely discussed in neuroscience, particularly through embodied cognition, (Clark & Chalmers, 1998; Damasio, 1999; Doidge, 2007; Fogel, 2013; Varela, Thompson, & Rosch, 1991), linguistics (Johnson, 2013; Lakoff & Johnson, 2008), and psychotherapy (Gendlin, 1978, 1996; Hartley, 2008; Staunton, 2002; Todres, 2007). Philosophy has placed the body in the centre of our experiential world, particularly through phenomenology

(Merleau-Ponty, 1962), pragmatist aesthetics (Dewey, 1934), somaesthetics (Shusterman, 2008, 2012b) and intersections between embodiment, technology and phenomenology (Dourish, 2001; Fällman, 2003; Ihde, 2002, 2010; Kozel, 2007; Robertson, 1997; Svanæs, 2013; Turner, 2008), to mention some examples.

The influence of embodied concepts emerging from phenomenology is widespread in HCI, setting the basis for our understanding of interaction with artefacts and human agents. For instance, the use of Heideggerian terminology to explicate our interaction with computers introduced by Winograd and Flores (1986), has been highly influential for projects such as Weiser's *Ubiquitous computing* (Weiser, 1991), inspiring the emergence of concepts such as *Tangible Bits and atoms* by Ishii and Ullmer (1997). These projects, as well as emerging concepts such as skilled action, computer disappearance, seams and tangibility have changed how devices are designed and how interaction is understood.

Another influential perspective is offered by Suchman (1987), who focused on the problem of intelligibility in the interaction between human and machine. In her thesis, she criticises the *planning model* of Artificial Intelligence (AI) adopted by behavioural science, arguing that not all interactions amongst humans and computational agents can be predicted, as behavioural clues are not always an observable phenomenon. Instead, she proposes the concept of *situated actions*, where action and interaction are intertwined and dependant of their contexts of occurrence. Suchman's analytic framework has been influential for projects such as Loke's *Moving and Making Strange* methodology for movement-based interactions (Loke, 2009).

The concept of *Embodied interaction* introduced by Dourish (2001) understands embodiment as the act of meaning making while immersed in mundane, everyday experiences where the lived body enacts and perceives. Dourish (2001), points out:

“Embodied phenomena are those which by their very nature occur in real time and real space [...]. Embodiment is the property of our engagement with the world that allows us to make it meaningful. Similarly, we can say: Embodied interaction is the creation, manipulation, and sharing of meaning through engaged interaction with artefacts” (Dourish, 2001 p.126).

A focus on a phenomenology of the body has been particularly influential through the lens of Merleau-Ponty's *Phenomenology of Perception*. Some few examples of their applications in our field are Robertson's *Taxonomy of embodied actions* for the design of Computer Supported

Cooperative Work (CSCW) technologies, particularly drawing upon Merleau-Ponty's concept of *reversibility of perception* (Robertson, 1997). Inspired by Merleau-Ponty's view on the lived body, Loke and Robertson (2011) offered an overview on how the body is understood and perceived from the standpoint of philosophical and theoretical approaches informing the design of interactive technologies. Influenced by Merleau-Ponty and Gibson's ecological psychology Deckers, Levy, Wensveen, Ahn, and Overbeeke (2012) introduce a framework to design for perceptual crossing. Svanæs (2013) describes a set of foundational concepts from *Phenomenology of Perception* applicable to HCI, particularly as an analytical framework for interactive experiences. Exploring the possibilities of phenomenology-inspired theory, and distinguishing the embodied approach from the Cartesian tradition engendered by traditional tangible interaction, Hummels and van Dijk (2015) propose seven design principles for *embodied sensemaking technology*. One of these principles, the concept of generating *scaffolds* as a way to facilitate problem-solving, is discussed in the context of collaborative sense making. Although artefacts as scaffoldings are powerful tools to facilitate collective sense making and reflect through action (an aspect that I will discuss throughout this chapter), more references to contemplative and subjective practices are needed in HCI. This need for a more explicit approach to acknowledge subjective experiencing as design materiality will be discussed as one of the salient gaps found during the development of my research project, particularly informing chapter 8.

In chapter 2, I have introduced some of the concepts emerging from Gendlin's theory of embodiment discussing (1) the tacit capacity of our bodies to encapsulate meaning, even when we are not able to consciously acknowledge this, (2) the inherent interconnection of human embodiments and (3) their dialogical influence with the environment, where our acts influence the *implying and occurring* process of our surroundings. Apart from drawing on this view, which has highly influenced the ways I have directed my design decisions (for instance, see chapters 6 and 8), this thesis positions itself as influenced by embodied approaches that conceive human cognition as a phenomenon rooted in our minds and bodies as a unity (Clark & Chalmers, 1998; Damasio, 1999, 2012; Varela et al., 1991). As pointed out by Damasio (1999, p. 51), our bodies are '*the theatre*' of our emotions, generating responses that also shape the configuration in our brains. In line with these influences, when I refer to the term *body* I endorse Shusterman's concept of *soma*, meaning that beyond its corporeal richness and expressiveness, it appears as a sentient, sapient and self-agent tool (Shusterman, 2011a) that

actively builds our ongoing subjective reality. Additionally, it identifies with Lakoff and Johnson's (2008) perspective that conceptual thinking, and therefore our language expression, is shaped by our bodily dimension. Acknowledging those principles, I use the *body awareness of itself* as a tool for meaning-generation, materialised in the use of the felt-sense as a tool for the understanding of experiences. Consequently, I place *the body* –instead of action or interaction– as the central materiality of experience. As we necessarily interact with *and through our bodies*, stressing the primacy of the body might seem unnecessary, yet making evident this distinction can help us to reveal some gaps in the existing body of knowledge. The distinction *reflection through inner presence* and *reflection through action* becomes particularly relevant in the second part of this literature review, dealing with design methods.

3.1.2 Facilitating embodied emotions through design

To recapitulate, building from Gendlin's philosophy (described in chapter 2), the body encapsulates implicit content, attentively awaiting to be revealed in the shape of generative meaning (Gendlin, 1992). This tacit knowledge residing in the inner self implies that we know more than what we can really estimate, hence a clear understanding of how the body relates with the environment would lead us to access our '*highest creative powers*' (Polanyi, 1967, p. 15). Our embodied selves conduct our thoughts and imagination process, playing a fundamental role in our understanding of the world (Johnson, 2013).

Some views in HCI have recognised the importance of our experiential and embodied dimension in the construction of our emotions (Höök, 2008b, 2013; Wright & McCarthy, 2004), in contrast with more cognitivist approaches (Fogg, 2002; Picard, 1997) where the focus centres on measuring and modelling emotions through technology (Leahu, Schwenk, & Sengers, 2008; Sengers, Boehner, Mateas, & Gay, 2008). Experientially-oriented views on the other hand do not aim to directly influence emotion in specific ways, but rather to engage in an open-ended conversation with the user towards stimulating the emergence of emotion. For instance, a concept such as *affective loop experiences* (Höök, 2008a), explored through the presentation of two case studies (eMoto and the Affective Diary), is conceived as an interactive dialogue between the system and the user, which recognises the subjective and personal process of meaning-generation, facilitating the emergence of emotions without prescribing any specific affective outcome. In another case study showing how the transmission of emotion can be done in open-ended, non-specific and playful ways, Mentis, Laaksolahti, and

Höök (2014) describe their experience with their device *Lega*, designed for scaffolding kinaesthetic dialogue, particularly by leaving communicative traces for small groups of people to reflect and express emotions in the context of a museum exhibition. In a different example, describing a failed attempt to generate a household system based on the logic of *emotional diagnoses*, Gaver and his team came to the realisation that focusing on situating emotion as a decontextualised challenge is counterintuitive, thus designing for specific, yet open-ended values, would enable users to generate meaning themselves, stimulating affective engagement (Gaver, 2009). This implies that the interpretation of how the system makes sense is not determined by the designer, but rather facilitated by artefacts supporting multiple worldviews (Sengers & Gaver, 2006). This view will be further discussed in relation to my artwork *Soul* (chapter 8), which although it was crafted from the point of view of one particular person's experience, has proven effective to support different modes of self-identification.

In regard with how our emotions shape our meaning-generation process, and how this is translated into considerations for the design of artefacts, Norman (2004) identified different levels of emotion emerging from our relationship with objects, where the *reflective dimension* was strongly linked with the memories and personal sensations everyday objects are able to trigger. To convey the evocative character of the reflective dimension through design requires a fine-grained understanding of the role of the body in the generation of emotions and experiences, which is something that will be further discussed in chapter 5, in the light of findings from my first study entitled *Focusing-oriented Bodystorming (FOI)*.

Drawing on Dewey's sensorial approach to emotion articulation, McCarthy and Wright (2004) identify the *emotional thread* of one of four elements intertwined in experience, along with the *sensual, compositional and spatio-temporal threads*. Understanding emotions as an element constituting experience rather than separated from it also resonates with Gendlin's (2004, 2012) model of *implying and occurring*. McCarthy and Wright capture the idea that emotions are qualities emerging from particular experiences, being shaped by how the external factors surrounding those experiences relate to our own needs and desires. This means that when these relationships change emotions also are influenced by those shifts (McCarthy and Wright 2004, p.84). This implies that *designing for emotion* requires a deep understanding of the particular situation in which emotions are supposed to generate meaning, instead of understanding emotion as an isolated concept informing design (Gaver, 2009).

The importance of granting spaces for people's interpretation of affect and meaning is directly related to my take on pragmatist aesthetics, as I will discuss in the next section. Instead of locating aesthetic qualities as a constituent part of artefacts or interaction technicalities, in my view interaction can be considered as aesthetic when it enables the user to trace meaningful relations between herself, the artefact and her personal values or past experiences, which would be conducive to a personal meaning-generation process, along with a sense of fulfilment. Below I elaborate on the referents informing this view.

3.1.3 Pragmatist aesthetics and the role of experience

One of the important paradigm shifts between Second and Third Wave HCI is the introduction of concepts from embodied interaction (Dourish, 2001) and the centrality of experience as key in our field (Bødker, 2015). In the nineties, beyond usability and utility, concepts such as user experience started to become popular, and to be considered as a fundamental criterion for good design (Hassenzahl & Tractinsky, 2006). Later on, a movement questioning the primacy of usability started to take shape, opening the door for more critical and experiential approaches to technology (Bardzell & Bardzell, 2015). The appearance and influence of pragmatist thinking represent one of these views.

Pragmatist aesthetics have had an important influence on the way we understand experiences in interaction design. The focus on Dewey's aesthetics has represented a shift from the understanding of aesthetics as a matter of appearance and judgement to focus on experience as a possibility to engage in meaningful interactions with objects and systems (Dalsgaard & Hansen, 2008; Höök, 2013; Lim et al., 2007; Locher et al., 2010; Petersen et al., 2004; Ross & Wensveen, 2010; Wright et al., 2008). According to Johnson (2015), the pragmatist view on aesthetics deals with our subjective ability to generate meaning: "Aesthetics concerns the patterns, images, feelings, qualities and emotions by which meaning is possible for us in every aspect of our lives" (ibid) . Dewey's take on aesthetics is infused by a predominant practical flavour as experience cannot be relegated to mere intellectualisation of phenomena, instead being perceived with the whole body (Shusterman, 2010).

Importing ideas emerging from pragmatist aesthetics to HCI brings some critical points to the discussion of how interactive systems should deal with the complexity of experiences, including the challenges of designing for body and mind. One of the early examples of this integration of theory and practice was contributed by Forlizzi and Battarbee (2004), who

introduced an experience-centric framework for interaction, offering three different ways to describe the interaction with objects: *Fluent*, *cognitive* and *expressive*. A *fluent* interaction alludes to its transparency; a *cognitive* relationship deals with our assessment of object affordances, whereas the *expressive* way allows personalisation. Additionally, they describe how these interactions can lead to different types of experiences. The same year, Petersen et al. (2004) introduced their aesthetic interaction perspective to the existing HCI model, illustrating the importance of aesthetics of use with emphasis on the experiential aspects of interactive systems. One of the points discussed was how the aesthetic interaction perspective promoted the design of intriguing or ambiguous systems as ways to stimulate freedom of interpretation and playfulness. This approach to ambiguity as a resource for the design of engaging interactive systems appeared as an opportunity to embrace rather than reject (Gaver et al., 2003).

By supporting personal interpretation, transparency of tools (otherwise ideal in traditional systems) becomes less relevant over the opportunities granted by exploration (Petersen, 2004). This aesthetic perspective would allow less-prescriptive mediations between tools and bodies (Hansen, 2005), as exemplified through the metaphor of *present-at-body*, introduced by myself and Loke (Núñez-Pacheco & Loke, 2014b). This term is a metaphorical re-interpretation of the Heideggerian term *present-at-hand*, reworking the notion of breakdown or malfunction towards recognising the opportunities for reflection and learning generated by visibility. Our re-interpretation, which we identify as *Present-at-body* is seen as a possibility to evoke heightened awareness on the body as a material for exploration and creativity. As such, our interaction with body-centric tools consists of different shifts of awareness and sense making, illustrated as a cycle of self-awareness and interaction with technology (Figure 5). By describing a case study involving an art installation called *Eloquent Robes* (Núñez-Pacheco & Loke, 2014a, 2014b), we elaborate on how this cycle of interaction with wearable tools embraces ambiguity, and considers lack of self-recognition with the device's feedback as a possibility for interaction. In this respect, if the wearer cannot recognise the output as making sense with her self-perception during the interactive task, ownership of displayed information does not happen and sense making is not achieved. To facilitate sense making and keep the intriguing quality of the experience, we designed the interactive content by balancing simplicity and ambiguity of output information, inspired by Gaver et al. (2003). One of the lessons learnt through our experience with *Eloquent Robes* is the importance of keeping the interaction simple, making space for noticing subtle changes in the body that would guide users to come up with their own

interpretations of the system. The application of these lessons was later applied in the development of the artwork *Soul*, as described in chapter 9.

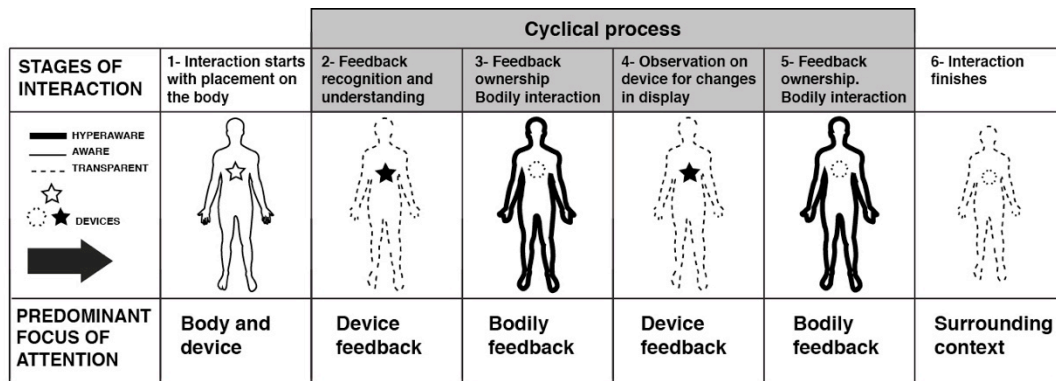


Figure 5 - Cycle of self-awareness through Present-at-Body artefacts (Núñez-Pacheco & Loke, 2014b).

Another important aspect discussed by Petersen et al. (2004) is the criticism against the assumption of users always wanting pleasurable or fun interactions. This reductive view on human nature discards the complexity of experiences that might escape from the tendency towards straightforward positivity and instant gratification. As a simple example of this complex way of interacting with the world, listening to sad music can be a strong and liberating form of self-pleasure and immersion for some people. The experience of aesthetic appreciation of listening to sad music generates an interesting gamut of emotional, bodily contradictory responses (Vuoskoski, Thompson, McIlwain, & Eerola, 2012). As most technologies aim to produce efficient and fast results instead of eliciting reflective interaction (Hallnäs & Redström, 2001; Höök, 2013), it makes sense that instant gratification appears as one of its more relevant motivations. Although there is nothing wrong with efficient and predictably pleasurable technologies as a general rule, there are also experiences that can be deeply aesthetic and fulfilling, although escaping from the traditional views of fun and positivity. As already discussed in chapter 2, fulfilment granted by overcoming difficulties is part of the complex and multifaceted nature of aesthetic experiences. Later in chapter 7, through the discussion on my studies in the application of props and Focusing I will elaborate on how unpleasant experiences through interaction can lead to insights, scaffolding the emergence of meaningful discoveries about the self.

As a pivotal contribution for the design of meaningful experiences through technology interaction, McCarthy and Wright (2004), draw on Bakhtin and particularly on Dewey's *Art as Experience* (1934). By adopting pragmatism as a political position, McCarthy and Wright warn us

against the simplification of human-computer relations becoming apparent ‘from many functional, sociocultural, and systemic accounts’ (McCarthy & Wright, 2004, p. 77). They invite us to see technology as aesthetic experience, by acknowledging the dialogical relation between human and machines as open and ongoing, allowing the sense of completeness and unity described by Dewey (1934) to emerge. They capture Dewey’s idea that ‘emotions are qualities of a complex that move and change’ (p.43), a concept that resonates with Gendlin’s felt-sense in terms of how its sense of complexity and transformation moves around the body (Gendlin, 1978) Another recurrent theme from pragmatist aesthetics captured and discussed in *Technology as Experience* is the ongoing sense making process crafted through our everyday interaction with the world (McCarthy & Wright, 2004). The aspect of sense making, or meaning making as preferred in this thesis, is particularly relevant as the lived body becomes the door for aesthetic appreciation (Scarinzi, 2012), and therefore an active agent in this process.

In order to assess the aesthetic qualities of technologies, some of the questions posed by *Technology as Experience* (McCarthy & Wright, 2004) interrogate if interactions allow flow of experience, and if these enrich or impoverish experiences we already value. These inquiries also confront us with the questions of whether the introduction of everyday technologies is always necessary, and when the existence of them (or some aspects of their design) generate further anxieties and worries emerging from their use. It is important to keep in mind that the aesthetic aspects of interactivity do not reside in the object, but rather in its interpretation (Petersen et al., 2004). For instance, as for some the act of self-cultivation through self-tracking wearable devices can be empowering and pleasurable, for others it can be fragmenting and conducive to self-guilt. One of the documented reasons of why people tend to stop wearing wearable wristbands after some months was the mismatch between unrealistic goals of normative body image promoted by these technologies, which can be perceived as alienating and detached from everyday practices and motivations (Lazar, Koehler, Tanenbaum, & Nguyen, 2015). In this respect, placing the design of aesthetic experiences centrally also implies deep understanding of complex motivations beyond traditional object-centric and goal-oriented aspects, such as efficiency and ease of use, towards the design of meaningful instances through interaction.

Influenced by pragmatist aesthetics, yet implying a view on aesthetics from the perspective of preference, Löwgren (2009) introduces four concepts characterising aesthetic qualities, intended to define the beauty of interaction: (1) Pliability refers to how responsive the

interaction with technology feels. The more responsive, adaptable, inviting and flexible it feels, the higher the pliability. (2) *Rhythm*, which is related to the predictable, balanced and pleasurable flow of sequence and actions occurring when interacting with rhythmical systems. (3) *Dramaturgical structure* refers to the tension arising from the commencement, development and resolution of the interactive act, where interactions can be shaped under the basis of different dramaturgical plots intended to generate different responses. Finally, (4) *fluency* refers to how interactive systems are seamlessly integrated with everyday social rules and practices, gracefully calling for our attention without being disruptive, or without requiring much effort. Although those definitions are useful for the design of interactions for everyday living, the way I adopt the pragmatist perspective of interaction resonates with Petersen's view affording breakdowns and seams (2004), as these planned disturbances along the interaction (or *implying*, in a Gendlian sense) have the potential to scaffold complex and unexpected modes of fulfilment. Additionally, by codifying aesthetic experiences we risk missing the richness of what makes the experience particularly meaningful (Boehner, Sengers, & Warner, 2008). From these examples, we can assume that the ways principles from pragmatist aesthetics can be interpreted depending on whether the focus is placed on the technicalities of the interaction with artefacts (where characteristics such as *fluency* or *pliability* of interaction are considered the main focus), or if we place interest in how the overall experience can be conducive to a sense of meaningfulness.

As an example of how concepts emerging from theory can take shape in the design activity, and how complex modes of fulfilment can be scaffolded, Dalsgaard (2014) describes the application of pragmatism into design thinking concepts, and calls for the articulation of pivotal aspects of design through the lens of established theory. He examines some central themes emerging from Deweyan literature on experience, which are later applied in the shape of *bridging concepts* in the design of interactive experiences; these work in a similar way to *strong concepts* described by Höök and Löwgren (2012), which I will later describe in my discussion chapter 10. As an example of the application of bridging concepts from Pragmatism, Dalsgaard describes the development of an artistic installation commissioned to stimulate children's interest in literature, designed under the bridging concept of *inquisitive use*, which was inspired by the Deweyan themes of *situation* (which draws on the reciprocity of situation and subject), *inquiry* (a mode of thinking towards the transformation of an unknown situation) and the use of *conflict* engendered in the story and delivered through technology, which pursues the

objective to stimulate further exploration. Under this framework, successful and playful prototypes were discarded towards stimulating the emergence of inquisitive use, particularly by adding elements of tension to the story. This example illustrates some aspects previously discussed about thinking beyond the obviousness of designing for what is expected (for instance, instant satisfaction and overly positive outcomes), in order to take advantage of the complex variety of possible interactions existing between people and technologies. In this example of the installation for children, some of them could not deal with the suspense and the rhythm of the story, however the ones who stayed until the end benefited from the consummation of the story and the successful appreciation of the experience as aesthetic. The cycle of self-awareness previously described (Núñez-Pacheco & Loke, 2014b) how the experience of dialoguing with technology for self-reflection also contemplates the possibility of withdrawal, as a focus on consummation of subjective experiences cannot be sustained in the premise of *one-size-fits-all*.

Deweyan pragmatist aesthetics has also been applied as a set of principles for the design of interactive artefacts from the standpoint of industrial design. Inspired by the work of Petersen et al. (2004), Ross and Wensveen (2010) defined four principles for designing for aesthetic interactions: (1) next to practical value, the inherent beauty of aesthetic interactions is rewarding in itself, (2) aesthetic interactions do not overlook socio-cultural factors potentially embodied in design, (3) it understands the concept of form as dynamic and satisfying and (4) involves bodily skills as a way to access the experience of beauty. The authors exemplify the use of those principles in the explorations of interactive possibilities for an Intelligent Lamp, using dancers to create strategies for behaviour and interaction. These strategies were later enacted by the dancers, who represented the roles embodied by the Intelligent Lamp. As part of the experiment, the dancer-lamp puts their strategies into action with a participant that simulates the user. In this case, aesthetic aspects of interaction are tested in situ, allowing the exploration of generative solutions through movement.

In the next section, I will review some of the literature directly integrating the lived body into the design process. Particularly, I will refer to Somaesthetics and its introduction to theory and practice of design and HCI.

3.1.4 Somaesthetics

As noted by Höök et al. (2015) the presence of the lived body in its most corporeal dimension is still quite marginal in HCI practice and theory. I claim that even less attention has been devoted to the role of the body as a *sapient* entity, from which experiences are filtered out, assimilated and assigned meaning. Recognising this gap, my introduction of Focusing-oriented techniques into the theory and practice of design and HCI aims to contribute with further knowledge on the role of the body in reflecting and creating, even beyond direct physical interaction.

Drawing particularly on the aesthetic lineages of Dewey, Baumgarten, and influences from classical Eastern theories on the body and cultivation, Richard Shusterman's *Somaesthetics* (Shusterman, 2008, 2011b, 2012b) has started to gain attention in our discipline, as one of the responses to fill this noticeable body-gap. In the same vein of the pragmatists such as Dewey, Shusterman advocates for a philosophy of practice which is particularly focused on the importance of the body or *soma*. Somaesthetics is defined by Shusterman (2011b, p. 1342) as

“...an interdisciplinary research project devoted to the critical study and meliorative cultivation of the experience and use of the living body (or soma) as a site of sensory appreciation (aesthesis) and creative self-stylization. An ameliorative discipline of both theory and practice, somaesthetics seeks to enrich not only our discursive knowledge of the body but also our lived somatic experience and performance; it aims to improve the meaning, understanding, efficacy, and beauty of our movements and of the environments to which our actions contribute and from which they also derive their energies and significance.”

In other words, the lived body is considered as a cultivation project towards the pursuit of traditional philosophical values of beauty and virtue, which are accessible through a heightened appreciation of everyday living. By *creative self-stylisation*, he traces relationships between personal identity and the body, highlighting the importance of personal, subjective resistance against corporeal normalisation (Shusterman, 2012b). As such, considering *Somaesthetics* as a mere set of guidelines towards a healthy lifestyle is denying the richness of his proposal. Although he advocates for self-improvement and cultivation as part of his project, he also distances himself from moralising and normative discourses and views on the body.

“Let's say a poet or an artist who can only create if he smokes and drinks lots of alcohol. It's not good for his health, but he prefers, if his poetry and art are more important than his health, even if this means that he dies, I am not the person who say, "You shouldn't change your smoking". So, the sense of improvement depends on what people want to do, and a lot of times the judgement of improvement -not always- but ultimately at the end depends on whether this person feels that is better. There isn't an ideal size for your shoe, but if your shoe hurts and then you get it stretched, and if it feels better, then there is an improvement.” (Shusterman, personal communication, 3rd of March 2016)

The somaesthetics project consists of three main branches where their principles can be explored, studied and put in practice (Shusterman, 2011b):

- *Analytic Somaesthetics*: With focus on studying bodily practices and perceptions, the analytic branch deals with the theoretical side of the discipline, particularly directed towards building a better understanding of the role of the body in the construction of knowledge. Philosophical projects investigating how the body is an instrument of political or social control and how it is shaped by those powers are examples of this branch.
- *Pragmatic Somaesthetics*: This branch is concerned with “proposing specific methods of somatic improvement or engaging on their comparison, explanation and critique” (Shusterman, 2011b p.1362). The utilisation of methods to cultivate bodily self-awareness towards its integration in the design process can be considered a part of how our discipline has incorporated this pragmatic approach.

Due to the nature of design as a discipline, the generation of knowledge through Somaesthetics is situated within the domain of *strong concepts* (Höök & Löwgren, 2012), midway between theories and instances, meaning conceptual knowledge is basically located in the analytic approach (as design generates knowledge), yet through adopting a pragmatic somaesthetics perspective (proposing methods and frameworks).

- *Practical somaesthetics*: As the label indicates, this dimension refers to the corporeal engagement in actual practices towards self-cultivation. This approach has been used in design practice as a strategy of sensitisation (Márquez Segura, Turmo Vidal, Rostami, et al., 2016).

3.1.4.1 Factors facilitating the adoption of Somaesthetics

As a discipline, Somaesthetics contains some special characteristics that make it particularly useful for its adoption in HCI and design. First of all, it advocates for the practice of philosophy as a way of living through our bodies, which relates with the practical (Stolterman, 2008) and embodied ways designers have to build knowledge (Bardzell, 2012). Beyond the act of prototyping and sketching, some other enactive methods use direct physical engagement as a way to extend the limits of our embodied cognition, for instance, to generate new ideas, evaluate, prototype or reduce time to analyse behaviour (Buchenau & Suri, 2000; Oulasvirta et al., 2003; Schleicher et al., 2010). Somaesthetics builds on Dewey's understanding of experiences, also offering some practical tools for the application of somaesthetic principles. As a sample of the practical somaesthetics approach, his chapter on Somaesthetics in the Philosophy Classroom (Shusterman, 2012b) offers a step-by-step protocol to engage in somaesthetics reflection, particularly in the shape of body scanning. Some of these elements for embodied self-awareness have already been applied in the context of idea-generation for design (Lee, Lim, & Shusterman, 2014; Márquez Segura, Turmo Vidal, Rostami, et al., 2016).

Another aspect resides in the multidisciplinary nature of Somaesthetics, making it adaptable for design use. In his book *Thinking through the Body*, Shusterman (2012b) describes the integration of some of its theoretical contributions into cultural politics, arts (including popular art), sexuality, consciousness studies and recently to interaction design. Although this might be anecdotal for the purposes of this list, Shusterman himself has recognised he is labelled as a *transgressor* and a *nomad philosopher* in circles of analytic philosophy, where he originally started his career.

Somaesthetics contributes to fill the gap of this taken-for-granted presence of the body in the rhetoric of experience, inherited by the adoption of isolated aspects of pragmatist thinking. It offers strategies to bridge somatic practices with aesthetics of interaction (Schiphorst, 2009). Somaesthetics encourage the adoption of principles from somatic practices, including paying attention to our movements, senses and changes in our bodies.

At the moment, the application of somaesthetics principles in HCI still represents a quite incipient movement. Some researchers refer directly to the materialisation of somaesthetic principles into research through design practice (Bergström & Jonsson, 2016; Höök et al., 2015; Ip et al., 2014; Schiphorst, 2009), including the elaboration of methods and

frameworks informed by Somaesthetics as a philosophy (Höök et al., 2016; Lee et al., 2014; Schiphorst, 2009). Dealing with the articulation of frameworks from theory to design practice, Schiphorst (2009) develops four somaesthetic themes applied through her tangible interactive artwork *soft(n)*: (1) Experience (which is both sensory and aesthetics), (2) poetics of interaction (referring to the process of critical meaning-making through interaction) (3) materiality (exploring the relationships between materiality and the sense of touch), and (4) semantics of caress (which investigates the meaning-generation process through touch, and how these can be applied to tangible interactions). Regarding the description of key qualities for somaesthetic appreciation design, Höök et al. (2016) describe an additional set of principles: (1) Subtle guidance towards the inside, (2) making spaces for reflection, (3) intimate correspondence between feedback and the rhythms of the body and (4) to provide means to articulate bodily sensations. Apart from the examples described by Höök et al. such as the *Breathing light* (a tent-like lamp for the exploration of breath) and the *Soma mat* (which heightens awareness on the body with localised heat), principles from somaesthetics appreciation design framework have been put into action with the design of the *Sarka Mat*, which sonifies shifts of movement and weight in the context of the practice of Feldenkrais (Bergström & Jonsson, 2016).

The principles described in these publications deal with meaning-making through reflective engagement, both by focusing on the subtle changes happening in the body, as well as in the semantic relationships between body, space, materiality and other bodies. Adding to these principles the anti-normative connection with one's own self, the distilled essence of these values can be acknowledged through the design of interactions aiming to take advantage of the body as a tool for creativity and self-discovery.

3.1.5 Discussing gaps emerging from theories of experience informing HCI

In my interpretation of the discussed paradigms, there are three influential themes traversing aesthetic pragmatism and somaesthetics (particularly, I am referring to how such principles are put in practice in HCI) also relevant to Gendlin's phenomenology. For these three approaches, the concepts of *experience*, *body* and *(inter)action* are very relevant, however in slightly different ways and degrees.

Drawing on the importance of our senses, and particularly upon the importance of our implicit sensory guidance, McCarthy and Wright (2004) define the *sensual thread* as...

“...concerned with our sensory engagement with a situation, which orients us to the concrete, palpable, and visceral character of experience. It draws attention to things being grasped pre-reflectively as the immediate sense of a situation in which the wonder of the material world is made actual for us in the quality of experience. When the functions of the senses are fully realized to give this sense of the situation, the interaction between person and environment becomes participation and communication” (p.80).

Foundational works such as McCarthy and Wright’s *Technology as Experience* are based on an interest in elucidating how people interact with technologies for aesthetic engagement. Designing for *body and mind* becomes one of the purposes of employing pragmatic aesthetic as a framework (Petersen et al., 2004), however it is not quite clear how our bodies are particularly taken into account from such a perspective. In the case of Deweyan pragmatism, the role of our bodies, and particularly the senses, is primordial for the appreciation of aesthetic experiences (Dewey, 1934), yet when this principle applied in our field aesthetic interactions sometimes tend to be associated with *transparency*. Some approaches such as Löwgren’s (2009) propose that aesthetic technologies should be immersed in the flow of everyday experience, even when integrating elements of dramaturgical tension. Similarly, Forlizzi and Battarbee’s (2004) take on *fluent* interactive experiences advocates for interactions that do not compete for our awareness, allowing us to perform our acts. As a result, keeping the body undisturbed appears as a goal when designing for aesthetic experiences. Even in the application of aesthetic values for the design of artefacts by Ross and Wensveen (2010, p. 6) (whose work is highly influenced by somaesthetics) the dancers who were in charge of devising interactive strategies through movement were instructed “*not to speak and only use their bodies as a means for interaction*”. As a result, the interaction with the world becomes the focus, whereas sensations and meaning-making emerging from such an interaction remains unspoken, in the tacit realm. The body becomes the silent tool to direct us through the world of experiences, *the means to an end*.

Somaesthetic places the lived body at the centre of its philosophy. As discussed, it advocates for a philosophy of theory and practice. Projects deeply grounded in theory which acknowledge the role of sensing, reflecting and meaning-making such as Schiphorst’s *Somaesthetics of Touch* (2009) and Höök et al.’s *Somaesthetic appreciation design* (2016) are still quite rare. The role of

articulation of somatic qualities is acknowledged as relevant, recognising the need for providing strategies to support description and externalisation (ibid). Yet existing references to the articulation of experiences rely on few instructions. As thinking through the body is not an everyday mode of awareness, nor easy for most (Fogel, 2013; Gendlin, 1996), more specific protocols for bodily focus become necessary to reinforce and scaffold the generation of meaning. More gaps emerging from the application of Somaesthetics in our field will be later discussed in at the end of the second part of this literature review on *design methods*.

3.2 Design Methods

Having reported on experiential worldviews in HCI, including designing for experiential emotion, the pragmatist view and Somaesthetics, here I proceed to refer to design methods used to access everyday experiences and beliefs, informing design solutions. Some of these methods delve into people's practices, whereas others use generative means to propose solutions in the context of design, as both practice and research.

3.2.1 Documenting bodily knowing for design

Having argued for Gendlin's understanding of the body as our door for meaning-articulation, acknowledging the role of our *bodily knowing* is crucial for crafting experience-centred design. We cannot afford to ignore a whole dimension of knowledge and understanding of experiences by regarding the body as a tool with no influence in our reflective processes, hence absent from everyday meaning-making. As already discussed, pragmatic and experience-centred design for emotion use openness as a strategy for users to make sense of the interaction by themselves instead of imposing pre-defined meaning. Although user-centred criteria for good design including satisfaction, effectiveness and efficiency (Bevan, 2001) are necessary for the design of quotidian artefacts these terms need to be expanded towards addressing the complexity of aesthetic values emerging from everyday interactions (McCarthy & Wright, 2004). I argue that part of the richness of these values resides in the intimacy and privacy of our tacit felt-sensing, the experiential space where feelings, sensations, thoughts and memories reside together, generating implicit connections beyond language.

The importance of our *bodily ways of knowing* in the design process is rarely discussed explicitly, at least in the terms this thesis discusses it. Generally, the concepts of bodily knowing (Françoise et al., 2017; Larssen, Robertson, & Edwards, 2007a, 2007b; Loke & Robertson, 2011; Wilde et

al., 2011) and meaning-generation (Carlson et al., 2015; Hummels et al., 2007) are discussed in regard to corporeal activity particularly seen as movement. Tacit knowledge generated through bodily engagement is also seen as contrasted to verbal paradigms (Klemmer et al., 2006; Koefoed Hansen & Kozel, 2007), 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 (Schiphorst, 2011). One of the salient issues in the integration of somatic knowledge is the difficulty to articulate aesthetic qualities, as well as transfer those values into design of new experiences (Fdili Alaoui et al., 2015; Höök, 2010; Höök et al., 2016). The importance of body-centric practices is generally acknowledged in HCI, yet a focus on documenting felt experience (Loke & Khut, 2011), and tacit and embodied knowledge (Bardzell, Bardzell, Dalsgaard, Gross, & Halskov, 2016), requires further consideration. The challenges of documenting the ephemeral qualities from bodily movement (Márquez Segura, Turmo Vidal, Rostami, et al., 2016) can be extended to other somatic manifestations such as the felt-sense, which is not only in constant transformation but also requires our heightened attention towards the self to purposely unearth somatic qualities for design practice. As I will discuss in chapter 5, I call instances of felt-sensing experiences as *mementos*, as a way to recognise their temporary, yet aesthetically meaningful materiality. In my study chapters dealing with the application of Focusing-oriented methods, I will discuss how accessing the inner dimension uncovers a world of intimate and rich descriptions of internal qualities, including new perspectives on the description of everyday experiences, insights, and self-discoveries. Other design methods display different strategies to access richness of experience. Next, I will set the scene for what I mean by richness of experience towards a description of how different methods used in design research and practice access this richness.

3.2.2 Richness of experience: Texture and Meaning

Experiences can be described in different ways. For instance, my proposed focusing-oriented agenda uses discernment through our bodily knowing to access aspects of experiences that tend to be generally overlooked by other means. However, one of the questions arising from this attempt to access experience is: what are the qualities engendered by the description of rich experiences? Two of the criteria I use to determine the qualities articulating rich experiences are the concepts of *texture and structure*, borrowed from phenomenological research (Moustakas,

1994; Todres, 2007). A *textural* description opens the door to witness how situations have subjectively unfolded, yet the richness of such a description conveys significance beyond the personal realm (Todres, 2007, p.8). In chapter 9, I elaborate on how by materialising a singular rich description into an interactive artefact it is possible to connect with a larger audience despite the specificities of the aesthetic experience. Additionally, by collecting textural aspects of experiences such as feelings, thoughts and sensations, we are able to understand the *how* of such an experience, accessing its *structure* (Moustakas, 1994, p.78). Textural experiences should collect information people can *empathise* with. These descriptions contain intuitive, wholistic presence and beauty, in a similar way to the felt sense (Todres, 2007).

Engaging in dialogue is an effective means to access personal stories to empathise with, for instance, by collecting descriptions through ethnographic tools and probes (Wright & McCarthy, 2008). Novels are good examples of how stories can connect us empathically, however in order to do so these have to show some characteristics. Drawing from Bakhtin's analysis of novels, Wright and McCarthy (2005) describe the kinds of narratives that make us engage with experiences. In contrast with *action genres*, which focus on adventures happening in the outside world, what Bakhtin recognised as *polyphonic novel* placed the emphasis on the characters' development and their inner conflicts. Dialogue was one of the fundamental features of polyphonic novels, granting a variety of possibilities informed by different points of view belonging to each character. The way all the different characters' worldviews were related would inform the development of the novel. Additionally, time and space were regarded as relevant aspects of the story, as situations lived by the characters cannot be conceived as isolated from their historical and social context.

Some of Bakhtin's features from polyphonic novels as described by Wright and McCarthy (2005) are relevant for this research, particularly those dealing with the focus on *the inner world of the participant*. The methods I am interested in describing go beyond collecting information about what experiences are about, but also the subjective and textural features composing these stories. In the following section, I will describe some methods allowing designers to access richness of experience in different ways, including subjective accounts and stories.

In sum, the description of rich experiences can be understood as: (1) showing texture in the shape of embodied descriptions, feelings, thoughts and context; (2) allowing the reader to

empathise with the narrative by; (3) placing the main focus in the inner world of the person who narrates the story.

3.2.3 Methods to access rich experience in design

The following methods allow access to empathic understanding through different procedures, ranging from one-to-one encounters between two individuals, conversations mediated through design artefacts or reflections on personal experiences that could potentially shape design.

3.2.3.1 Interviews

Widely used as a research method to approach experience and knowledge for design use, interviews are helpful to get information about people's opinions, practices, problems and context, providing insights towards a better understanding of the particular phenomenon of study (van Boeijen, Daalhuizen, Zijlstra, & van der Schoor, 2014). When properly conducted, interviews can reveal detailed and rich responses, including the description of personal stories (Doody & Noonan, 2013). Interviews can vary in terms of structure, the most common is semi-structured in qualitative research (Brinkmann, 2014). Even in apparently more natural and unstructured conversations, research questions somehow structure and shape how the interview unfolds. To facilitate the generation of responses and build trust with the interviewee it is essential to show empathy and interest, whilst keeping a neutral attitude to avoid directing participants to alter their responses (Doody & Noonan, 2013).

The data extracted from interviews and observations give the designer enough material to discover patterns and unearth insights (IDEO, 2009), which are later materialised into artefacts, services, methods or frameworks. In terms of the nature of the knowledge obtained through interviews, although accounts from participants can be rich and insightful, particularly if the interviewer is experienced and knows how to manage the rhythms of the conversation (Doody & Noonan, 2013), this method only deals with what participants consciously know about a given situation (van Boeijen et al., 2014). Complementing interviews with techniques such as active listening (Gendlin, 1978; Rogers & Farson, 1979), which I have introduced as a design method to elicit the emergence of insights (chapter 6) can help to render explicit some previously tacit content.

3.2.3.2 Design probes

Inspired by disruptive practices such as Dadaism and Surrealism, and distancing themselves from more scientific approaches to engage in research, Gaver, Dunne and Pacenti (1999) introduced the concept of *Cultural Probes*, which are packages with different evocative objects to stimulate a dialogue between designers and people who receive them. These tools are intended to facilitate a better understanding of unfamiliar cultures, particularly by eliciting the articulation of stories emerging from the interaction with the packages in the participants' territories. Originally, cultural probes were conceived as tools valuing inspiration over information, catalysing dialogue through provocative and playful tasks. However, as later recognised by Gaver et al. (2004), probes have been adapted towards more scientifically-oriented processes of data collection and analysis (such as the case of *Empathy probes* (Mattelmäki, 2006; Mattelmäki & Battarbee, 2002)), somehow missing the open-endedness and rebelliousness of the original approach.

One of the interesting aspects of the use of probes as originally intended is the centrality of people's stories as the main material extracted from the method. These stories emerge from the exercise of defamiliarisation granted by the tools, acting as scaffolds for dialogue and exploration (Gaver et al., 2004). *Design probes*, a variant developed by Wallace, McCarthy, Wright, and Olivier (2013), follow Gaver et al.'s spirit in terms of its dialogical and open focus, however they direct its use to a particular phenomenon of inquiry. By elaborating on a case study centred on understanding the experiences of patients suffering from dementia, design-researchers immersed themselves in the topic before elaborating the probes, which became physical materialisations of their *tentative hypothesis*. The project described in the paper centres on the experiences of Gillian, a woman who is slowly losing her memories, and her husband John who witnesses her struggles. In order to facilitate the articulation of stories without overwhelming the participants with the probe tasks, the design-researchers reflected on the difficulties behind the act of *being creative*, something that we designers tend to take for granted. As a result, their design decisions are directed towards making probes approachable and achievable to complete. Some of the strategies utilised to facilitate responses are: (1) *Openness and boundedness*, a balanced relationship where objects await to be completed by using constraints as ways to elicit dialogue, (2) *Materiality* taken into account as embodying everyday metaphors, and (3) *Pace and challenge*, which acknowledges the slowness in the reflective process of completing the probes.

Beyond capturing everyday stories, probes can also be used as tools for the speculation of future scenarios through magical thinking (Samson & Andersen, 2013). These can be used in conjunction with diaries and essays (Go, 2007), introducing open-ended devices to explore new possibilities granted by technology (Hutchinson et al., 2003). Magical thinking can also function as a means for critical design practice and generation of theory (Koefoed Hansen & Kozel, 2007). Other methods such as contextmapping (Visser, Stappers, Van der Lugt, & Sanders, 2005; Visser & Visser, 2006) use props to sensitise designers prior to generative design sessions. Different modalities of probes are useful to access people's stories from various perspectives, yet having to materialise a specific research question through an artefact prop might be difficult, and in some cases, time consuming.

3.2.3.3 Autobiographical instruments: Diaries, essays and self-use

Diaries have been traditionally utilised to report on self-practices, facilitating reflection through the act of journaling (Lupton, 2014). These tools allow re-living experiences through expressive means, sometimes opening the door for digital ways of documenting experience (Lindström et al., 2006). In design, these tools are commonly used in combination with other methods, such as probes. In this way, participants are asked to complete textual descriptions, articulating their emotions in regard with different situations and tasks. An example of design tools used for people to document their daily practices are *photo essays*, which collect visual and textual narratives, and are used by designers as materials to explore new opportunities for the design of household technologies (Go, 2007). Another self-reporting method is *Mobile diaries*, which allow participants to document their everyday experiences by using a mixture of digital and non-technology tools, such as blogs and notebooks (Hagen, Robertson, & Gravina, 2007).

An important part of the knowledge acquired by designers is tacit, embedded in artefacts and the design decisions we make. Reflecting on one's own practice is fundamental to make sense of it (Schön, 1987). Adopting a first-person design perspective (understood as designing for others from a personal perspective) can be helpful to deal with complexity in flexible ways (Tomico, Winthagen, & Van Heist, 2012).

One strategy to become aware of one's own practice is by documenting self-use. Despite the fact several design decisions rely on subjective assessment thus influencing our designs (Zhang & Wakkary, 2014), the existence of literature documenting autobiographical design practices is still quite rare. Interesting and detailed examples of this method in action include Desjardins

and Wakkary (2016) autoethnographic project on reconfiguring and redesigning a camper van and Williams' (2015) personal experience with self-tracking devices for weight loss. These works draw on Neustaedter and Sengers (2012a, 2012b), who discuss how expert designers engage in self-use and testing, although this practice is generally regarded as not valid in HCI. Some of the accounts emerging from self-use document textural and intimate aspects of interacting with artefacts, which are difficult to obtain through other methods.

The quality of *intimate knowledge and intimate frustration* refers to the deep personal connection we have with the van. It is a strong relationship and a profound understanding for how things are in the van. For example, when driving, we can hear different sounds like creaking and rattling depending on how things are positioned in the van. However, these sounds vary with the temperature and the weather (heat and humidity make wood and metal expand and shrink at different rates). After twenty-three months of building, living, and driving in the van, we have learned where these noises come from, and we now know how to make them stop by rearranging objects in some cases. (Desjardins & Wakkary, 2016, p. 5279)

Based on Gendlin's view, the body is perception (1992) and it is through our bodies that we make sense of the experiences occurring in everyday life. In the previously described example of the van, Audrey Desjardins and her partner Bérubé Lebrun were able to tacitly recognise the meaning of each noise emerging from the camper van and how to act in response to those. Although this information might be possibly regarded as difficult to analyse, everyday experiences are undeniably plentiful of such instances. Accessing the description of tacit experiences will allow us to better understand people's motivations and possibly how to design for those. Detailed embodied descriptions can be used as materials to shape design, as discussed by Höök (2010) in her application of the *transfer scenarios* method (Ljungblad & Holmquist, 2007), where personal accounts on horse riding were translated into lessons learnt, applicable for the design of body-centric digital technologies acknowledging aesthetics of enjoyment.

One of the possible issues emerging from autobiographical design, and particularly from self-use, is getting confined in personal pre-conceptions. Immersion might lead us to take for granted issues beyond the limits of our personal space. In this case, additional tools for

scaffolding fresh meaning are needed to surpass this potential issue without having to sacrifice the richness of personal experience in the process.

3.2.3.4 Body maps

Experience is a multifaceted phenomenon that involves sensorial and intellectual engagement. Most methods deal with the verbal dimension of experience, however there are different ways of expressing and communicating richness, including non-verbal ways. Body maps are projective graphical tools that support expression through intuitiveness, allowing those who craft the instruments to tell stories about themselves (Gastaldo et al., 2012). Participants are encouraged to complete their body maps with coloured pencils, photos from magazines and any other material useful to represent their symbolic world.

According to Solomon (cited in Gastaldo et al., 2012), body maps can serve different purposes. The following are relevant for design practice: (1) as research tools, (2) communicative and expressive tools, and (3) inter (personal) dialogue tools. As illustrated below, these dimensions might sometimes overlap:

- *Research tools*: As graphical representations of bodily sensing, body maps help us to access sensory experiencing, complementing textual data obtained through interviews and questionnaires. To access more corporeal (as well as symbolic) aspects of experiences, I have used body maps to further elucidate how felt-senses develop around the body (Núñez-Pacheco & Loke, 2016).

- *Communicative and expressive tools*: Body maps are used as tools to facilitate the communication of affective responses in those dimensions of experience where the articulation of affect is difficult through words, such as in the case of feelings and physical sensations. Additionally, body maps allow participants to notice the presence of their bodies in the affective realm, and to project their feelings through symbols and metaphors. As an example of body mapping acting as a communicative tool, Almeida, Comber, Olivier, and Balaam (2014) used body maps to access participants' perception of their bodies to inform their development of e-textiles for female pelvis fitness. In a different example, Jaatun, Haugen, Dahl, and Kofod-Petersen (2013) have used user-centred design principles to develop and evaluate a self-assessment tool based on digital body maps, allowing cancer patients to self-assess and properly articulate their subjective levels of pain with the assistance of visual clues. In terms of

expression, *The Heart Library Project* by the artist George Khut uses body maps as tools for enquiry, in which participant's feelings, sensations and insights are collected after their interaction with the artistic installation (Loke & Khut, 2014). In this approach, participants were asked about their personal process, while crafting their *experience map*. Apart from being informative and reflective, the expressiveness and beauty of the resulting maps was exhibited as part of the *Enfoldings & Disclosures* exhibition at the UTS in 2008¹.

- *Inter (personal) dialogue tool*: In order to define the influence of these tools, Solomon (cited in Gastaldo et al., 2012) uses the term *inter-generational* instead of *inter-personal* as expressed here. Apart from allowing people to fill communicative gaps through expressive metaphors in the shape of images, these tools are also useful for multicultural exchange, as words are not always necessary. This approach has been demonstrated in art therapy by Rappaport (2008), in which participants from different cultures and languages communicated through a series of exercises of dialoguing from the inner self, exclusively through drawing. This *inter-personal dialogue* mediated through intimate artefacts can also be linked with cultural probes, which are effective tools to discover unknown aspects of unfamiliar cultures and private accounts (Gaver et al., 2004; Gaver et al., 1999).

3.2.4 Gap of methods to access experience

The methods reviewed above contain at least some of the following distinct features:

- Some of them take advantage of artefacts as *projective tools*, allowing participants to establish a dialogical and mediated relationship with the designer or researcher. This is the case for probes (Gaver et al., 2004), body maps (Gastaldo et al., 2012) and diaries. In the case of autobiographical design, personal accounts are mediated through and directed towards *artefact self-use* (Neustaedter & Sengers, 2012a).
- When relevant, the articulation of bodily experience (such as in the case of body maps) remains tacit and embodied in symbolic and abstract representations of colours and shapes. Due to their openness and lack of structured textual descriptions body maps remain hard to analyse. However, in their original context of application, these are expressive tools conceived for storytelling, only making sense in relation to the participant's stories

¹ www.georgekhut.com/2008/10/experience-maps-2008.

(Gastaldo et al., 2012). 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 (Loke & Khut, 2014). The use of body maps could possibly work as both mediators and scaffolds of description, however it might be worthwhile attempting to facilitate the verbal articulation of bodily experience before recurring to the symbolic mediation granted by the body map as an artefact. In that sense, I endorse Gendlin's recognition of language as a *pre-condition for meaning*, acting as a direct channel to transform the tacit into implicit, as already discussed in chapter 2. Although useful, the symbolic dimension of body maps as descriptive material brings the experience back to the tacit, acting more as mediators of description, possibly dispersing attention from rich and highly specific accounts about to be articulated.

For a more explicit and accurate articulation of bodily experience, the use of techniques such as interviews can be useful, however it is important to take into account that bodily experience (which is strongly tacit in part) is –again– difficult to describe, even through the use of words. Additional highly specific techniques to ensure sustained focus would be needed, such as for example Petitmengin's (2006) method for the description of first-person experiences grounded in phenomenology. Some of her strategies 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 (Petitmengin, 2006). This method has been recently utilised by Françoise et al. (2017) to capture subjective experiences in the context of an interactive installation supporting kinaesthetic awareness of micro movements. In addition, *Reflective or active listening* (Gendlin, 1978; Rogers & Farson, 1979; Weger Jr, Castle Bell, Minei, & Robinson, 2014), which I have described as part of my methodology (chapter 4) might also help to further articulate the complex aspects of experience grounded in the body.

Those tools and methods to access experience are not designed to consider the body as the centre of the experience. Tools such as body maps acknowledge the presence of the body, however these tools might be mediating stories rather than scaffolding description, possibly leaving important information in the tacit realm. Although highly effective, techniques previously described such as Roger's reflective listening and Petitmengin's approach can be

applied to a variety of topics beyond bodily inquiry. Even in the case of body maps, these tools await completion by verbal narratives, which give them the meaning they encapsulate.

3.2.5 Aesthetic and embodied approaches to ideation

During the last decades, a broader access to tangible technologies has directed the attention of designers and researchers towards the development of new frameworks and techniques based on bodily interaction and gestures. This has opened up the emergence of different research projects valuing the importance of subjective experiencing as a design material (Larsen et al., 2007b; Márquez Segura, Turmo Vidal, Rostami, et al., 2016; Schiphorst & Andersen, 2004; Segura & Isbister, 2015; Silang Maranan et al., 2014; Tholander & Johansson, 2010).

This section describes some ideation approaches using the body and experience as the central ground for knowledge construction and meaning making.

3.2.5.1 Bodystorming and Experience prototyping

Drawing on performance techniques previously explored in the context of design by Burns, Dishman, Verplank, and Lassiter (1994), *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 (Oulasvirta et al., 2003). 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* (Schleicher et al., 2010) 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* (Buchenau & Suri, 2000) 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 wholistic 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" (ibid, p.425). Similarly, approaches such as

empathic modelling (Nicolle & Maguire, 2003) 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.

As these are enactive methods their source of knowledge resides in their situated approach to action. As I will discuss later in the chapter, the focus on knowledge through action keeps its articulation tacit, an aspect that was also noted by Schön (1984) when he described 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.” (Schön, 1984, p. 3)

3.2.5.2 Interaction relabelling

Developed by Djajadiningrat, Gaver, and Frens (2000), 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 (ibid). Artefacts are used to scaffold fresh meaning beyond established social conventions, an aspect I have also explored through my focusing-oriented methods in chapter 7. Even though relabelling artefacts is useful in generating new connections, this exercise is still too artefact-oriented.

3.2.6 Artefacts, materials and props

Although these are rather 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 et al. (2017) 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 artefact can also be intended as a resource for defamiliarising everyday experience. For instance, in their presentation of their *Experience Modelling* method, Schiphorst and Andersen (2004) 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 (2007) 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 (2009, 2010) 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 (2015) 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.

3.2.6.1 Embodied sketches

Capturing principles from theatre and practical Somaesthetics, *embodied sketching* (Márquez Segura, Turmo Vidal, Rostami, et al., 2016) 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.

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 (Márquez Segura, Turmo Vidal, & Rostami, 2016)), (2) participatory embodied sketching (where games are created and modified), and (3) sensitisation, where designers participate in physical sessions to better articulate embodied experience.

3.2.6.2 Somaesthetic reflection

Functioning as a catalyst for ideas grounded in bodily sensibility, Lee et al. (2014) 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 (2012b) 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. 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.” (Lee et al., 2014 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.

3.2.7 Gaps of existing methods to access experience and design ideas: Reflection through action versus reflection through inner presence

The previously described ideation methods use tacit bodily knowing to facilitate and explore ideas, for instance through direct interaction with artefacts, prototypes, spaces and sites. In the majority of those ideation methods, the materialisation of aesthetic aspects of interaction is assumed to be later embedded in the artefact design. As a result, the tacit component contained in this embodied knowledge does not need to be articulated directly. The step between the tacit and the explicit remains unspecified.

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 (Oulasvirta et al., 2003). Enactive approaches can enable us to access social embodied patterns (Márquez Segura, Turmo Vidal, Rostami, et al., 2016) and to take into account the aesthetics of interaction and the primacy of experience over more functional and artefact-centric considerations (Djajadiningrat et al., 2000). As demonstrated in the description of the previously introduced 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 (Dreyfus, 1991). In the middle of this state of absorption in the task it is actually difficult to describe subjective experience accurately (Petitmengin, 2006). Circumspection, which is an everyday mode of autopilot awareness, (Dreyfus, 1991) 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-through 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 easy, possibly because of such social discouragement (Fogel, 2013; Rome, 2014), therefore it is important to generate spaces directly designed for the purpose of paying attention. Although props can direct our attentional focus towards outside instead of inwards, these are still very useful tools to scaffold meaning, which explains its prevalent use in design. To take advantage of props and other artefacts to scaffold meaning through bodily observance, it is important to alternate the attention between device and body, in order to purposely facilitate the articulation of somatic qualities, as done by Jonsson et al. (2016) in their study of thermal guidance for the practice of Feldenkrais, or Feltham, Loke, van den Hoven, Hannam, and Bongers (2014) with their *Slow Floor* and the study of walking as an expressive and creative activity. I also elaborate on the application of this principle in chapter 7, where I explore the use of props emitting gentle heat and vibro-tactile stimuli in the practice of Focusing.

In other cases when the body becomes the instrument or *equipment* for action such as in the case of the embodied sketching method (Márquez Segura, Turmo Vidal, Rostami, et al., 2016), the materiality of bodily movement and its location on space are used as tools for design. Still, 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, somatic sensing and bodily knowing remains in the tacit realm. We get closer to the real experience, but something else is unavoidably missing. Additionally, the authors actually argue for the need to separate sensitisation strategies from ideation, as this would allow designers to enact directly (Márquez Segura, Turmo Vidal, Rostami, et al., 2016). In that case, it is not quite clear how somatic accounts emerging from these somatic sessions are actually incorporated in the designs.

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 (Polanyi, 1967), focusing exclusively on action discards the

possibility to dig deeper into our motivations, taking its valuable and subtle information for granted. Although 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 (Shusterman, 2005) is somehow inherited by these approaches.

From this discussion on research gaps, the generation of ideas acknowledging a more comprehensive role of the body requires distinguishing between two dimensions: (1) *reflection through action* (as already done by most ideation techniques) and (2) *self-reflection through inner presence*, which is something this research aims to incorporate as a material for representational meaning making. When one dimension is attended, the second goes to the background of our consciousness. The first one uses the *silent body*, whereas the second uses the *felt-sensing body* as a design tool. It is important to take into account that I have coined this division as a practical way to distinguish where is the attention placed, however in somatic practices *self-reflection through inner presence* is part of the practice of becoming attuned with our inner dimension of the self (Hanna, 1988). Yet, when attention is placed on the action the body is performing, it is difficult to filter out how our bodies perceive representational everyday content. Knowledge through the body can encapsulate both dimensions.

From the described methods, a noticeable exception from the tendency to overlook the articulation of bodily knowing is the use of *somaesthetic reflection* as a material for design ideation (Lee et al., 2014). 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 (ibid). Recognising the importance of somaesthetic reflection as well as the philosophical and practical tools 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.” (Lee et al., 2014 pp.1057)

On a personal note, 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 session with some self-Focusing. 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 and felt-sense, 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*. Privileging 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. This experience, which I also described as part of my autoethnographic journey, is something I have taken into account in the development of my Focusing-oriented methods, an aspect to be later discussed in chapters 6 and 8.

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 (Höök et al., 2006). 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, something that has been mentioned previously. As a result, the body scanning sessions and the design sessions might seem unrelated for those with little experience in somatic practices. The instructions given by Shusterman (2012), including the body scanning session he describes in detail², 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.

Despite the undeniable contributions of Somaesthetics into the field of interaction design, it is not clear how our interpretation of this philosophy has overcome part of the Cartesian thinking inherited by HCI culture. Shusterman clearly describes how developing an enhanced somatic awareness can make us more sensitive and vigilant to everyday social issues related to social justice (for instance racism and discrimination) (Shusterman, 2011b), which also resonates with what Madison (2016) discusses about how adopting a more Focusing-oriented attitude can get us a step closer towards developing enhanced political assertiveness and empathy. In this respect, another existing gap refers to how techniques that are closer to embodied articulation generate solutions mostly related to the body in the more literal sense, namely ideas for interactive games, sports, or somatic disciplines. Bodily focus is not generally seen as a source of creativity and assertiveness per se; the body is not normally taken seriously as a contributor of our abstract representational knowing, as discussed by Lakoff and Johnson (2008) in their work discussing how our way of making sense of the world and expressing it linguistically is shaped by our bodily presence. The source of our discomforts with current society goes way beyond our rationally adopted values and principles; these are shaped by what we feel. This lack of trust in our bodily knowing is maybe the most noticeable gap

² In his book *Thinking Through the Body, Essays in Somaesthetics*, Shusterman provides an example of a body scanning session (pages 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" (Shusterman, 2012 p.118). Then, he 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.

revealed through this research. My thesis aims to contribute with a discussion point towards the recognition of its importance, opening a door for its applicability in design.

3.2.8 Summary of gaps

To finalise this chapter, I will briefly summarise the gaps found throughout this review.

- As discussed by other researchers, the presence of the body is still quite incipient and secondary in our discipline. Although the role of phenomenology, pragmatist aesthetics and somaesthetics have noticeably contributed to a more rigorous take on the importance of the body in interaction, approaches deriving from these contributions tend to overlook the following: (1) despite the claims situating the body as crucial, existing views mostly interpret the body exclusively in its *physical presence*, externalising the focus from the bodily awareness of itself to interaction (2) when the body is acknowledged, the physicality of the body is seen as the only material for design contribution (namely movement, breathing) discarding the potential dialogue that could take place between body and mind. As a result (3) bodily knowing is assumed to remain in the tacit realm, hopefully revealing part of its wisdom from time-to-time. In sum (4) the soma is acknowledged as the door to access meaning in theory, thus this aspect has not been actively or adequately explored in our field in practical terms. It might be useful to distinguish *reflection-through-action* from *reflection through inner presence*, as both generate two types of design materials. The first one put us close to experience, and has been applied by most enactive techniques. The second one requires stopping and reflecting, as it is assumed that meaning is constantly absorbed by the body, therefore awaiting to be articulated (see chapter 2).
- There is a current lack of techniques leveraging the role of the body as a door for accessing everyday stories and meaning, in spite of embodied theories acknowledging this importance. When the focus has been placed in the bodily dimension more explicitly, dynamics related to the practice of design might interfere with the proper articulation of rich experiences and somatic qualities. As a result, potentially relevant content is diluted in the transference of information for design use.
- Despite the fact it has been acknowledged that the objectives and rhythms granted by somatic practices differ from the mindset of design, the disconnection mostly remains. It is still quite difficult to integrate lessons learnt from somatic facilitation sessions into

design practice. As a result, somatic connection is used as a strategy to increase sensibility, but not necessarily as a designerly material to craft aesthetic everyday experiences.

Aiming to fill these gaps, this thesis introduces the generation of Focusing-oriented design methods, which are grounded on the idea of articulating experience from the felt-sense. As discussed in chapter 2 on Gendlin's philosophy, the felt-sense is a bodily way of knowing that emerges wholistically, in the form of words, metaphors, thoughts, sensations and feelings that are not restricted by the representational language of common emotions. The felt-sense is a way in which we generate meaning through the notion of filtering out through our bodies. As such, Focusing-oriented design methods use *self-reflection through inner presence*, accessing part of the already encapsulated, ongoing knowledge residing in our tacit dimension.

Chapter 4

METHODOLOGY

Steps towards knowledge articulation

This chapter is concerned with the developmental steps of my research, including a rationale of methods and design decisions. I will discuss how my different approaches to generate knowledge contribute to an overall system of focusing-oriented design.

4.1 Two main branches of research

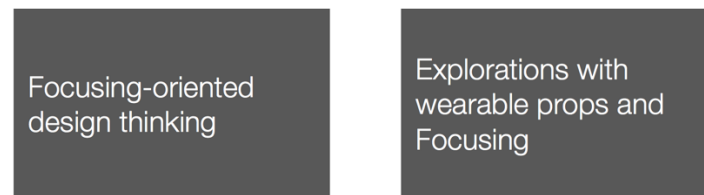


Figure 6 - Research branches

This research is shaped by two main research perspectives (1) *Focusing-oriented Design Thinking* and (2) *Explorations with wearable props and Focusing* (Figure 6). As the introduction of Focusing is novel in design and HCI, dealing with the openness of an unexplored field was particularly complex, in line with the challenges emerging from ill-defined problems commonly encountered in design practice (Cross, 2004). Related to this complexity, later in the chapter I will describe some of these challenges, including failed attempts and some lessons learnt.

4.2 Research questions

The following research questions are connected to my two branches of research, plus a final question that bridges the two.

Design Thinking and bodily knowing

- Considering the body is fundamental in the process of meaning-generation, how can bodily knowing –beyond its tacit interpretation- assist in the generation of knowledge for design practice? How are these ideas different to those generated through other existent methods?
- Which qualities are engendered by ideas generated through the process of ‘filtering out’ through the body?

Explorations with wearable props and Focusing

- How can we transfer aesthetic qualities from personal experiencing to the design of artefacts, whilst avoiding the dilution of such qualities?
- How can Focusing in conjunction with wearable/portable stimuli shape the generation of personal narratives?

- How can the somatic technique Focusing contribute to access intimate stories and meaning in conjunction with designerly means?

4.3 The influence of phenomenology in research

The iterative development of my research methodology is grounded in principles inspired by phenomenological research. Phenomenological research is concerned with lived experience in its quest to capture the essences of human activity (Van Manen, 1984a), an aspect that permeates my research questions and their focus on subjective meaning. It also demands a sustained practice of thoughtfulness, described as ‘a minding, a heeding, a caring attunement [...] about the project of life, of living, of what it means to live a life’ (Van Manen, 1984a, p. 1). Giorgi (1975) defines specific characteristics of this kind of research, which infuse my methodological approach: (1) phenomenological research attempts to capture the accuracy of experiences, (2) it focuses on the lived experience as it unfolds, (3) uses a descriptive perspective, (4) the point of view of the individual is pivotal, (5) lived experiences are the essential materials for research, (6) it relies on biographical accounts, and (7) aims to access meaning. There is another characteristic, which refers to (8) placing the researcher’s presuppositions aside, which distances my proposal from a purely phenomenological endeavour, as my research journey demanded the generation of some hypotheses along the way. My position is also directly related with my choice of tools for analyses of felt-sensing experiences, which are in part theory-driven, as I will discuss at the end of this chapter. An important part of my research methodology is grounded in the practice of Focusing, which has been adapted for research design as both method and philosophy. Another significant aspect informing this research is its autoethnographic component, which is based on my own personal experience as a Focusing trainee, a path I have followed in parallel with my doctoral research.

4.4 Design-oriented research

My thesis methodology corresponds to *Design research*, employing mixed-methods of data collection, predominantly focusing on qualitative research towards the study of felt-senses as materials for experience-centred design methods. This doctoral research comprises four studies, with different objectives and contributions for design knowledge, including the

introduction of new theory. Considering that Focusing-oriented knowledge has not been applied before as a method, tool, or philosophy for design, an important part of this research was devoted to devising opportunities and assessing the applicability of Focusing values into the design realm. To understand how the design methodology unfolds, I use Fallman’s distinction between *design-oriented research* and *research oriented design* (Fallman, 2003, 2007). *Design-oriented research* is focused on generating knowledge through design means, where artefacts are crafted to test theories rather than being treated as ends in themselves. On the other hand, *research-oriented design* focuses on generating artefacts as the research’s main contribution. This research is mostly situated at the *design-oriented research* end, as instead of generating a particular artefact for end-use, it focuses on the development of methods and an epistemology for design. Having said that, this research also nests elements from *Research through design* (RtD) (Bardzell et al., 2016; Bardzell, Bardzell, & Koefoed Hansen, 2015; Zimmerman, Stolterman, & Forlizzi, 2010), as it uses designerly ways of inquiry (such as prototypes and design thinking processes) towards the generation of artefacts or theory for design in the shape of design methods and frameworks (W. Gaver, 2012).

During this research, four user studies were conducted: (1) Focusing-oriented Bodystorming (FOB), (2) Focusing-oriented Design Ideation (FOI), (3) Wearable props and Focusing (W&F) and (4) Soul: Storytelling the Felt-sense. These studies correspond to two main research branches, which I describe below. Figure 7 illustrates the design-oriented research process, starting from an exploratory study (FOB) intended to assess the applicability of Focusing in design. This first study informed the next steps of the research, which followed a research through design methodology.

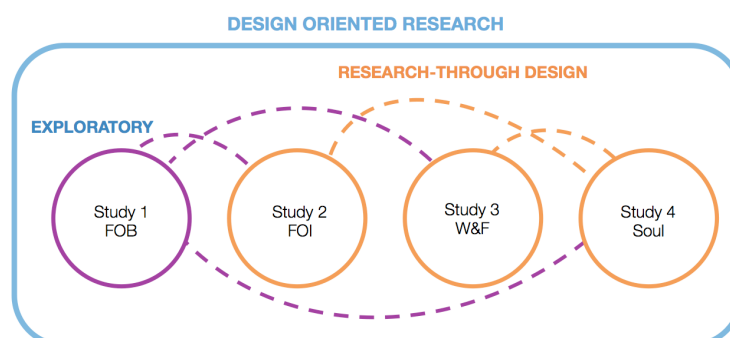


Figure 7 - Design-oriented research nesting RtD

4.5 Research design

In the following Figure 8 I introduce a high-level diagram on how my research has developed across four years of doctoral research. Each year is represented as a *stage*, through which different studies have been conducted. Connections related to the two branches of my research have been colour-coded differently. From the standpoint of my *design-thinking* branch, study one (FOB) directly influenced the method tested as an ideation technique in study 2 (FOI). It also contributed to the development of the artwork *Soul* (study 4), particularly as previous studies have dealt with questions related to the distinct qualities and values generated through filtering out through the body. As these qualities were demonstrated to be rich and meaningful I was motivated to ask if it is possible to transfer those through an artwork. From the perspective of the research branch of *explorations with wearable props and Focusing*, Study 1 (FOB) opens the feasibility of continuing to explore Focusing for design, which motivates the use of props and Focusing. Study 3 (W&F) informs *Soul* (study 4) as it provides a theoretical foundation grounded in the question of how stimuli on the body can shape narratives in the context of Focusing.

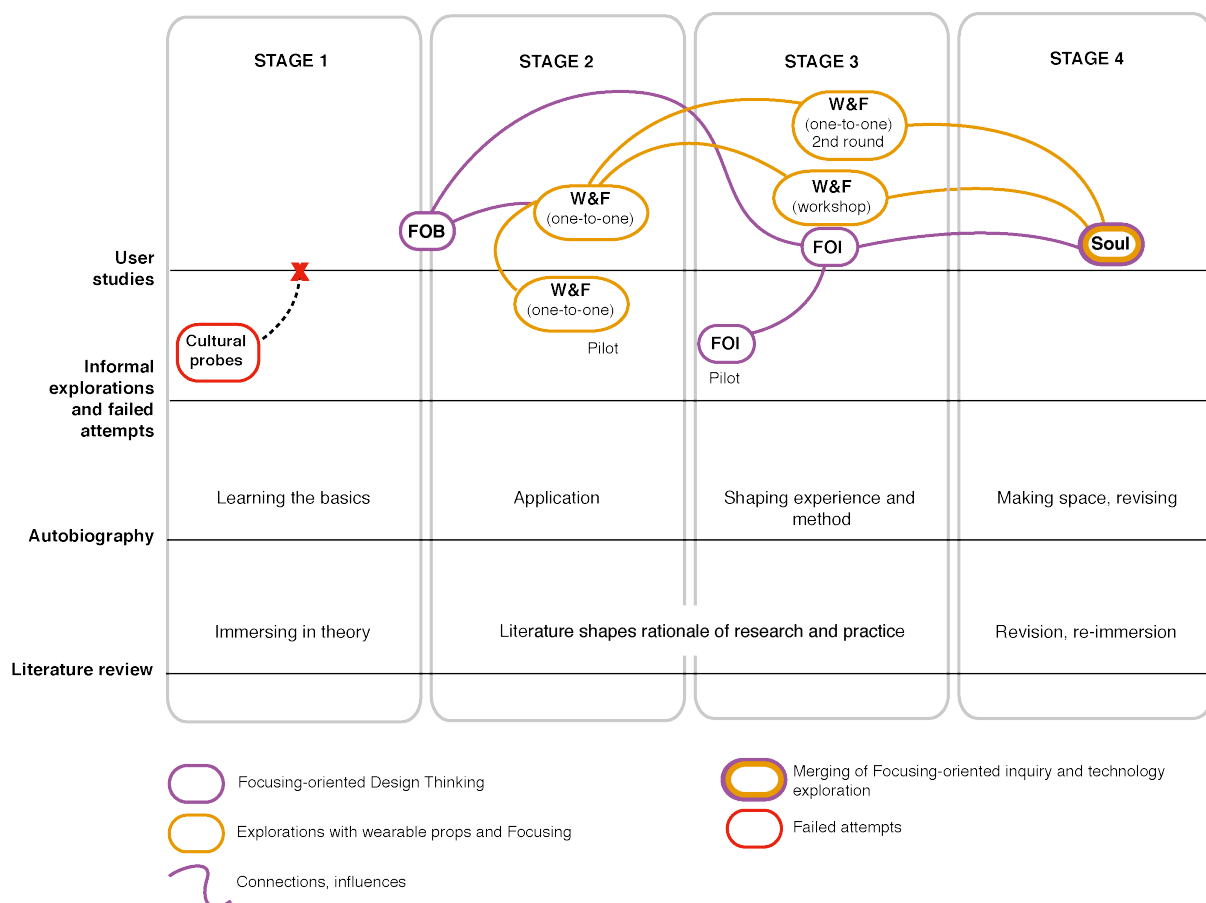


Figure 8 - High-level research design

4.6 A failed attempt: Cultural probes with practitioners

Aiming to design artefacts towards self-awareness and discovery, my initial research interest was elucidating how Focusing practitioners would react to wearable stimuli (particularly heat and haptic stimulus on the body) in the context of self-practice. This research focus was inspired by literature acknowledging the importance of touch in certain branches of somatic-oriented therapy (Fogel, 2013; N. Friedman, 2004). My original plan was to recruit participants from the Focusing group I was attending, by asking them to interact with a design kit containing some portable technology props, a diary with body maps to colour and instructions for self-practice (Núñez-Pacheco & Loke, 2015).

However, something I did not anticipate happened during the first stage of my research. My Focusing group showed no interest to participate in this study. The only person who agreed to receive the design kit ended up withdrawing from the study before even completing the instructions. In her email, she pointed out “I think the coloured pencils were probably a sticking point. I have difficulty being creative. Mostly it was that I couldn’t find the spark I needed”.

This initial failure influenced my practice and research in the following ways:

- Focusing practitioners were reluctant to test my wearable props, *because they might not need them to access the felt-sense*. Even in the case of those who are not experienced Focusers, their motivation to join a Focusing group is likely to be sustained in their natural bodily sensibilities and interest. This assumption was later confirmed through the responses given by expert focusers after their interaction with my art installation *Soul*, where the inclusion of bodily stimuli was considered in most of the cases unnecessary to connect with the storytelling task (chapter 8).

As a result of my initial failed attempt, I decided to involve participants with no particular experience in Focusing. This decision had the following implications for my practice: (1) In terms of significance, bridging Focusing to the design discipline appeared as an opportunity to disseminate this somatic practice outside my small community. Moreover, (2) as I worked with participants with no experience in Focusing, refining my somatic facilitation abilities became crucial for the success of this research.

- My biases as a designer differ from other people's worldviews. Although this seems obvious, I assumed that colouring a body map was a straightforward task, overlooking the fact that my participants knew I was a designer, hence making them feel judged. Later on, by teaching design methods to students I could witness how activities that are associated with creativity such as sketching can be a source of anxiety for some professionals from disciplines outside the field. This situation directed me towards rethinking my approach, and to start taking advantage of the potential opportunities within the design realm, by integrating Focusing qualities and somatic sensibilities throughout different design stages, such as research, ideation and evaluation.

In the following section, I proceed to describe the Focusing protocol in detail, which constitutes the most essential element of my overall methodology.

4.7 The Focusing Protocol: Filtering out concepts through our bodies

As we extract meaning from the implicit dimension (Gendlin, 1999), some of the main uses of Focusing are the emergence of discoveries or *insights*, as well as the provision of rich and detailed descriptions of different types of situations, with potential for use in design. One of the ways I have found to explain with my own words what Focusing is and how it works is by indicating that ideas should be *filtered out through our bodies*, meaning that experiences should be sensed before going through rational scrutiny. In order to access discoveries, pre-conceptions should be put aside (Rome, 2014).

4.7.1 Justification

The Focusing technique is a tool to access the implicit dimension of experience, by using a specific protocol of instructions, as discussed in chapter 2. The way to access the tacit path is through somatic introspection, where situations are first felt through the body before jumping into familiar conventions and conclusions. As Focusing is grounded in somatic introspection towards meaning making, the use of this protocol serves the purposes of answering my research questions, which are centred on subjective experience and the generation of meaning through embodied self-awareness.

How is Focusing different to meditation?

Mindfulness and Focusing seem similar, however there is a crucial distinction between the two, which makes Focusing more apt for the purposes of extracting meaning from experience. While mindfulness meditation is about *letting go* and cultivating awareness of the present moment in non-judgemental ways (Kabat-Zinn, 2009, p. 24), Focusing is rooted in the idea of *staying with*, in dialoguing with emerging concepts as these unfold. However, this *staying with* process is not static, but rather a process of *holding and letting* (Gendlin, 1981), which is an attitude which sits in the middle of *letting go* and *staying with*. The Focusing attitude requires putting aside preconceptions and maintaining an open attitude to what comes, whilst at the same time demanding staying with something of what emerges (Gendlin, 1996). According to Gendlin, the state of deep relaxation induced by meditation sometimes can be counterintuitive for the emergence of the felt-sense (ibid, p.66). For that reason, when analysing Focusing-based data and particularly when assessing their closeness with the felt-sense narratives documenting relaxation should be carefully scrutinised. This close examination is to distinguish if the description of such a state corresponds with a felt-sensing response, or rather appears as a misunderstanding of the objectives of Focusing. As part of my research contributions, I have generated a *Felt-sensing archetypical method* of data analysis (Núñez-Pacheco & Loke, 2016), which facilitates this process of scrutiny. This method of analysis will be further described in chapter 9.

4.7.1.1 Modalities

For this research, I facilitate Focusing under two modalities: one-to-one sessions and public workshops (Table 2). One-to-one sessions are private interviews, where two active roles are required (1) a *focuser* (a person who goes through focusing) and a (2) *listener* (who listens to the focuser, supporting his or her process through the protocol). The Focuser is instructed to voice their sensations and feelings, which are reflected back through a process known as *reflective or active listening* (Gendlin, 1978; Rogers & Farson, 1979; Weger Jr et al., 2014). The act of listening reflectively requires an unconditional and attentive attitude of empathy, which demands trying to capture the essence of what is said, to be mirrored or reflected back to the Focuser (N. Friedman, 2005). In my experience with Focusing, key terms are better mirrored without being paraphrased, respecting the generative process of meaning-finding taking place in the focuser's world. This mirroring process allows the focuser to either (1) confirm his/her

state and carry forward, or (2) if the words or term does not feel right, it facilitates the search for a fresh term, to eventually also carry forward with the process.

For group workshops, one person acts as a facilitator, whilst the group follows her guidance. Some examples of this workshop modality can be found in Simon (2015), which has inspired my take on the *Love Exercise*, or Klagsbrun and Lennox (2012) and their application of the *Clearing a Space* protocol as a strategy for stress-reduction in cancer patients. Although Focusing does not require any special logistics, working in a quiet room with comfortable chairs assists in making the process of dropping into the body easier.

Table 2 - Two Focusing modalities and their differences

Workshop	One to one sessions
Participants follow the guided exercise silently, keeping the inner dialogue to themselves	Participants are invited to verbalise their inner process as it occurs. The facilitator reflects back what is said.

4.7.2 The Six Focusing Steps

The focusing technique is a protocol comprising six steps: (1) Clearing a space, (2) felt sense, (3) handle, (4) resonating, (5) asking, (6) receiving. Although Gendlin (1978) suggested that these six steps were not rigid, and could be adapted in other ways in order to make sense, this protocol has been utilised as the foundational set of guidelines inspiring new approaches, for instance such as the case of *Focusing-oriented art therapy* (Rappaport, 2008), and *Mindful Focusing* (Rome, 2014). In my interpretation, I follow the original spirit of the technique including a few variations to minimise the potential elusiveness of beginners' self-focus. Below, I proceed to describe the six traditional Focusing steps (briefly illustrated in Table 3), followed by how these have been adapted to my design research practice.

Table 3- Focusing six steps

Clearing a space	Felt sense	Handle	Resonating	Asking	Receiving
Inventorying, Bringing awareness	Immersing in the complex whole	Finding symbolic content	Allow the body to make sense	Asking for the crux of the situation	Acknowledging what comes

4.7.2.1 Clearing a space:

This step (also known as *inventorying*), starts by finding a moment of silence to focus on the inner body, particularly on the upper torso. Then, we start by asking basic questions to put us in contact with our awareness, such as ‘*where is my life going? What is the main thing for me right now?*’ (Gendlin, 1978, p. 50). Another question to ask would be ‘*what does stand between myself and feeling fine?*’ (Gendlin, 1996, p. 72). After having acknowledged one issue, the body is ready to find a right distance and move forward towards the discovery of something else. As a result, various situations asking for our awareness appear during the exercise, until we find what is described as the ‘*all fine*’ place (Rappaport, 2008), or a state where everything feels lighter (Gendlin, 1996).

- *Clearing a space applied to this research*: This step has been applied more in the sense of getting in contact with our own awareness, including the invitation to perceive a *general sense of the situation*. This understanding merges aspects of clearing a space with the next step of the protocol of *felt-sensing*. This general sense of the situation is complex and contains plenty of information to be potentially inventoried. However, considering most of my participants are beginner focusers in some cases with no particular interest in the technique, the sole perceiving as a *whole* through their bodies is one of the lessons I consider fundamental to transmit. A similar process of inventorying or *clearing a space* is naturally unfolded after the guided exercise and articulated through writing, as I will discuss in chapter 5.

If necessary, in this step I also contextualise the theme participants should focus on by providing some brief imagery instructions, such as in the case of the ideation script used for Focusing-oriented design ideation (chapter 6), where I invite participants to imagine and perceive their office space (see appendix).

4.7.2.2 Felt-sense

In this step, we focus on one particular issue. Instead of quickly selecting one of the possible themes emerging from *clearing a space*, it is important to allow our bodily sensations to navigate through our feelings and choose (Rappaport, 2008). At this stage, we pay

attention to the wholeness and impreciseness of it, which corresponds to the felt-sense of the situation.

- *Felt-sensing applied in this research:* Merged with the previous step, here I put emphasis on noticing how the body reacts to the bodily memory of the perceived wholeness, as the felt sense can be easily and mistakenly interpreted as a mental set of representations or ideas.

4.7.2.3 Handle:

After having allowed the felt-sense to form, we ask the focuser to find a word, a phrase, a metaphor, an image, a gesture or any type of representation that could somehow match the wholeness and impreciseness of this particular, complex sense of intricacy.

- *Handle applied to this research:* This step remains as the original.

4.7.2.4 Resonating (the handle)

At this stage, we ask if such a representation really resonates with the sense of intricacy emerging from the felt-sense. If that is the case, a sense of relief and lightness should accompany the word. If the representation does not feel completely right we allow the body to make space and find new ways, until something makes sense.

- *Resonating applied to this research:* As in the original step, I invite the participant to stop and allow the body to assess how the emerging metaphor, feeling, phrase, memory, or thought actually feels.

4.7.2.5 Asking:

Then, we inquire about the crux of the situation, to discover new qualities. Questions such as: *What about this whole thing is so_____? what is really in this_____ that is asking for my awareness?* (Gendlin, 1996) or *what is in this sense?* (Gendlin, 1978).

- *Asking applied to this research:* In public workshops where the facilitator delivers a script to a group of participants, it is difficult to directly ask what is the crux of the situation without having access to the inner process of the participant or specific handle. During my early explorations of Focusing workshops (chapter 5) asking and

the following step of *receiving* were merged. Instead of asking for particular qualities, the question was articulated as: *Ask yourself is it okay to stay with that feeling for a moment?* in similar fashion with the wording used in the Focusing practice of clearing a space. Later on, *asking* was reformulated as a general question: *What about this situation is particularly relevant to me?* Having said that, *asking* was also applied under the following circumstances:

- Reflecting on things we love: Particularly useful to put focusers in contact with their felt-senses, this exercise uses the following wording: *What about this situation makes it so special to me?* I have used this approach to assess how bodily stimuli shapes the generation of meaning (see chapter 7).
- One-to-one sessions: As the focuser verbalises their handles (metaphors, feelings, memories), it is possible to craft a question specifically addressing this representation. For instance: ‘What about this whole situation makes you feel *connected and receptive?*’

4.7.2.6 Receiving

Sometimes a shift comes, which is identified with a sense of relief. However, it is common that the process might have shown some pending features. As the process is ongoing, whatever emerges should be considered as a step in a larger dimension (Gendlin, 1978). In both cases, we invite the focuser to welcome, or acknowledge those senses.

- *Receiving applied to this research:* As in the original approach, I ask participants to *acknowledge* any emergent feeling, sensation, memory or thought. During my first explorations of Focusing I used the wording ‘*welcome what comes*’, which I later changed towards a more neutral way of dealing with meaning. In one-to-one sessions however, if the focuser is immersed in positive feelings, I generally prefer suggesting them to *welcome* what is revealed through their bodies, as it generally intensifies their inner state of wellbeing.

As discussed, Table 4 offers an overview of the Focusing steps and how these have been applied to research, including to which studies each feature has been applied. Figure 9 and Figure 10 briefly illustrate the modalities of how Focusing steps have been structured. The first approach (Figure 9) was applied during early stages of exploration with Focusing, particularly for the first public workshops titled *Focusing-oriented bodystorming*, later described in chapter 5.

Rudimentary elements of *asking* were present, which were merged with the step of *receiving*. In the later studies, the guided structure was edited, incorporating clearer elements of *asking* and *receiving*, as previously discussed.

Table 4 - Summary of Focusing steps and modalities of application

Focusing Step	Original features	Features applied to research	Study where features were applied	Rationale of discarded features
Clearing a space	<ul style="list-style-type: none"> • Inventorying • Bringing awareness 	<ul style="list-style-type: none"> • Bringing awareness 	<ul style="list-style-type: none"> • Focusing-oriented Bodystorming (FOB) • Focusing-oriented Design Ideation (FOI) • Wearables and Props (W&P) • Soul 	<ul style="list-style-type: none"> • Inventorying: Bringing awareness was considered as more relevant for beginner focusers.
		<ul style="list-style-type: none"> • Setting the context 	<ul style="list-style-type: none"> • FOI • Soul 	
Felt-sense	<ul style="list-style-type: none"> • Focus on a particular issue from inventorying • Immerse in the complex whole of the situation 	<ul style="list-style-type: none"> • Immerse in the complex whole of the situation 	<ul style="list-style-type: none"> • FOB • FOI • W&P • Soul 	<ul style="list-style-type: none"> • As inventorying was omitted, participants were asked to focus on open-ended tasks instead.
Handle	<ul style="list-style-type: none"> • Find a word, phrase, metaphor, gesture, et cetera 	<ul style="list-style-type: none"> • Same as the original 	<ul style="list-style-type: none"> • FOB • FOI • W&P • Soul 	<ul style="list-style-type: none"> • No features were omitted
Resonating	<ul style="list-style-type: none"> • Allow the body to sense if the handle resonates 	<ul style="list-style-type: none"> • Same as the original 	<ul style="list-style-type: none"> • FOB • FOI • W&P • Soul 	<ul style="list-style-type: none"> • No features were omitted
Asking	<ul style="list-style-type: none"> • Inquiry about the crux of the situation 	<ul style="list-style-type: none"> • Same as the original 	<ul style="list-style-type: none"> • FOI • W&P • Soul 	<ul style="list-style-type: none"> • At early stages of my research, asking oneself about the adequacy of feeling was used instead of the crux of the situation (FOB)
Receiving	<ul style="list-style-type: none"> • Acknowledge or welcome what comes 	<ul style="list-style-type: none"> • Same as the original 	<ul style="list-style-type: none"> • FOB • FOI • W&P • Soul 	<ul style="list-style-type: none"> • No features were omitted

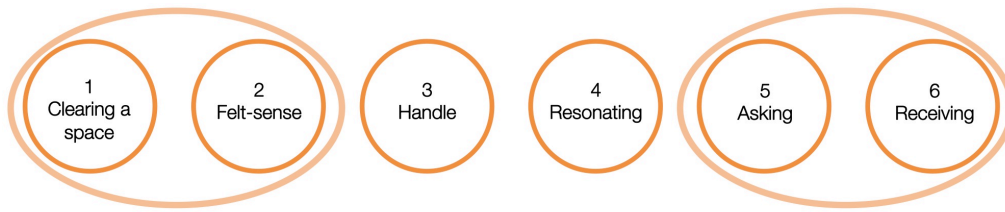


Figure 9 - Early application of Focusing steps, merging two sections of the protocol

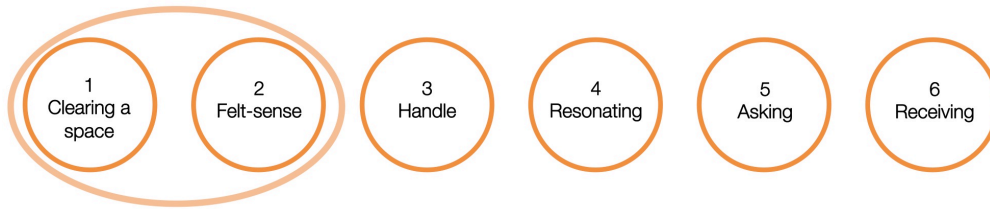


Figure 10 - Reformulation of Focusing script

4.8 High-level structure of a Focusing session

Having described the Focusing six-steps and how these are applied to this research, I proceed to illustrate how the exercises are structured from a higher-level perspective. In both workshops and one-to-one sessions, the Focusing experience consists of three main phases, as illustrated in Figure 11. In terms of duration, the Focusing guided exercises are generally structured to last between ten to twelve minutes in total. To avoid mind wandering, when working with inexperienced participants, extending the guided exercise for longer than fifteen minutes is not advisable. In chapter 8, I describe how the use of a brief six-minute Focusing exercise as part of the artwork *Soul* was assessed as achievable and even encouraging by participants with no experience in contemplative practices, ones who described themselves as tending to get distracted easily. This is different to the case of one-to-one Focusing sessions, which can easily last around twenty minutes or more. As part of the inclusion criteria for recruitment, participants from one-to-one sessions are required to have at least some previous experience with somatic practices, including but not limited to meditation and/or Focusing. This is to ensure they will connect with the task, therefore giving detailed responses to my research question on how narratives can be shaped through wearable stimuli.

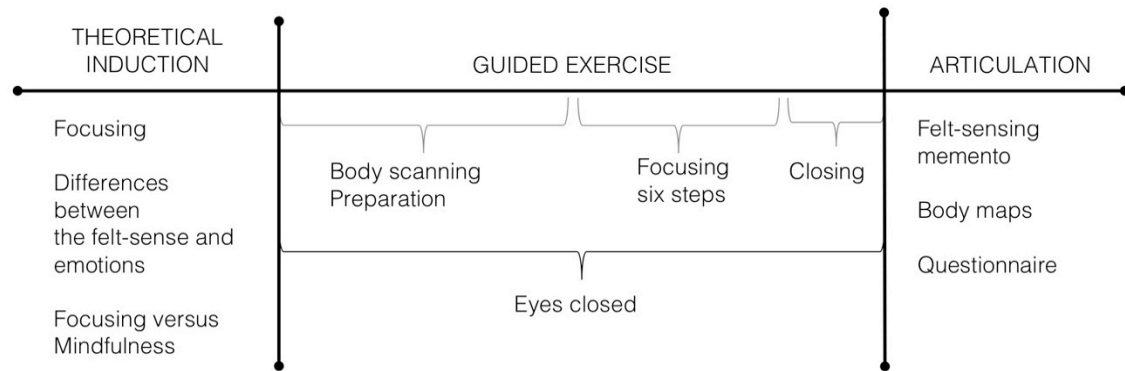


Figure 11 - High-level structure of my take on Focusing sessions

The following are the structural steps of how I structure a Focusing session, which work in the same way for both modalities:

4.8.1 Theoretical inductions

Considering Focusing is not a mainstream somatic technique, theoretical inductions are necessary to contextualise and delimit the domain of the practice. The content centres on explaining what the technique is, how felt-senses differ from emotions, and the differences between mindfulness meditation and Focusing.

4.8.2 The guided exercise:

The guided exercise starts after the participant is asked to make himself or herself comfortable and close their eyes. Guided exercises are divided into three stages:

- **Body scanning:** Having attended Focusing workshops and participated in Focusing partnerships for almost four years, it is becoming more common to hear the following question: ‘do you want me to start with some guidance, or do you prefer just dropping in?’ This question refers to whether an initial body scanning is necessary to get into the state for the six steps or if such a preamble is unnecessary. It is not rare that experienced practitioners sometimes prefer omitting this step, as dropping into their bodies is quite a familiar practice for them. In chapter 8, I further elaborate on how Focusing practitioners need less time to get in contact with their bodily awareness and the implicit, compared with other practitioners from contemplative practices such as meditators. In terms of the duration of guided exercises, I take

approximately half of the guided exercise session for body scanning, as illustrated in Figure 11. This methodological decision has a straightforward reason: the act of paying attention to one's own body is far more difficult than it sounds. In the urban technologised societies we live in awareness of the body is generally regarded as irrelevant, instead placing our attention on doing and reasoning over feeling and perceiving (Fogel, 2013). As a result, our bodies are not accustomed to purposely stop and reflect. Having worked mostly with inquisitive Masters students as my participants, commencing the session with a body scanning exercise is fundamental to sensitising them to inquiry from an unfamiliar terrain. I ask them to feel their feet touching the ground, their backs making contact with the chair, the outside temperature influencing how their skin is felt. Then, the guided exercise focuses on breathing, before activating body parts from the upper torso, starting from throat, going down to chest, abdomen, lower abdomen.

- **The six steps:** After performing the body scanning, I go through the six steps, starting with the invitation to feel the situation as a whole. Here, depending if the experience is delivered as a one-to-one or public workshop, the participant can verbalise what is felt, or silently engage in his or her inner dialogue.
- **Closing:** During the Focusing sessions it is common to get deeply immersed both physically and emotionally in feelings and sensations emerging from our implicit core. Thus, it is important to close the exercise gently, inviting participants to slowly bring the awareness back to the outside world. As common practice, I close the exercise with a summarised version of a body scanning, by asking them to focus on their breath and their feet making contact with the present moment.

4.8.3 Articulation of experience:

At this stage, participants are asked to complete a felt-sensing answer kit, intended to assist in their articulation of felt-senses.

As I have made evident through small fragments of methodological justifications throughout this chapter, my ongoing process of learning and practicing Focusing has influenced important parts of my methodological decisions. Next, I refer to how this tacit bodily knowing has

influenced the way I facilitate my practice to others from a standpoint of a second-person perspective.

4.9 The influence of autoethnographic research in Focusing-oriented design

Although most design problems are complex as they offer potentially endless sources of opportunities and information sources (Stolterman, 2008), the acquisition of new knowledge from a source unrelated to design demands the development of new skills. This skill acquisition process is particularly complex in the case of somatic techniques, where the personal development of the facilitator's sense of self is intimately connected to the experience of practice. Schiphorst (2011) discusses the role of the facilitator's skills as influencing design outcomes, particularly as somatic qualities can be transferred and communicated through practice. Part of the facilitator's somatic sensibility can be transferred, particularly the *ability to notice* (ibid, p.148). This ability to notice is fundamental in Focusing to access the implicit, where unspoken aspects of bodily knowing reside. However, acquiring this somatic sensibility requires practice and a sustained work of reflection.

While Focusing is not as mainstream as Mindfulness and other somatic disciplines, the way the Focusing community encourages practice is quite open and far from obscure. The *Six steps* and additional instructions for self-practice are available in Gendlin's literature (Gendlin, 1978), as well as in the website of the Focusing Institute³, where it is possible to find a series of guided exercises to practice with others. However, I considered it fundamental to gain some experience and confidence before attempting to facilitate this technique. Before organising user studies with participants, I attended one year of Focusing workshops run once a month. As part of my learning process, I practiced one-to-one sessions with my fellow Focusing trainees once a week via Skype. Meanwhile, I was immersing myself in Gendlin's literature as part of my doctoral studies. It was only after this training that I designed my guided protocol for my first public workshop, making sure to avoid topics that would drag my participants to undesirable or negative emotional states. Although I could not consider myself an expert (and I am still working towards refining my abilities after more than three years), my experience as a trainee has put me in a privileged position to understand and clearly visualise beginner's struggles to connect with their bodies.

³ <http://www.focusing.org>

This research contains some elements of autoethnographic research, particularly predominant during stage one and three of my doctoral journey, where I collected most of my self-reflective manuscripts including my experiences during Focusing and some facilitator notes. According to Ellis, Adams, and Bochner (2011, p. 710), this qualitative research method can be defined as ‘a self-narrative that critiques the situatedness of self with others in social contexts’. In autoethnography, writing is used as a fundamental tool for the exploration of the uniqueness of personal life experiences (Custer, 2014). Autoethnography is a method of self-critique that can inspire others to reflect on their own practices while questioning our own position in the world (Spry, 2001). Instead of trying to hide the influence of the researcher’s emotions and subjective process this method acknowledges the existence of such aspects (Ellis et al., 2011). The application of autoethnographic research in HCI is still quite underrepresented, however there are some notable exceptions, such as the study of horseback riding and their emerging lessons for design conducted by Höök (2010), which reveals the importance of self-reflection to articulate aesthetic qualities of experiences.

4.9.1 A lesson: A real connection makes the difference

In terms of how the autoethnographic view has influenced my Focusing practice, some of my reflections make evident my inner conflict and concerns, which later on shaped the way I started to facilitate Focusing. For instance, the quality of being authentically receptive to the subtle changes happening during the session makes an important difference in the facilitation of the technique. When engaging in practice, it is important for both focuser and facilitator to sense and be receptive to what is being delivered. When using a script, as a facilitator I should pause and sense how the instructions resonate in my own body, allowing a better management of pauses across the script, as well as a more precise control over voice colouring and rhythm. One of the themes emerging from my autobiographical experience (which was also documented as autoethnographical notes) is how the use of an insincere tone of voice can not only jeopardise the generation of the felt-sense, but also inspire negative feelings of inadequacy.

As an example of a particularly insightful moment shaping my practice, my autobiographical notes from the 14th of February 2016 describe a particularly unpleasant situation happening with one of the new members of my group of Focusers, who made me feel personally uncomfortable during the entire workshop. After her insensitive remarks and impolite ways of

addressing me, her voice sounded affected and overworked during our Focusing exchange. Her pauses while 'listening' to my Focusing process, particularly her 'hums' and 'yeahs' sounded terribly patronising. I felt she was more interested in delivering a captivating tone of voice rather than empathising with my process, which made me feel alienated and inadequate. However, I realised this sense of *not being really listened to* was something that happened previously. Trying to do their best, trainees make efforts to sound convincing, and to reflect back exactly what they hear, sometimes forgetting to really connect with their focusers' processes. In practical terms, when the focuser and the listener trainee do not establish a good connection, sessions might feel mechanical, predictable, and pauses might not be adequately granted as the anxieties associated with reflecting back often take over. I recognise the act of listening and reflecting as being quite challenging, so this criticism also extends to my own practice and learning process.

This situation was useful for me to reflect on my own ways of engaging with Focusing and others. Before that, I used to feel strange about the use of some stylistic resources during reflective listening (such as the hums and assertions), but until that moment I could not articulate my discomfort clearly, thus preventing me from taking direct action. The role of autoethnography demands a critical examination of the situations described in writing (Spry, 2001), so beyond the fact this experience was impactful, the act of noting down also directed me towards articulating and documenting how to transfer the importance of these experiences to my practice. Some worries started emerging. *What do people perceive when they listen to my facilitation? Do I sound fake, like an audio recording? How about when I hum in reflective listening, do they feel judged? Do they notice I care for their comfort?* These questions and anxieties are not generalizable to other practices and experiences and do not mean to be, but these were key for refining some aspects related to the way I deliver the practice. It is difficult to know if my participants perceive the changes in my voice, pauses and rhythms, yet this negative experience generated a clear shift at a personal level. As an insight, a correct facilitation of Focusing is not only about pauses and voice colouring, but it is also about making others feel listened to, safe and free to be themselves during practice. These values are generally emphasised through workshops and literature, however experiencing emerging tensions makes the importance of acknowledging these a more relatable reminder. This insight also has some implications in terms of significance for design, as the provision of safe spaces where people can give their opinions without being judged is important to stimulate creativity (D. W. Taylor, Berry, & Block,

1958). Considering my attempts to integrate the Focusing technique into design have no precedents as far as I know, and this practice has the potential to unearth intimate aspects of those who participate in the experiences, emphasising the provision of safe spaces becomes crucial for the correct integration of this technique in our field. In chapter 6 I further refer to this notion in the context of design practice.

In the following Table 5, I briefly illustrate a summary of my ongoing personal journey. Next, I proceed to describe a high-level view of my research methodology, followed by a description of methods, materials and procedures involved in each study.

Table 5 - A summary of my autobiographical journey.

	STAGE 1 Learning the basics	STAGE 2 Application	STAGE 3 Shaping experience and method	STAGE 4 Making space, revising
Research outcomes	Autobiographical notes	FOB W&F (One-to-one, round 1)	FOI W&F (One-to-one, round 2)	Electronic installation 'Soul' Thesis
Personal process as a Focusing Trainee.	Overwhelmed by having to learn reflective listening. Open and curious.	Searching validation in both the Focusing and Design community. Trying to figure out how to apply its benefits to design.	Discomfort to be in an environment that does not feel accommodating for my status of being an outsider in a broad sense.	Feeling confident. Advocating for somatic literacy in public talks, when teaching and discussing about research.
Subtle skill acquisition	Trust on my bodily knowing. I found myself using Focusing to overcome indecisiveness in daily life situations ('If my reason cannot decide, then my gut is in charge')	I found myself questioning my facilitation skills. Sometimes I thought I sounded like my Focusing teacher. I felt the quality of my facilitation was highly influenced by the interest of participants in my practice, and by my own perceptions about the audience. ('I don't like this people; this people don't like me: This is not going to work')	The way I started to listen to others slightly changed, becoming more bodily active. I started to nod more as a way to assent. I started to perceive that this subtle feedback was appreciated. I realised my 'reason and gut' functioned as a whole system, which I think has heightened my capacity to discern. My Focusing facilitation skills became more consistent, and less dependent on external influences.	I have been improving the way I use my body, and particularly my hands to speak through them when I facilitate. Focusers cannot see my gestures, but these orchestrate the pauses of my voice, like a music director. Acquiring this skill is influencing my persona as a public speaker. I can tell by the way people pay attention.
Lessons learnt that that have enriched my practice with others	The basis of Focusing as a foundational set of tools and ideas.	Unlike myself, some people get tired after some attempts to go inside their bodies. Context is important in the applicability of this technique for design	The importance of facilitating carefully is reflected in the colouring of voice and pauses. Empathy starts when listen carefully, without interrupting. Looking at others to the eyes: confirming their existence somatically. Building a safe space is fundamental for the success of this technique, including the adoption of a non-judgemental attitude	I have been told I am able to transmit confidence, curiosity, and faith in the technique. During a conference, I was invited to run workshops and talks to a University outside Sydney. Looking back, getting outside my comfort zone was necessary to improve my practice as a facilitator and design researcher. But this process is still ongoing.

4.10 Research studies- Methods and tools

The following Table 6 illustrates the research methods used during all my studies. A common set of data collection methods including (1) the collection of a narrative description or felt-sensing memento, (2) a body map and (3) a specific two-query questionnaire were invariantly utilised across three out of the four studies conducted during this research. The two former instruments were intended to access the articulation of experience and its embodied dimension, both fundamental in the generation of the felt-sense. The third one was introduced to bring the evaluative dimension back to the studies. The instruction to complete each set (thereafter also referred as *felt-sensing answer kit*) remained the same, only shaped by the content of the guided exercise, which varied according to the objectives of each study. These objectives, as well as the specific nature of the data collection tools will be described later in the chapter. Additionally, Table 7 describes the different materials used to facilitate, inspire or evaluate the emergence of meaning. It is important to note that my understanding of materials is not only concerned with concrete artefacts and tools, but it also considers intangible objects, such as the case of participant’s personal memories.

Table 6 - Research methods applied in user studies. Red crosses represent a set of methods utilised invariantly across three studies.

	Study 1	Study 2	Study 3		Study 4
Data collection methods	FOB	FOI	W&F (Workshop)	W&F (One-to-one)	Soul
Narrative description (Felt-sensing memento)	x	x	x	x	
Body maps	x	x	x	x	
Questionnaire	x	x	x	x	X
Video recording (observation)				x	
Interview				x	X
Reflective listening		x		x	
Reflective listening (Participant’s self- reported notes)		x			
Sketches		x			

Table 7 - Materials used to scaffold meaning across studies

	Study 1	Study 2	Study 3		Study 4
Materials used to scaffold meaning	FOB	FOI	W&F (Workshop)	W&F (One-to-one)	Soul
Focusing guided exercise	x	x	x	x	x
A random object (the teapot)	x				
Vibrotactile props			x	x	
Heat props			x	x	
Everyday memory	x				
Blissful memory	x		x	x	x
Brief-directed memory (working at the office)		x			
Felt-sensing post-it notes		x			
Reflective listening (Participant's self-reported notes)		x			
Art installation					x
Felt-sensing memento					x

4.1.1 Recruitment

Volunteers participating in the different studies included professionals, academics, students from the area of design, and general public, as illustrated in Table 8.

Table 8 - Profile of participants recruited for each study

Study	Participant profile
FOB	Participants from creative areas: Designers, artists, design researchers, curators, and academics.
FOI	Students from the MIDEA program (Master of Interaction Design and Electronic Arts), University of Sydney.
W&F (w)	Students from the MIDEA program (Master of Interaction Design and Electronic Arts), University of Sydney
W&F (o)	Participants demonstrating personal interest in somatic practices such as yoga, meditation, Feldenkrais, Focusing and others.
Soul	General public, over 18 years old.

4.11.1 Ethical considerations when working with students

Student involvement in user studies requires researchers to ensure the conditions for a safe environment of inquiry and learning. In this regard, this research complies with the ethical standards established by the University of Sydney as preconditions to conduct user evaluations and testing within the classroom⁴. In order to collect authentic and valid data, next I describe some of the measurements taken to minimise coercion:

- FOI and W&F workshops became part of the pedagogical curriculum of the Studio component of the Master of Interaction Design and Electronic Arts (MIDEA) as part of a major strategic plan led and coordinated by Dr. Lian Loke to integrate somatic sensibility into design practice. Activities were centred on a design brief around the concept of healthier workplaces, involving the creation and evaluation of interactive technologies. However, participation in the studies described in this thesis were not directly marked or scored. Students were aware that my personal

⁴ Approved study, Protocol number 2014/3953

judgements on their in-class participation could not affect their final grades, as I was not involved in any marking tasks concerning this Studio subject.

- Data collection instruments were handed anonymously. Instead of asking for their names, students were given felt-sensing answer kits containing a random folio number.
- Students were given privacy to complete their Participant consent form (PCF), which were collected separately.

4.12 Studies

This section describes the research design of each of my four studies: FOB, FOI, W&F and Soul. The way these relate and influence each other are illustrated in Figure 12, which also shows the overall structure of the study design. Study descriptions are structured in terms of (1) objectives and research questions, (2) procedures, and (3) research summary structure, describing branch of study, summary contribution, methodology, methods, and materials.

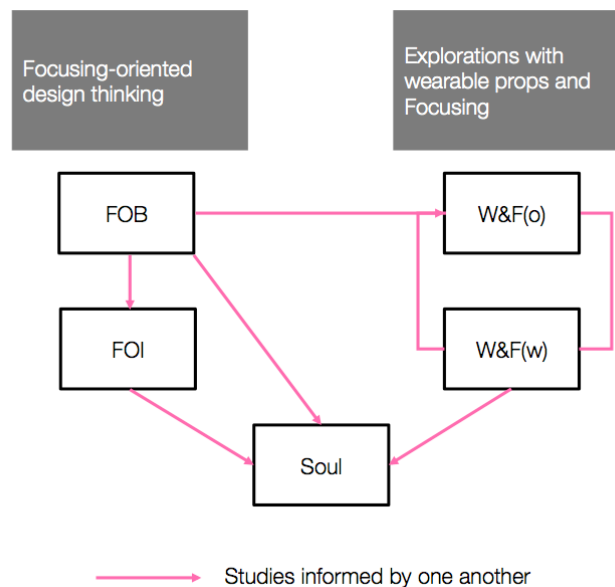


Figure 12 – Development of two dimensions, and how studies are informed by one another

4.12.1 Study 1: Focusing-oriented Bodystorming (FOB)

4.12.1.1 Objectives and research questions

Having personally experienced the effectiveness of Focusing for approximately a year, at this stage I was prepared to share part of my incipient knowledge with the design community. This first study titled *Focusing-oriented Bodystorming* consisted of a public workshop with the exploratory goal of devising possible uses of the Focusing technique in the context of design, distancing my project from the therapeutic focus of Focusing courses available for the public. The use of exploratory research was intended to understand the phenomena *from a broad perspective* before trying to elaborate any method for design (Stebbins, 2001). Yet the outcomes from FOB can be used as materials for design, as I will later discuss in chapter 5.

Another objective of this study was to understand how descriptions generated through a Focusing-oriented process would differ from more traditional approaches to creativity, or experience-articulation. For instance, *which kinds of specific qualities make experiential descriptions emerging from felt-sensing distinct and potentially useful for design?* As a result of this study, a set of categories emerging from felt-sensing informed the elaboration of a *felt-sensing archetypal analysis tool*, which I have utilised to assess the quality of the felt-sense throughout my user studies.

4.12.1.2 Procedure

Participants were asked to go through three guided exercises, each of them centred on three different themes: (1) Reflecting on an everyday experience, (2) reflecting on something loved, and (3) reflecting on an unfamiliar object: *The teapot*. After each guided exercise, participants were asked to complete a felt-sensing answer kit in a total of 21 minutes. Each instrument had to be completed in no longer than 7 minutes each. As previously described, the answer kit was composed by (1) a descriptive narrative, (2) body maps and (3) a brief questionnaire. Next, I proceed to describe the importance of each tool of the answer kit, as it was used invariably for the majority of user studies.

- **Descriptive narrative:** I also call these narratives *felt-sensing mementos*, as these capture a very specific aesthetic dimension of a particular experience from an infinite pool of possibilities, in accordance with Gendlin's description of the body's implying and occurring source of possibilities (Gendlin, 2012). Although my take on phenomenological writing is much more economical than my inspirational sources,

some of my rules are informed by McNeilly's (2012) method of *bracketing and attention* based on Husserlian phenomenology (which I personally experienced during one of her workshops) and by Kozel's (2007) method of *doing phenomenology of lived experience*. The use of these inspirational sources was intended to assist in distilling the essence of the lived experience emerging from the guided Focusing exercise. In my approach to writing, my participants are instructed to do the following:

- Allow consciousness to flow through writing: Writing should be done right after the guided exercise to avoid the dissipation of sensations and memories. Writing is an activity that allows the writer to submerge himself or herself into a particular, solitary space where meaning and insights might emerge (Van Manen, 2014). The act of *making space* for writing also contains a strong temporal component (ibid), which is relevant in the logistics of such a space. In my approach, participants are given up to seven minutes, which grants enough space to capture the richness or *texture of the experience* (Todres, 2007), at the same time avoiding over rationalisation of the felt-sensing mementos.
- Linguistic conventions such as grammar and structure are disregarded.
- Descriptive accounts are encouraged over evaluative language: Descriptions should be mostly focused on what was felt or experienced. Evaluative remarks about the experience, although not discarded, are less interesting.
- Suspension of assumptions: Participants are encouraged to leave the 'story line' aside, and open the mind to establish new relationships, which are useful in the context of Focusing (Rome, 2014). If we stay within our assumptions, we risk getting stuck in certainties, closing the door for the emergence of the felt sense.
- **Body maps:** These projective artefacts and research tools are useful to articulate meaning in those instances when words fall short to convey tacit qualities of the experience, such as bodily states and unfamiliar metaphors (Gastaldo et al., 2012). Participants are asked to complete body maps in open-ended ways. They are given coloured pencils to complete the task.
- **A brief questionnaire:** Questionnaires are useful tools to collect participants' opinions (Sharp, Rogers, & Preece, 2007), bringing back the evaluative dimension discarded by the rules concerning the elaboration of felt-sensing mementos and body maps. Two statements were introduced next to a ten-point Likert scale (ranging from 'totally disagree'

[1] to ‘totally agree’ [10]), as a way to assess the quality of participants’ felt-sensing experiences.

- ‘The guided exercise felt more intense than just thinking about the experience’
- ‘I have discovered a new dimension of my experience’

In the following Table 9, I illustrate a summary of FOB’s research structure, including the research tools and methods of inquiry utilised.

Table 9- FOB: Summary contribution, methods and materials

Research branch	Focusing-oriented design thinking
Study	Focusing-oriented bodystorming (FOB)
Summary contribution	In the context of potential situations for design, Focusing can be used as a research method to access tacit, subtle and aesthetic aspects of experience and meaning of everyday situations, including our relationship with objects.
Research approach	Design-oriented research (Fallman, 2007)
Type of research	Exploratory (Stebbins, 2001)
Research methods	Narratives (Felt-sensing memento) Body Maps Questionnaire
Design methods	None
Materials and tools	Focusing guided exercises Random object (a teapot)

4.12.2 Study 2: Focusing-oriented Design Ideation (FOI)

4.12.2.1 Objectives and research questions

FOI was crafted drawing on procedures and findings emerging from FOB, yet this time centred on a design brief-specific guided exercise around the generation of new spaces for *healthy workplaces*. FOI follows the principles of *practice-led research* applied to design, in the sense the primary objective is the generation of practical knowledge within practice (Candy, 2006), in this case the generation of a design method. Beyond the intended development of a method to access tacit creativity, this study aimed to describe the kinds of design ideas potentially

generated under the concept of *filtering out through the body*, in line with the concept of *cognition as bodily, and sentience as cognition*, as proposed by Gendlin (2012). These objectives imply trying to clarify how ideas generated through a Focusing-oriented process would differ from traditional approaches to ideation and articulation, including tools more in line with traditional concepts of imagination, as well as enactive methods.

4.12.2.2 Procedure

Traditional design thinking tools and methods were fused with the process of data collection. Some of these techniques correspond to (1) the generation of notes emerging from felt-sensing reflection inspired by affinity diagramming, and particularly by the first-person style of wording of affinity notes (Holtzblatt, Wendell, & Wood, 2004). These notes were generated as articulation tools to facilitate the generation of ideas linked to felt-sensing qualities. (2) The incorporation of reflective listening (Gendlin, 1978; Rogers & Farson, 1979) as a design activity allowed participants to elaborate additional content emerging from the guided exercise. (3) Finally, sketches (Greenberg, Carpendale, Marquardt, & Buxton, 2011) were used as a way to articulate and communicate their resulting ideas more effectively. The analysis of the felt-sensing answer kit, sketches, notes and videorecorded sessions where participants described their ideas, conveyed the generation of a series of categories describing different idea configurations and qualities. The understanding of these categories or ways to generate design ideas from felt-sensing, later informed the refinement of the method instructions.

A summary of all the research methods and materials utilised for this study can be found in Table 10.

Table 10 - FOI: Summary contribution, methods and materials

Research branch	Focusing-oriented design thinking
Study	Focusing-oriented design ideation (FOI)
Summary contribution	Drawing on FOB, this study aimed to craft a method to generate ideas through the felt-sense, sustained in bodily knowing.
Research approach	Design-oriented research (Fallman, 2007)
Type of research	Practice-led research (Candy, 2006) Research through design (Zimmerman, Stolterman, & Forlizzi, 2010)
Research methods	Narratives (Felt-sensing memento) Body Maps Questionnaire Reflective listening notes Videorecording
Design methods	Narratives (Felt-sensing memento) Body Maps Reflective listening notes Sketches
Materials and tools	Focusing guided exercise: Design brief-specific Green notes Yellow notes A memory of the office environment

4.12.3 Study 3: Wearable props and Focusing (W&F)

4.12.3.1 Objectives and research questions

W&F was run in parallel with FOB and FOI, as a way to investigate a different dimension on the use of Focusing involving artefact design. Based on theoretical references indicating that touch was useful to some approaches of somatic therapy (Fogel, 2013; N. Friedman, 2004), my hypothesis was that wearable stimuli (particularly heat and vibration) could be perceived as either distracting or enhancing for the formation of the felt-sense. As my main interest, I wanted to understand if perceptible stimuli could be helpful to anchor, acknowledge and augment the felt sense towards a more evident identification of participant's inner process of

meaning-making. Additionally, this study aimed to describe different quality of responses derived from the interaction with props and Focusing.

4.12.3.2 Procedure

This study was carried out in two modalities: (1) one to one Focusing sessions with props and (2) Focusing workshop with props. In terms of differences between the two modalities, one-to-one interviews were conducted over two sessions, where each participant could interact with both heat and vibration. During the public workshop on the other hand, each participant tested one of the options only due to time constraints. In the second round of one-to-one sessions, interactions were videorecorded to examine participant's gestures and corporeal responses emerging from their manipulations of the props in the context of the Focusing practice.

In both modalities, participants were instructed to manipulate two types of props, emitting either gentle heat or vibration. Each participant interacted with one type of prototype per session only. They were instructed to test the feel of the output around different body areas (throat, chest, abdomen, lower abdomen) and then complete a questionnaire consisting of rating scales assessing the sensory qualities of stimuli in terms of comfort, intensity and pleasure. After this, they were asked to follow the guided exercise centred on a personal blissful memory, and to place the prop on the body area the felt-sense appeared as distinct. A second rating scale questionnaire was handed out, this time inquiring about sensory qualities emerging during the guided exercise. Additionally, participants were required to complete the felt-sense answer kit (felt-sensing memento, body map and questionnaire).

In terms of their function, pre and post rating scale questionnaires were designed to recognise if aspects related to pleasure and comfort could be linked with an augmented perception of the felt-sense. The felt-sensing answer kit delivered more descriptive and symbolic accounts on the interaction with the props, as well as some clues about the participant's access to the felt-sense.

In regard to the use of props as materials for inquiry, these are not intended to be introduced as finished prototypes, but rather as something similar to *non-finito* products, which have a specific function (in this case, to emit heat or vibration), yet sense-making is basically open to interpretation (Seok, Woo, & Lim, 2014). The props' functionality however, is not self-evident, only making sense in the context of my Focusing studies. These artefacts are also

inspired by some principles from technology probes, which differ from prototypes as they have fewer layers of functionality, intended to be open-ended and exploratory (Hutchinson et al., 2003). As a research methodology, technology props serve the objectives of research through design, as these act as manifestations and generators of theoretical knowledge (Zimmerman et al., 2010).

Table 11 W&F: Summary contribution, methods and materials

Research branch	Explorations with wearable props and Focusing
Study	Wearable props and Focusing (W&F)
Summary contribution	Theoretical: For beginner Focusers, the use of props anchors, augments and helps to acknowledge the felt sense. Additionally, the use of props shape people's generation of personal stories
Research approach	Design-oriented research (Fallman, 2007)
Type of research	Research through design (Zimmerman, Stolterman, & Forlizzi, 2010)
Research methods	Narratives (Felt-sensing memento) Body Maps Questionnaire Pre-post sensory assessment questionnaire.
Design methods	None
Materials and tools	Focusing guided exercise: The Love exercise, based on the procedure of (Simon, 2015) A blissful memory Vibrotactile prop Heat prop

4.12.4 Study 4: Soul

4.12.4.1 Objectives and research questions

This final study was informed by the two main branches of my research. From my explorations with W&F, I could conclude that the utilisation of sensory input on the body can influence the way people make sense of experiences through Focusing. Additionally, drawing on FOB, FOI uses aesthetic bits from Focusing as materials for design, leading to a detailed articulation of aesthetic qualities informing design ideas. At this point, some of the questions

still unanswered are: Is it possible to transfer felt-sensing qualities through interactive technologies for self-reflection? Which are the pre-conditions to guard as much as possible the integrity of felt-sensing qualities when using interactive devices as a medium? To answer these questions, I crafted an immersive art installation by materialising the values emerging from one specific felt-sensing memento or narrative granted by one of my participants. As an artistic aim, *Soul: Storytelling the Felt-sense* uses storytelling and controlled vibration on the body to generate a space for reflection and self-inquiry on participants' personal moments of bliss. The method of delivering the interactive experience is based on the *Facilitated Interaction Framework* coined by Loke and Khut (2014), where the participant is guided by the artist, who assumes the role of a facilitator. As a result of the explorations with the installation, a method for the design of aesthetic experiences from subjective perspectives was created.

In this study, the artwork is used as a tool for theory generation (Zimmerman & Forlizzi, 2008; Zimmerman et al., 2010) instead of an end in itself. The principles embodied by the executed research through design methodology are inspired by the concept of *combodying*, where all bodies are connected to the universe in complex relationships of implying and occurring, as discussed by Ikemi (2014), drawing from Gendlin's philosophy (see chapter 2). The adoption of this principle as a governing philosophy for design implies that there is something *essentially shared* in people's subjective experiences that can be transferred to others. In this case, the aesthetic experience of a *granter* (a particular participant) was metaphorically represented by utilising the electronic art installation as a medium to connect with the audience.

4.12.4.2 Procedure

Two evaluation instruments are utilised at this stage: After interacting with the artwork (1) the participant is left alone to answer a brief questionnaire consisting of statements and Likert scales, which (2) leads to an interview, where the responses are reviewed by the facilitator, who then prompts the participant to give more information. The questions are intended to assess the reception of the interactive experience in general, the role of vibration in the process of self-identification with the narrative, as well as the transference of values between the personal domain to someone else's lifeworld. The list of methods and materials is described in Table 12.

Table 12 - Soul: Summary contribution, methods and materials

Research branch	Hybrid (Focusing-oriented design thinking with elements of bodily sensing)
Study	Soul
Summary contribution	A method for the design of aesthetic experiences inspired by subjective experiencing.
Research approach	Design-oriented research (Fallman, 2007)
Type of research	Research through design (Zimmerman, Stolterman, & Forlizzi, 2010)
Research methods	Questionnaire Interview
Design methods	Bespoke design Facilitated interaction framework
Materials and tools	A felt-sensing memento Focusing guided exercise: The Love exercise (six-minute audio session) Art installation: A vibratory mat and soundscape Narrative based on memento (twelve-minute audio session)

A summary of tools for data collection, design methods and tools utilised across all the studies is illustrated in Figure 13.

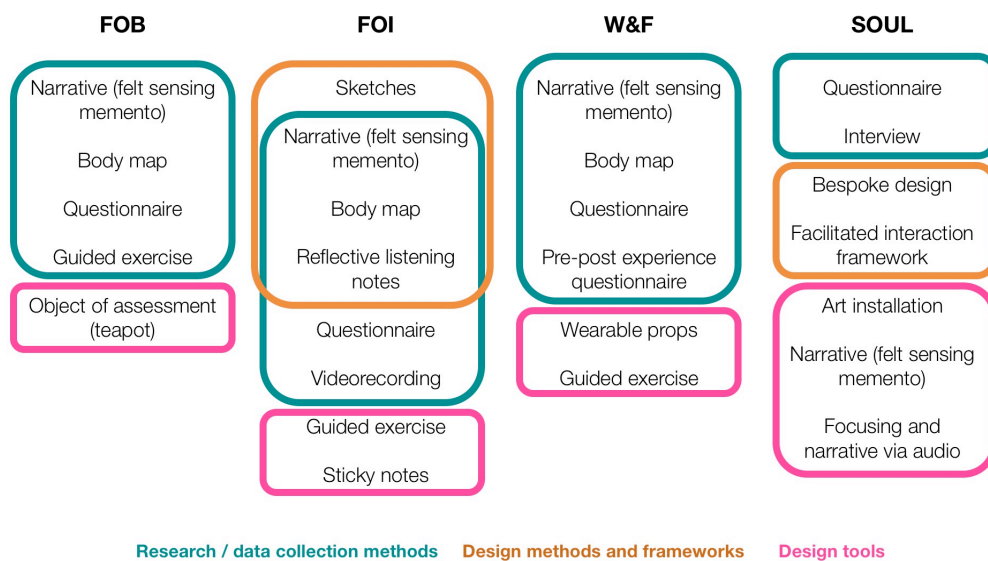


Figure 13 - Summary of research and design methods and tools

4.13 Data analysis

The resulting qualitative data was analysed through the lens of three approaches: Grounded theory (open-coding), concept-driven coding and data tabulation.

4.13.1 Grounded Theory

In accordance with this qualitative approach to data analysis, narratives were firstly treated and analysed without pre-conceived models, towards the generation of theory emerging from categories (Corbin & Strauss, 1990; Moustakas, 1994). Grounded theory is based on principles inspired by Pragmatism and Symbolic Interactionism, which consider experiences as ongoing and open processes, instead of being fixed in determinisms (Corbin & Strauss, 1990). By following this same logic, felt-sensing mementos, data from interviews, questionnaires and transcriptions were open-coded, tracing patterns of relationships inductively, leading to the generation of themes.

As part of their analysis of data generated from contextmapping sessions and inspired from Grounded Theory, Visser et al. (2005) describe three different stages in the process of sense making through analysis: (1) Fixate on the data, (2) search and be surprised and (3) find patterns and create an overall view. Relating those steps to my research, the first one requiring *fixation on the data* became a fundamental part of the process of sense-making, particularly during earlier stages of this research. As I was not very familiar with the kind of textural and rich data emerging from Focusing in the context of research, the analysis of felt-sensing answer kits from the first study FOB (mementos, body maps and questionnaires) was incredibly time consuming. I was in a position to generate publishable material only after a year of sustained analysis, pattern-finding and writing. In terms of data manipulation, I have transcribed the data from all the studies myself, which has served to immerse myself in the nuances of participant's responses.

4.13.2 Concept-driven coding

Although most data were analysed from an emergent approach, aspects corresponding to my research questions, particularly those assessing the quality of experience in regard to the felt-sense, required some more specific measurements. To understand how the felt-sense was reached, and in which ways, it was necessary to return to theory to generate models inspired by descriptions of how the felt-sense unfolds. This approach to data analysis is known as

concept-driven coding, where the researcher is encouraged to create checklists to apply his or her understanding of theory, research questions and even possible ideas emerging during data collection (Gibbs, 2008). In chapter 2, I described the differences between felt-senses and emotions, which were materialised into questions or criteria that were answered through the data analysis. This usage of research questions is also known as *thematic analysis*, which recognises the active role of the researcher to discriminate data, rather than engaging in the rhetoric of information as passively ‘emerging’ (Braun & Clarke, 2006).

First, I created a checklist with a simple scoring system based on Gendlin’s description of the felt-sense (Gendlin, 1996) to assess participant’s descriptions (Figure 14). I found the uniqueness and complexity of each text made the scoring system too deterministic, however the criteria established on the list still appeared useful to understand the presence (or absence) of the felt-sense in descriptions.

<input type="checkbox"/>	Place in where bodily sensation is located (3 points)
<input type="checkbox"/>	"It's like..." "It feels like..." (2 points)
<input type="checkbox"/>	Use of metaphors to explain the bodily dimension (2 points)
<input type="checkbox"/>	Presence of uncommon wording/vocabulary (1 point)
<input type="checkbox"/>	Mostly unstructured narration (1 point)

Figure 14 - Scoring system to assess the authenticity of Focusing descriptions from concept-driven analysis

Further analysis allowed me to trace different types of felt-sensing patterns of responses, leading to the creation of the *Felt-sensing archetype analysis* (Núñez-Pacheco & Loke, 2016) as a result of the analysis of data from FOB and iteratively improved through the scrutiny of additional data generated in further studies. This system of context-driven categorisation required the analysis of the data from the felt-sensing answer kit (particularly felt-sensing mementos and body maps), which have been utilised in three out of my four studies, including FOB, FOI and W&F. More information about the system, including a more detailed description of each archetype and examples can be found in chapters 5 and 10.

4.13.3 Data tabulation

As part of my research methods, I included questionnaires containing Likert scales measuring participant's attitudes towards the felt-sense as well as those related with the interaction with the artwork Soul. Data from scales were tabulated and visually represented for further analysis, complementing the analysis of qualitative accounts. Data tabulation and visualisation are part of *distribution free methods*, which are appropriate for the analysis of Likert scales (Allen & Seaman, 2007).

A summary of studies, approach to design research and methods of data analysis are described in Table 13.

Table 13 - Approach to design research and methods of data analysis

Study	Summary objective of study	Type of data analysis
FOB	Envisaging opportunities for design methods	Open-coding Concept-driven coding (Checklist, Felt-sensing archetype analysis) Data tabulation
FOI	Evaluation of an experimental design method informed by FOB	Open-coding Concept-driven coding (Felt-sensing archetype analysis) Data tabulation
W&F	Evaluation of bodily stimuli for Focusing practice.	Open-coding Concept-driven coding (Felt-sensing archetype analysis) Data tabulation
Soul	Evaluation of aesthetic transfer through the artwork artefact	Open-coding Data tabulation

Chapter 5

STUDY ONE: FOCUSING-ORIENTED BODYSTORMING

Towards a technique for articulating aesthetic experiences in design using Focusing and the Felt Sense

This chapter describes my first attempts to use Focusing as a method to access tacit experiencing, towards its utilisation for design use. This exploration has demonstrated usefulness in two main ways: (1) to reveal nuanced aspects of personal stories participants did not consider before the application of the technique, scaffolding the emergence of their own insights, as well as (2) as a tool to extract aesthetic qualities from experiences, including from those that might be recognised as anaesthetic or unremarkable in people's consciousness. The use of Focusing facilitates the access and articulation of meaning encapsulated in the tacit dimension of experience.

This chapter was crafted by combining a set of unpublished data, plus content from the following papers:

Núñez-Pacheco, C., & Loke, L. (Conditionally accepted). *Towards a technique for articulating aesthetic experiences in design using Focusing and the Felt Sense*. *The Design Journal*, Routledge.

The manuscript has been used as a baseline and edited for the purposes of this thesis. Detailed information about the Focusing philosophy can be found in chapter 2. A full description of the study methodology can be found in chapter 4.

Núñez-Pacheco, C., & Loke, L. (2016). *Felt-sensing archetypes: Analysing patterns of accessing tacit meaning in design*. Paper presented at the Proceedings of the 28th Australian Conference on Computer-Human Interaction.

As one of the outcomes of the theory-driven analysis of data, different archetypes representing ways to access the felt-sense were found. A fragment of this paper dealing with the description of each archetype has been included.

5.1 Introduction

As discussed in previous chapters, my work has been deeply influenced by Dewey's understanding of *aesthetic experiences*. However, the influence of pragmatist terminology only started making sense after the analysis of research outcomes emerging from this first study, run as a workshop titled *Focusing-oriented Bodystorming*. The nomenclature *Focusing-oriented bodystorming* (FOB) is more directly inspired by *brainstorming* than by *bodystorming* itself. There are some reasons for this: (1) FOB is not an enactive technique, as it leverages the existing information permanently captured by our bodies in tacit form as discussed in regards of Gendlin's theory (Gendlin, 1996, 1999, 2004). It requires a quiet room and an open-minded attitude, in contrast with traditional *bodystorming*, which uses action and sometimes props or prototypes (Buchenau & Suri, 2000; Oulasvirta et al., 2003; Schleicher et al., 2010) (2) Similarly to *brainstorming* (Osborn, 1953), in FOB the rules of felt-sensing description through writing promote a non-judgemental stance, for instance by discarding grammar and structure as relevant. Finally (3) FOB (and by extension, all *Focusing-oriented design practices* described in this thesis) is grounded in the principle I have described as *filtering out concepts through our bodies*, which can be considered as a way of thinking or inner dialogue. It might be a slower way of thinking, as it demands us to stop, pay attention and become aware of the changes happening in our bodies (shift of sensations, feelings and thoughts), yet it can give us a different perspective, as will become evident in the presentation of results.

One of the unexpected outcomes of the use of *Focusing* is how everyday experiences can be re-lived from an aesthetic perspective, even when these could be considered as *anaesthetic*. It makes sense as our meaning-generation process is deeply grounded in bodily experience, as I have discussed in this thesis, and particularly in chapter 2. In Dewey's perspective, having an *experience* is also described as involving a sense of completion or unity that unfolds within a specific context, marked by a beginning and an end. As a common ground, these *aesthetic experiences* generate a sense of memorability in contrast with most everyday interactions and actions, which go generally unnoticed to our consciousness (Dewey, 1934). Experiences that have vague temporal connections, or are based on rigid automatisms are defined as *anaesthetic experiences*. Those *anaesthetic experiences* are more difficult to recognise as meaningful (ibid).

Acknowledging the importance of all types of experiences, including the ones that can be

considered as anaesthetic ones, this chapter introduces Focusing to access the tacit dimension of everyday life, extracting aesthetic qualities of experiences that generally go unnoticed, or unrecognised as meaningful. The use of Focusing shows two effects in terms of aesthetic experiences: a) it generates new layers of information within existing aesthetic experiences, and b) shapes the meaning of those anaesthetic and unremarkable everyday acts into experiences that contain a perceived meaning and a sense of unity.

This chapter describes the first attempts to test viability of the Focusing method in the context of design.

5.2 Hypothesis and research questions

As described in my methodology chapter 4, one of the objectives of this exploratory first step was to test the waters and envision possible uses for Focusing applied to design. As indicated by precedents of Focusing applied to different fields (described in chapter 2), I hypothesised that the use of Focusing could bring interesting insights in the description of personal stories for design use. It is important to note that despite the fact Focusing has been used outside therapy it is still associated as a psychotherapeutic practice, an aspect that motivated me to explore before attempting to apply this technique in the context of more specific design roles, such as ideation or evaluation.

The questions motivating this particular study are:

- Which kinds of specific qualities make experiential descriptions emerging from felt-sensing distinct and potentially useful for design?
- How does descriptions emerging from the felt-sense differ from those generated through more traditional methods?
- How does Focusing work when reflecting on everyday experiences, relevant experiences and objects? How do these reflective allocations differ?

5.3 The Focusing for Design technique and workshop structure

The workshop was structured into three sections: (1) theoretical introduction, (2) facilitated bodily reflection (divided into three exercises) and (3) collective sense making, as described in Table 14. The theoretical introduction was intended to offer some definitions of key concepts

such as Focusing, felt-sense, and the differences between the felt-sense and feelings. This brief introduction was designed to help the audience to understand the nature of the somatic induction to be experienced next. Additionally, participants were instructed to drop their story line for a moment while Focusing on the body, to prevent preconceptions from taking over the experience (Rome, 2014).

The facilitated bodily reflection comprises the application of the Focusing technique, following the tailored script (see appendix). Participants were asked to close their eyes and silently follow a guided exercise designed to heighten bodily self-awareness. Immediately after each Focusing guided exercise, participants were instructed to complete the *Felt-sensing answer kit*, consisting of a narrative, body map and questionnaire. More detailed information about the methods used can be found in chapter 4.

In regard to the content of the guided Focusing exercises, each exercise invited participants to reflect and sense a specific object or situation, such as: 1) an everyday activity, 2) an object of special, personal significance and 3) an unfamiliar object. In the first guided exercise, participants were asked to sense and reflect about an everyday experience. They were instructed to choose a 'middle size' situation, able to trigger psychosomatic responses, but not necessarily in a distressing manner. To facilitate the process of exploration, flashcards with different statements describing some everyday issues were provided as suggestions for participants to reflect on (see content of cards in Table 15). During the second exercise, participants were instructed to think of and felt-sense an object of special significance for them. In the case of the third exercise, the unfamiliar object was a random teapot with a flowered pattern design. Participants were encouraged to touch, manipulate, feel and look at the object before commencing the guided exercise.

Table 14- Summary of workshop activities

Duration	Section	Objectives
15 min	Theoretical introduction	To introduce participants to Focusing, particularly highlighting the differences between the felt-sense, feelings and emotions.
15 min x 3	Facilitated bodily reflection	To compare the potential of Focusing in each scenario for accessing lived experience: a. Reflecting on everyday situations b. Reflecting on a significant object c. Reflecting on a random object
10 min	Collective sense making	Participants discussed their impressions of the technique.

Table 15. Situations from everyday life, distributed as flashcards

Washing the dishes	Doing household chores	Working in the office	Getting stuck in the traffic
Using the public transport	A child making fun of you	When someone ask you for money	Starting a new job
Family gatherings	The plane is landing after a 10 hours flight	Receiving a nice surprise	Hugging someone haven't seen for a while

After completing the guided exercises and assessment, the participants and facilitator engaged in an open conversation of approximately 15 minutes about their personal experiences with the Focusing guided exercises. The conversation was centred on finding out the perceived difficulty of each exercise, and whether participants were able to discover something different by reflecting from a more bodily perspective.

5.4 Results

This study consisted of two workshops of approximately 2.5 hours each. We recruited five people for the first one, and ten for the second session, yet the methodology remained the same. A total of 15 designers, artists and design researchers participated in the study. The participants were selected with these backgrounds as the technique was firstly hypothesised as a research and ideation tool for designers. The questionnaire asked participants to rate two statements regarding the influence of the Focusing technique on the intensity of their experience and the discovery of new dimensions of experience.

- Q1: The guided exercise was useful in a more intense way than thinking
- Q2: The guided exercise was useful to discover a new dimension of my experience

It is important to note that this is a qualitative study, which is not intended to perform quantitative analysis. Therefore, the information shown in this section is limited to the presentation of descriptive statistics.

5.4.1 Intensity of experience

Across the three exercises (illustrated as N1, N2, and N3 in Figure 15), it is shown how for most participants, the application of Focusing felt more 'intense' than merely evoking the situation from a purely mental point of view. Regarding their agreement with the statement from figure 2 in N1, a total 87% of positive responses (40% 'totally agree' and 47% 'agree') versus 13% of neutral responses was obtained. N2 seemed to increase slightly with 93% of positive responses (53% 'totally agree' and 40% 'agree'), and only 7% of neutral responses. Finally, in N3, it remained steady in the total of positive responses with 93%, (20% 'totally agree' and 73% 'agree') and only 7% of neutral responses.

5.4.2 Discoveries and Insights

In Focusing, the insight is materialised as the felt sense, generally as a collection of feelings, bodily sensations and thoughts that makes sense in its totality when perceived (Gendlin, 1996). Discoveries and insights - which can be subtle as a new sensation or as strong as a realisation - make evident the presence of the felt sense, and therefore the effectiveness of the technique.

Question 2, as illustrated in Figure 16 was concerned with the identification of these kinds of patterns. In N1, 80% of participants gave positive responses (47% 'totally agree' and '33% agree'), versus 20% of neutral answers. In the case of N2, 93% were within the agreement range (40% 'totally agree' and 53% 'agree'), while 7% were neutral. Same as N1, in N3 80% of positive responses (27% 'totally agree' and 53% 'agree'), 7% 'neutral' and 13% of 'disagree' were obtained.

Focusing has demonstrated to be particularly useful to: 1) allow experiences to be felt with heightened intensity when recalled, and 2) allow participants to experience insights by discovering aspects of their experience they did not consider before. We elaborate these findings with the following analysis of emerging themes.

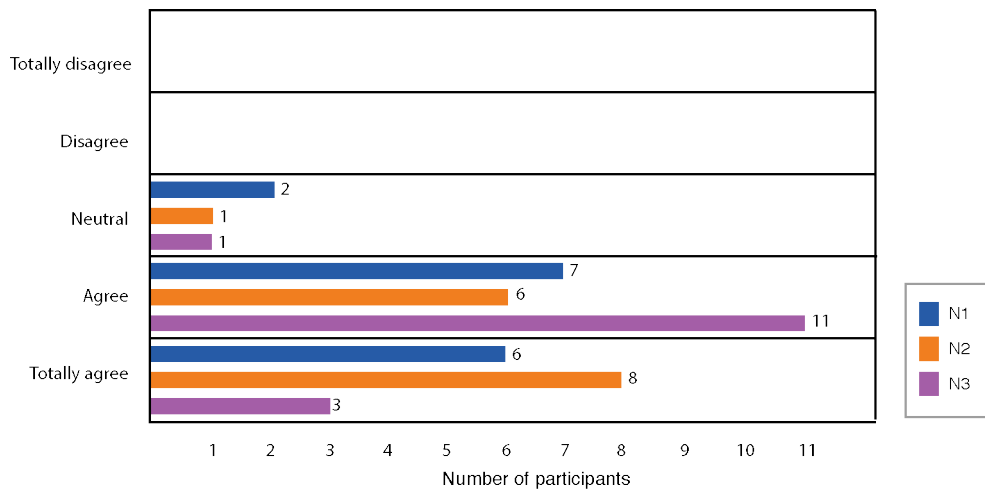


Figure 15- Q1: Intensity of Focusing compared with only thinking, exercise N1, N2 and N3

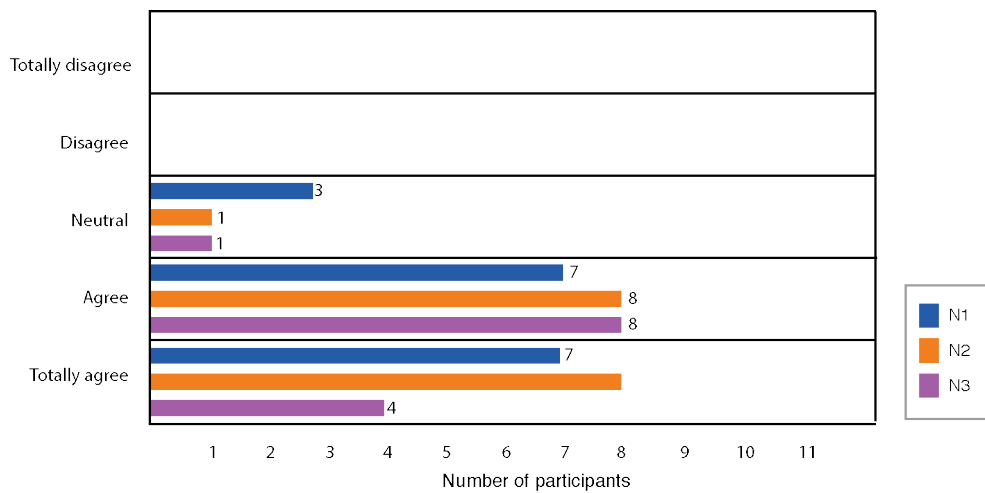


Figure 16 – Q2: Emergence of discoveries, exercise N1, N2 and N2

5.5 Emerging themes

The data was analysed according to different perspectives, in a mixture between open and theory-driven coding (see chapter 4 on methodology for details). Emerging themes from each narrative were later categorised according to the type of description and characteristics of perceptual engagement. Table 16 illustrates the first list of general themes emerging from open-coding, which was later narrowed down to the most predominant features filtered through the lens of Dewey’s aesthetic and anaesthetic experiences as described in Table 17. In this chapter, I will focus on describing theory-driven categories, particularly the ones based on Dewey (Table

17), and later in the chapter on the description of felt-sensing archetypes, drawing on Gendlin's understanding of felt-senses. It is important to note however, that some of the labels or properties described in Table 16 re-emerged through the top-down data analysis of later studies. For instance, the notion of *object rejection* became more relevant in the study with wearable devices described in chapter 7, also taken a step further in chapter 8.

Table 16- Emerging themes – First round

TYPE OF DESCRIPTION	CHARACTERISTICS OF PERCEPTUAL ENGAGEMENT
<p>Bodily descriptions</p> <ol style="list-style-type: none"> 1. Shifting between the inner and outer world 2. Metaphors and unfamiliar descriptions of bodily sensations 3. Active shifting around the body 4. The past is revisited 5. My body rejects the object 6. Somehow my body became the object, or it is nesting it 	<p>Perception of objects</p> <ol style="list-style-type: none"> 1. Vivid description of objects and its properties 2. Symbolic properties granted to the object 3. Emotionally or creatively engaged with the object 4. Felt sensing the object
<p>Inventorying</p> <ol style="list-style-type: none"> 1. Mental inventory concluding in a bodily outcome 2. Mental inventory of object characteristics 	<p>Perception of everyday situations</p> <ol style="list-style-type: none"> 1. Memories described in vivid detail 2. Enhanced physical responses through recalling 3. The ordinary becomes strange 4. Emergence of revelations through felt sensing: The insight
<p>Description of structural elements</p> <ol style="list-style-type: none"> 1. Opinions, evaluative language 2. Most evocative language was omitted, however the presence of the felt sense was described 	<p>Perception on unexpected outcomes</p> <ol style="list-style-type: none"> 1. The guided experience as a tool for mental concentration 2. The guided experience as a tool for relaxation
<p>Description of feelings</p> <ol style="list-style-type: none"> 1. Feelings as familiar territory 2. Feelings as elements of the felt sense 	

Table 17 - Narrowing-down process through the lens of Dewey's theory: Predominant features

<p>Effect of unremarkable experiences</p> <p>Inventorying of qualities</p> <p>Projecting the self on artefacts</p> <p>Making routine activities remarkable</p>	<p>Effect of already remarkable experiences</p> <p>Discoveries from re-living cherished situations</p>
<p>Common features</p> <p>Use of metaphors and evocative language</p> <p>Reference to bodily sensing</p>	

5.6 Remarkable and unremarkable experiences

This section will be devoted to describing the most predominant outcomes found according to the type of guided exercise. Drawing upon the concept of aesthetic versus anaesthetic experiences, experiences are divided into: a) remarkable (reflecting on the object of personal significance), and b) unremarkable (reflecting on everyday situations and objects).

5.6.1 Reflecting on remarkable experiences

One of the hypotheses emerging before the study was that due to the remarkable nature of pre-existing feelings inspired by personal objects and situations, a limited expression of self-discoveries would be articulated. However, according to participants' perception, a high percentage of them admitted having discovered something completely new about their experience, with 93% of responses within the agreement range. Focusing allowed accessing the insight beyond the prevalence of known emotions and pre-conceptions.

This exercise of reflecting on something special is not unfamiliar to the practice of Focusing, and it is known as the *Love exercise* (Simon, 2015), which is used to connect beginner Focusers with their felt senses. Despite the fact that most people are rationally aware of the influence generated by the things and situations they feel attached to, reflecting on significant objects through Focusing unfolded intimate narratives characterised by the use of poetic adjectives, metaphors and textural descriptions that are not usually obtained through the application of other methods. In the following example from

Table 18, a participant described his aesthetic experiencing embodied by his inherited watch as a significant object.

Table 18. Description of an aesthetic realisation by a participant reflecting on his felt sensing of an object of personal significance, his grandfather's watch.

<p>'Word: TOUCH</p> <p>Detail: I could recollect my grandfather smiling...</p> <p>... touching his watch ... I felt by touching the watch.</p> <p>I could 'access' the touch of my grandfather ... his smile</p> <p>I felt I could feel the reason why the object is special.</p> <p>It gives me comfort, it gives me a feeling of support / reassurance / confidence / LOVE / a foundation ... something to rely or to fall back on.'</p> <p>When asked whether he discovered something new, he pointed out: 'Helped me to realise/understand the significance of the metaphorical 'heart'... as we say from the bottom of my heart.'</p>
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5.6.2 Reflecting on unremarkable experiences

Even though participants expressed their access to aesthetic experiences was slightly more powerful as these had emotional and personal significance, Focusing has proven useful to transform non-aesthetic to aesthetic experiences related to specific memories or individualised qualities. Next, the discussion will centre on three aspects emerging from the data: inventorying of qualities, projecting the self on artefacts, and making routine activities remarkable.

5.6.2.1 Inventorying of qualities

The aspect of inventorying was predominant in the description of everyday objects (exercise 3). Felt-sensing experiencing was articulated by listing perceptible qualities of the object as a prelude for insight. The act of inventorying leads to two possible outcomes: a) It triggers the formation of the felt sense through writing. Written language can facilitate not only the availability of ideas, but also can influence how these are shaped and formed (Langer & Applebee, 1987), an aspect that also influences the connection with the felt sense. Additionally, b) the act of listing concludes with the expressed inability of the participant to 'connect' with the object or experience, yet still generate a detailed description of it.

Since the emergence of the felt sense is not a linear phenomenon, the prelude does not always occur in the introductory paragraph of the narration, but rather as a preparatory stage for the felt sense to appear (Table 19, prelude underlined). In some cases, the prelude can be expressed as a mental inventory, helpful to recreate the inner situation. The mental inventory is

useful in assisting the generation of the felt sense through writing. It also evidences the difficulty of bodily reflection on unanimated random objects, requiring a stage of ‘reminder’ or structured recalling. These observations suggest that the felt sense continues unfolding through the writing process, which corresponds with Gendlin’s (1962: p. 8) proposition about how meaning is shaped in the act of both experiencing and symbolising.

Table 19. Example of inventorying when reflecting on the flowered-pattern teapot. The underlined words refer to the preparatory stage of the narrative prior to the potential emergence of the felt sense.

The teapot felt rounded, cold, smooth/’slippery’; it looked shiny; the bottom was as smooth as its body. It produced high-pitched sounds when the lid only partly come into a contact with the body, but the sound coupled with a deeper one when the lid would be closed and the [] would make an instant, quick contact. Deeper sound echoed in the sound empty space of the teapot.

I felt the teapot placed inside my lower abdomen. My breath was filling with its inner-space. It felt a bit uncomfortable, as the teapot has this cold appearance. It is made out of porcelain, it is slip-coated and there are no marks of human hand working it (I couldn’t help having the associations likened to ceramic/pottery practice, as I am too familiar with them)

A word that came to my mind is ‘balloon’. I kept having the associations of empty space, air filling and sound space, air, breath.

5.6.2.2 Projecting the self on artefacts

Under certain circumstances, it is possible to project or mirror aspects of the self on external objects. For Jung, such identification would lead to aesthetic awareness, empathy and deep searching out of imagery-related processes on the object (Schwartz-Salant, 1988). In this study, the application of Focusing resulted in some cases in self-projection on artefacts, allowing participants to aesthetically reflect on them, as if these were embodied in their inner world.

In some cases, participants integrated immediate perceptible qualities of the object (teapot) such as shape, feel, et cetera into their bodily sensations as if they were nesting the object (example, Table 19). Focusing also amplified the sensations of rejection towards the object, as well as affective memory from a positive perspective. In most cases, Focusing elicited a clear and open expression of sincere sentiments generated by the artefact. Borrowing Norman's tri-dimensional model of emotion that understands our relationship with objects as visceral, cognitive and reflective (2004; p.36), Focusing generates an aesthetic transmutation, from

perceiving the object only viscerally to an inner conversation integrating the visceral and the reflective dimensions.

5.6.2.3 Making routine activities remarkable

Focusing on unremarkable everyday situations allowed participants to individualise, acknowledge and bring to the surface qualities of certain experiences encapsulated in their past experiences. The routine series of acts related to everyday activities was transformed into a specific moment in time, or a particular quality of experience (such as the example in Table 20). In Deweyan terms, non-aesthetic experiences, which are characterised by blurry commencements and ends, are transformed into a specific well-defined event to reflect on.

Table 20. Example of an anaesthetic experience transformed into an aesthetic one: Washing the dishes.

<p>'I was very aware of tension in my body and how difficult I found it to let go of this.</p> <p>I felt a tension between wanting to depart completely into myself, but having a memory and an awareness of the room full of people around me.</p> <p>Tension around being pulled in different directions.</p> <p>Vibrating in the head and neck.</p> <p>Crawling sensation in my hands.</p> <p>Wet and fragile -- that might easily break.</p> <p>A memory of my mother's chapped, cut, flaking hands.</p> <p>Worn down by domestic work.</p> <p>The fragility of skin</p> <p>Gross stitching slime.'</p>

5.7 Common features: Metaphors and evocative language to describe the felt-sense

Evocative language is normally the language of the felt sense. As explained in chapter 2, the specificity of felt-senses sometimes requires modes of expression going beyond our common repertoire of pre-conceived representations. As in Focusing, the use of evocative language – along with symbols and gestures- is generally used as a resource by methods that enhance embodied self-awareness. Some of these practices include Tai chi, Yoga, dance, psychotherapy, Feldenkrais Method and Rosen Method Bodywork (Fogel, 2013), however unlike others Focusing is particularly language-oriented. The use of evocative language is also a fundamental

part of phenomenological description (Todres, 2007; Van Manen, 2014) and by extension it is for Focusing. Metaphors are important in the process of meaning making, where the role of bodily experience in their creation is fundamental (Johnson, 2013; Lakoff & Johnson, 2008). In Focusing, when the description of identifiable emotions and feelings falls short in representing the complexity of subjectivity, evocative language assists us to build new meanings and understand our own inner process. In some cases, another recognisable feature of felt-sensing language is the presence of the phrase "it feels like", as well as other phrases denoting a subjective description. The concept of "feeling like" surpasses the domain of feelings themselves. Feelings are pre-established, available states that remain invariant when sensed, whereas the felt sense moves and changes (Gendlin, 1996).

In the following example (Table 21), the participant selected the topic of family gatherings to reflect on during the Focusing session. Responses to Q1 and Q2 are also crucial to further understand the context.

Table 21 - Situation: Family gatherings

<p>“Lips pursing Mouth clamp Rigid putty Tightness ... Moved to lower throat A sense of restriction Like a clamp tightening A blockage. ... Then slowly softened But lingering tightness at base of throat. Was that there before?”</p> <p>Body map description: “Rigid grey putty lips pressing down. Throat. Constriction. Like metal nuts being tightened”</p> <p>Q1 About intensity versus thinking: Neutral “Often thinking about the family gatherings situation can arouse emotional feelings, a firing up of emotion and a sense of powerlessness.”</p> <p>Q2 About discovering something new: Totally agree “But with the guided exercise it seemed to create a more gentle</p>	
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experience in that felt images in specific parts of my body where generated, rather than a rush of emotion.”

5.8 Analysis through the lens of the felt-sense: Participant archetypes

From the analysis of felt-sensing mementos and body maps, different patterns of responses were found in response to the felt-sense. As discussed in chapter 2, different criteria inspired by Focusing rules were utilised to assess the closeness of the memento to the felt-sense. These criteria are the following:

- Identifies where bodily sensations emerge
- Wording for active sense making such as “it feels like”
- Use of metaphors to describe the bodily dimension
- Use of uncommon wording or vocabulary
- Mostly unstructured narration (this criterion was later discarded)

Six different archetypal patterns of expression were distinctly observed when comparing and analysing the textual description of manuscripts and the visual one provided through body maps, as illustrated in Table 22. The three archetypes from the first row (*WOSI*, *WOSS* and *storytellers*) represent responses that can be considered as closer to the felt sense. The *concealer* category can be categorised as ambiguous, while the last two are more removed from the felt-sense.

Table 22 - Archetypes emerging from theory-driven analysis based on Gendlin’s felt sense

Writer of the self-insight (<i>WOSI</i>)	Writer of the somatic self (<i>WOSS</i>)	Storytellers
Concealers	Evaluators	Dissenters

5.8.1 Writers of the self

Participants from this group describe revelations of self-discovery as well as sometimes perplexity or uncertainty. There are two types of writers of the self: 1) *writers of the self-insight*, participants who experienced an insight or “aha” moment of realisation, or 2) *writers of the somatic self*, who describe vivid memories with strong focus on somatic sensations. For instance, a participant who revives the memory might also feel temperature very clearly, the warmth of

a hug on the torso, or the memory of washing the dishes and the sensation of cold water on the hands.

In the case of this dual category, the act of sensing triggers unexpected outcomes, in the shape of a particular memory, sensation or augmented feeling, which is clearly described in the text. These participants' texts are full of textured description and evocative language, showing movement and action within the body. Despite the description of the felt sense's inner movement in the texts, body maps crafted by the writers of the self tend to be concise, directly describing the insight arrived at rather than the process leading to the insight. This could be explained by the powerful prevalence of the insight in the body and emotions. Figure 17 shows the body map of a writer of the self-insight participant, who reflected on an object of personal significance: "I felt as if the box occupies the whole length of my back, spreading from shoulder to shoulder. I felt pleasant tingling, as if I am massaged. My shoulders relaxed. The meaning I associated with the object is "he cares" (this particular friend is very much like a guarded animal that doesn't show how he feels). The phrase that emerges next was "He has my back". When asked whether she discovered a new dimension of experience, she pointed out "I was surprised by what was revealed".

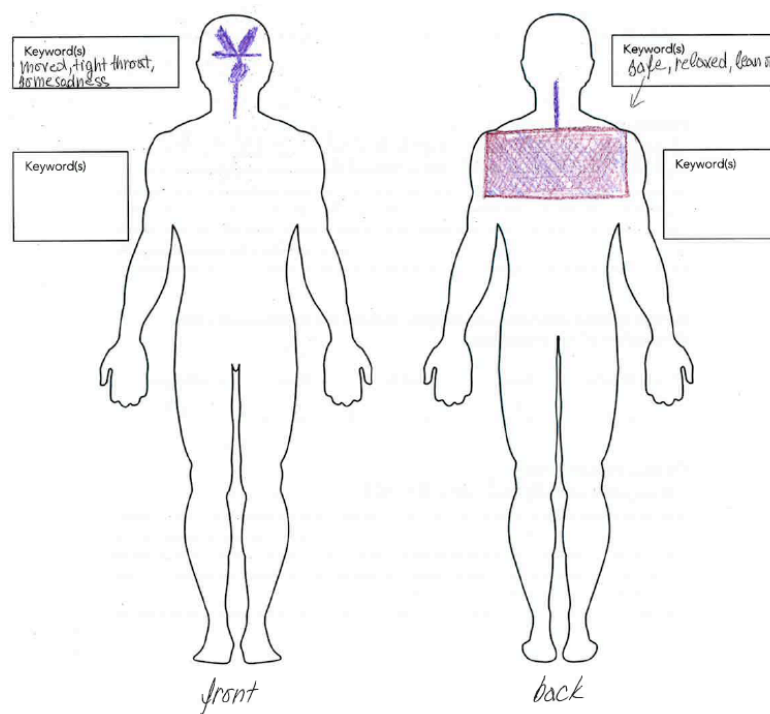


Figure 17 - Writer of the self-body map

5.8.2 Storytellers

These participants tend to stay with their memories and the important presence of their familiar feelings, showing metaphors and comparisons with supporting symbolic imagery. However, this insistence does not prevent the appearance of interesting descriptions. Storytellers are deeply emotional, expressing a rich and complex variety of adjectives relating to their feelings and personal stories. They borrow symbols from existing objects or culturally recognised metaphors to tell stories through their body maps, therefore the process of *making strange* is only partially carried out. They possibly rely on their creativity as their source of trust. The quality of data obtained by these participants is rich, providing stories and an interesting repertoire of feelings. The act of felt sensing becomes then, a means of a more detailed self-contemplation of everyday life. Storytellers are highly motivated towards the task of sensing and reflecting, an aspect that is demonstrated through their colourfully crafted body maps. In some cases, they can be slightly more creatively or emotionally expressive than inclined towards the felt-sense. However, it is common to find storytellers with *writer of the self* traits, as well as somatically-inclined participants tending to storytelling, therefore participants that have accessed the felt-sense. Figure 18 shows the body map of a participant inclined towards storytelling, which articulates an interesting mixture between symbolic aspects and identifiable bodily presence ('smiley guts, glowing chest, light shoulders'). In his narrative (described in Table 23) he refers to a plush toy—in a humanised way—as a significant object. We can see the description is detailed, emotional and rich. The body map nicely complements the story by adding new symbols to articulate his feelings. In another example illustrated in Figure 19 and narrated in Table 24, another participant with storytelling traits also tells part of the story through her body map, by drawing a teapot worn as a hat, possibly as a metaphor of being absorbed in her memories. In her answers, she gives some extra information that helps the reader to contextualise her narration.

Table 23 - Storyteller felt-sensing memento A

My object is a plush giraffe I bought to my partner when we started dating many, many years ago when we still lived overseas.

She (the giraffe) came to Australia with us and has been living with us ever since. She is very clumsy and has a protuberant belly. She is always smiling a Mona Lisa kind of smile.

She is the embodiment of the illusion of life. We know she is an inanimate, but we give her life. We create situations when she is acting out, so that to surprise each other. When we are sad, she lifts us up. When we are happy, she reminds us all is fake. In a way, she keeps us balanced.

We don't have children, but we also don't infantilise our giraffe. As I said, we know she is fake. But then so are we.

Thinking of here immediately makes me smile and brings me closer to my partner, wherever she is. Our giraffe is something that binds us together, though external to both of us. It's a continuous stream of cynical joy

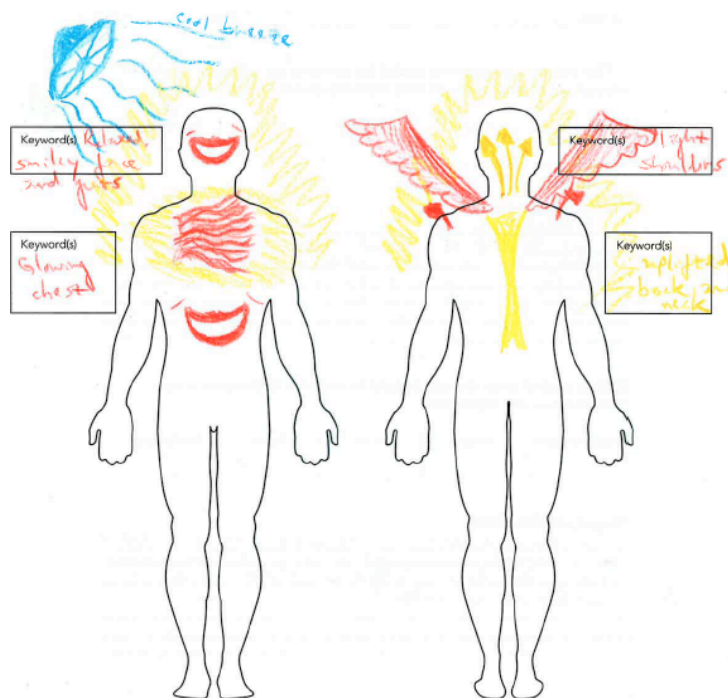


Figure 18 - Storyteller body map A

Table 24 – Storyteller felt-sensing memento B

- Firm - Cool – Mound - Fixed but fragile
- Warmth - Memory - Hearth > Fuzzy shoulders - comforting
- Family (Mum offered tea/ Dad called for it)
- Soothing - Beautiful
- Decorative (relief it's not brown, but also comforted by the memory of my parent's brown, 70's style teapot).
 - > Allow between this memory and my experience of this more feminine, more beautiful teapots.

Q1: Totally agree

“I remembered more vividly my fingers meeting the cool and rounded surface of the teapot. I could have more succinctly the clink and clatter of the lid being removed, and smell more deeply the tea-stained insides”

Q2: Totally agree

“I discovered that teapots could expand to be other things when considered through the body. What about its body? Its neck, its helmet, its... how could it be used? A much more intense consideration.”

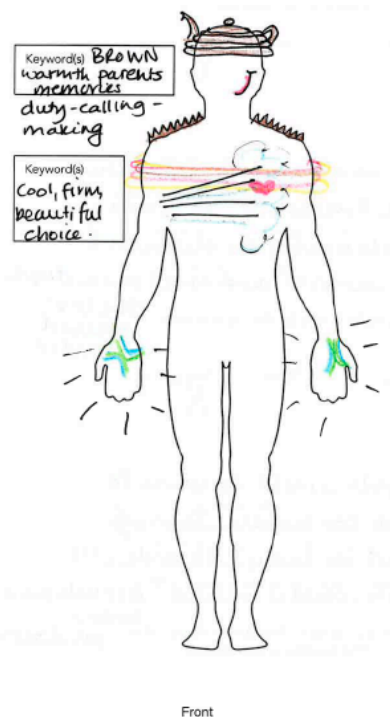


Figure 19 - Storyteller body map B

The following archetypes correspond to participants that due to different reasons (including personal and external reasons) cannot completely connect with the bodily experience.

5.8.3 Evaluators

They stay in their minds and evaluate the effectiveness of the experience through writing. Their visual representations through body mapping tend to be concentrated in their heads (as metaphor of thinking) or spread diffusely across the body, evidencing lack of focus on specific body parts, as shown in Figure 20. Evaluators tend to be honest, and describe their explicit disconnection, rarely connection—and sometimes frustration—towards the task. They tend to rationally assess the quality of their connection or lack of it. In the following example (excerpt), evaluative language is underlined. The participant’s body map is shown in Figure 20.

“I was able to transport to the situation I received the gift as a whole body, rather than just thinking of it. (...). I guess the exercise worked well in terms at fully immersed in the idea at the object, not thinking but sensing it.

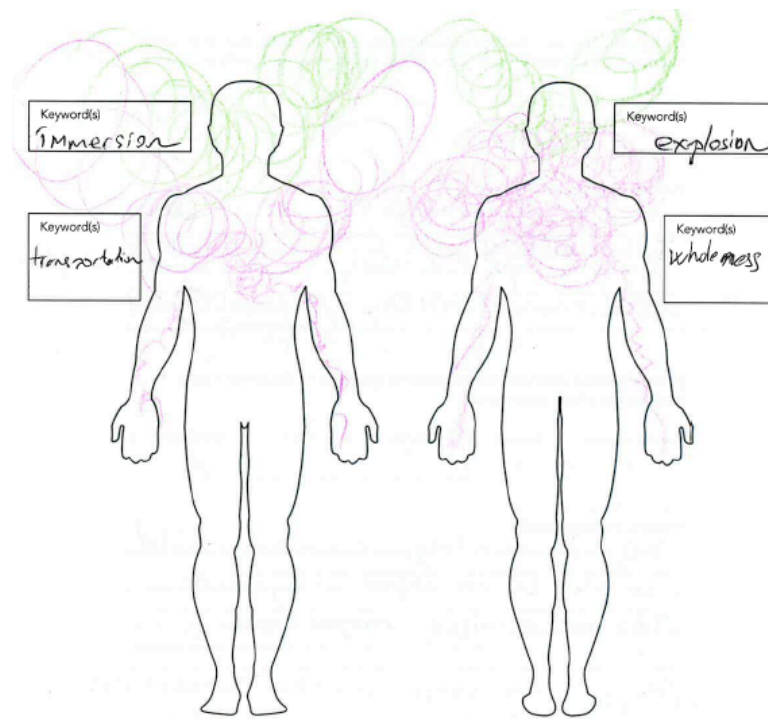


Figure 20 - Body map of a Concealer with Evaluator traits.

5.8.4 Dissenters

These participants tend to interpret the guided exercise as an opportunity for relaxation, or adopt a “letting go” attitude rather than focusing, thus misunderstanding or contradicting the spirit of the exercise. In this study in particular, there were not participants categorised as dissenters as a main archetype. The following participant (Figure 21), who shows some

dissenters' traits, describes her experience as follows: "The feelings I had were just a calm stillness, a sense of relaxed peace. There was tightness in my shoulders, which may have been unrelated to the object but related to the lack of connection."

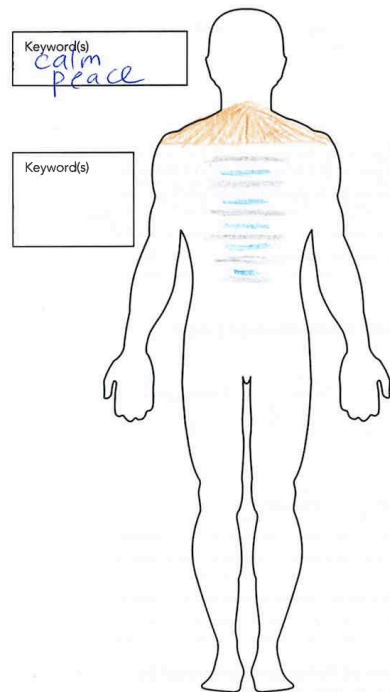


Figure 21 - Dissenter body map

5.8.5 Concealer

These cases belong to ambiguous representations, which are hard to label. This ambiguity is related to the lack of evidence to clearly determine whether the felt-sense was reached or not. Generally, these participants do not express directly their disconnection with the task, but rather use rational accounts to fill the gap between both. Sometimes the emergence of the felt sense is elusive due to a series of personal factors: external environment, personality aspects, or simply the exercise did not make much sense to the participant during that specific moment of his/her present life. In some cases, the amount of time of each exercise is not enough for participants to develop a more finished description.

In the following example (Figure 22), one participant describes her experience in this way, evidencing the elusive nature of the insight.

"Not really sure where I felt this quality. Nothing really presented itself, except towards the end in my cheeks- they capture the fatness. A word, BAO (bun in Cantonese). White steamed buns. An image came to my mind more than body, also the sounding of BAO evokes this plump feeling."

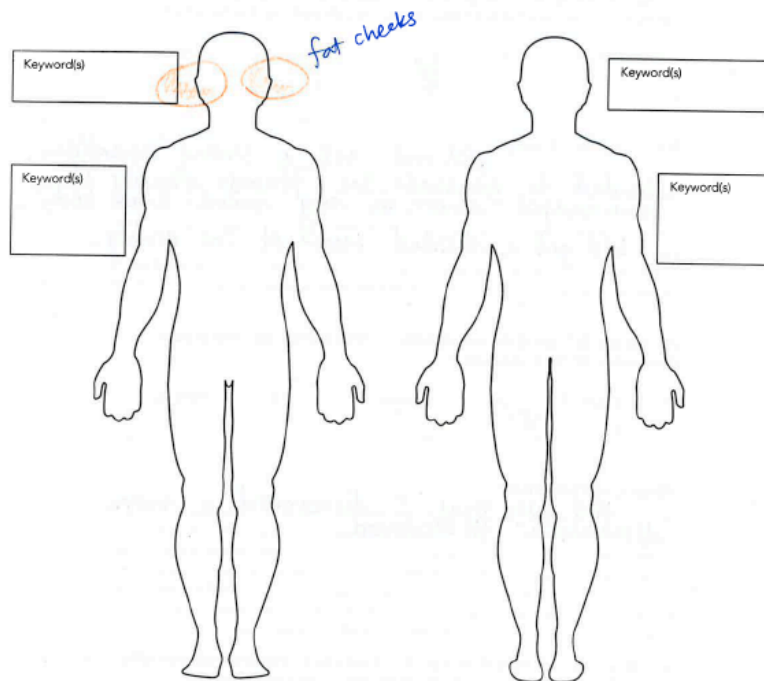


Figure 22 - Concealer body map

5.9 Categorising Narratives

Due to the complexity of textual narratives and body maps the categorisation process is not straightforward. Ambiguous relations can easily emerge from this process, in which case it is suggested to re-evaluate carefully, or rather to categorise them as *concealers*, since there might be incomplete aspects of the relationship between narration-body map, making difficult a clear labelling of a specific archetype. It is important to point out that these categories *are not mutually exclusive*, having some cases of participants showing multiple traits from different archetypes. Table 25 shows the distribution of mementos grouped by main archetypes obtained by participants. From a total of 15 mementos per exercise N1- reflecting on everyday situations obtained 13 felt-sensing archetypes; N2- reflecting on a special object 11, whereas N3- Reflecting on an unfamiliar object obtained 9 narratives close to the felt-sense.

Table 25 - Number of participants falling into different archetypes

TOTAL MEMENTOS	45
Writer of the somatic-self	16
Writer of the self-insight	9
Storyteller	8
Concealer	8
Evaluator	4
N1- EVERYDAY SITUATIONS	15
Writer of the somatic self	10
Writer of the self-insight	3
Concealer	1
Evaluator	1
N2- SPECIAL OBJECT	15
Writer of the self-insight	6
Writer of the somatic-self	3
Storyteller	2
Concealer	4
N3- UNFAMILIAR OBJECT	15
Storyteller	6
Writer of somatic-self	3
Concealer	3
Evaluator	3

5.10 Some comments about the application of FOB

Although felt-sensing mementos revealed interesting traits of human experience, which are difficult to obtain through other means, it is important to recognise that the amount of time given for completing the felt-sensing answer kits during this first study was too limited. The idea behind giving five minutes per instrument was to avoid over-rationalisation of accounts, privileging raw and authentic narratives. This principle was inspired by McNeilly (2012) phenomenological method to access the *essences* of audience experiences. Yet beyond my intention to access the core of felt-senses, I had to keep in mind that my application of Focusing was mainly intended to generate narratives inspiring design. In future studies, this aspect was taken into account, and the time to complete the instruments was slightly increased from five to seven minutes per instrument. In case participants might need more time to write their mementos, up to 10 minutes can be granted.

Related to the previous point, in order to keep the emergence of felt-senses in a pure form (it means, avoiding overly structured, or familiar narratives), participants were instructed to *drop the story line* as recommended by Rome as a strategy to access the felt sense (Rome, 2014) allowing stories to speak from filtering out through the body instead of from the *common-sense*. In that way, participants can put aside their familiar ways of thinking and access self-discoveries, a process that in phenomenological methods is also known as *bracketing* (Moustakas, 1994). The application of this rule resulted in some participants expressing their difficulties to separate themselves from their existing stories, an aspect that made me question if the rule of putting aside was benefitting or jeopardising the generation of rich, textural stories.

On the other hand, when this instruction is omitted, participants become less open to access discoveries, an aspect that becomes more evident when they are asked to describe their experiences with the *Love exercise*. Their narrations might reveal interesting information about feelings, but when they are asked if they have discovered something new, the likely response is “No, because already I know why this object is special for me”. To overcome this conundrum, participants should be invited to *put their stories aside and be open* instead of instructed to *drop the story line*. The most important instruction to keep in mind is that the body directs the conversation in this inner dialogue.

5.10.1 About felt-sensing mementos

I call narratives inspired by Focusing experiences as *mementos*. A memento is an artefact that represents an event we want to cherish or remember. Not all mementos generated through felt-sensing are positive, yet these might embody a lesson, a discovery or at least a small realisation, which makes them meaningful artefacts. In order to be a memento, narratives should contain texture, and some evidence of the inner dialogue between body and mind. As such, mementos are ephemeral photographs of a moment in the life of a person. The logic behind mementos is embracing the fact that experiences are *temporal* and *ongoing*, yet still able to generate feelings of self-identification. As souvenirs symbolising a trip, and embodying complex meaning -which Norman identified as our reflective dimension of object emotion (Norman, 2004)- mementos encapsulate complexity and meaning, hopefully making explicit part of their inherent mysteriousness. Recognising the temporality of experience does not mean these cannot be categorised (Hassenzahl, Diefenbach, & Göritz, 2010), or used as design materials, their categorisation is not intended to generate universals for design either. Rather,

by designing from mementos as inspirational starting points is adopting a position that, some might agree with, whereas it might generate rejection in others. This adoption of mementos as design positions will be later discussed in chapter 8, where I describe the development of my art installation *Soul*.

5.11 Summary of outcomes

Focusing-oriented bodystorming (FOB) has proven useful to access the aesthetic qualities of experiences from everydayness, by re-living situations through inner focus. When reflecting on experiences that are already remarkable for the participant, new aesthetic qualities emerge contributing to further generation of meaning. In the case of Focusing applied to situations considered as anaesthetic (such as routine acts), its application brings underlying aesthetic qualities to the surface. When reflecting on everyday objects, participants tend to project the self on them influencing the way they describe the properties of the artefact. As a result, descriptions are detailed, and sometimes revealing intimate aspects of the self. Additionally, it was observed that when reflecting on anaesthetic experiences, participants inventoried qualities as an extension of the guided exercise. Finally, one of the most interesting outcomes is how the use of FOB allows participants to experience and acknowledge the presence of insight themselves.

Chapter 6

STUDY TWO: FOCUSING-ORIENTED DESIGN

IDEATION

The introduction of somatic techniques into the design process along with the recognition of body and movement as materials for ideation have captured the interest of the design and HCI communities. These methods use enactment, role-playing or direct interaction with prototypes to facilitate a rich generation of ideas that consider the body in space as sentient and sapient. However, it remains unclear how somatic and aesthetic values emerging from interaction can be translated into design problems, and eventually to ideas addressing these potential issues. It seems that there is a step missing between the actual bodily interaction and the documentation process, which makes these values difficult to document. Drawing upon the findings and lessons learnt through Focusing-oriented bodystorming (FOB), this chapter introduces a second study intended to test the viability of an emerging method called *Focusing-oriented design ideation* (FOI), which imports principles of Focusing (Gendlin, 1978, 1996), phenomenological writing (Van Manen, 1984b) and active listening (Gendlin, 1978; Rogers & Farson, 1979) into the ideation process. These notions are represented in the following steps: a) becoming aware of how the body senses everyday situations through Focusing, b) generating descriptive documentation regarding the personal awareness process and c) working in partnership to uncover more somatic qualities to be transferred later through a systematic process of extended reflection involving notes and sketches.

6.1 Introduction

The importance of personal experience as a starting point for design discovery and ideation deserves further exploration. Somatic and aesthetic qualities emerging from subjective experiencing are highly subtle and unique, requiring the direction of our attention towards the changes occurring in the body and emotions. Practices such as Feldenkrais for example, are grounded in the notion of noticing, leading us to perceive small changes as transformative steps in a lifelong process of the body as a project itself (Feldenkrais, 1977). Although some somatic-oriented methods acknowledge the importance of situating the body as inseparable from the environment, it is important to acknowledge that tactics such as enacting, roleplaying, interacting with prototypes or even direct experiencing might not always be sufficient to extract tacit content to be utilised in design. As discussed in the literature review (chapter 3) and inspired by the Heideggerian principle of circumspection (Dreyfus, 1991), if we aim to obtain descriptions grounded in embodied sensibility and use them as design material, adopting an enactive strategy might be directing our attention towards the outer instead of the inner world. Some ideation methods such as Somaesthetic reflection for instance (W. Lee et al., 2014) rely on somatic strategies to access more specific aspects of our bodily knowing, however as discussed in the literature review (chapter 3) emerging aesthetic and somatic qualities might get diluted during the articulation of insights from reflection within the design team. The question that emerges is, how do we protect the integrity of personal accounts during the transference of somatic knowledge? Additionally, how do we describe somatic qualities in close connection to subjective experiencing?

Drawing upon the findings and lessons learnt through Focusing-oriented bodystorming (FOB), this chapter introduces a second study intended to test the viability of an emerging method called *Focusing-oriented design ideation* (FOI), which imports principles of Focusing (Gendlin, 1978, 1996), phenomenological writing (Van Manen, 1984b) and active listening (Gendlin, 1978; Rogers & Farson, 1979) into the ideation process. These notions are represented in the following steps: a) becoming aware of how the body senses everyday situations through Focusing, b) generating descriptive documentation regarding the personal awareness process and c) working in partnership to uncover more somatic qualities to be transferred later through a systematic process of extended reflection involving notes and sketches.

As a brief look to the results of the ideation workshops, the FOI method has shown to be useful for the generation of critical and lateral solutions, as well as for the discovery of design problems that tend to be generally overlooked. The inclusion of somatic values also opens the discussion of the role of design in addressing complex ethical issues amongst individuals. Some of the emerging ideas also incorporate nuanced somatic qualities from the lived body, whereas others have shown a transformative quality by reframing a problematic experience into a design solution to counter it.

6.2 Research question

How do ideas generated through a Focusing-oriented process differ from traditional approaches to ideation and articulation?

6.3 The study

This workshop called *Focusing-oriented Ideation* was run as part of the Studio component of the Master of Interaction Design and Electronic Arts, at the University of Sydney. Thirteen design students (6 females and 7 males) participated in the sessions. Ten students participated in the first session, and three joined for a catch-up workshop for those who could not attend. As some activities were done in partnership, one student who attended the main session volunteered to participate twice. As a result, 14 sets of data have been collected. The design task was set around the brief of *sustainable bodies and healthy workplaces*, which was based on generating ideas to make workspaces healthier and more physically active. Students (thereafter referred as ‘participants’) were commissioned to ideate a piece of interactive technology, taking into account the centrality of somatic sensibility as a governing principle for their design concepts.

It is important to note that most participants had little experience in somatic practices prior to this workshop. Based on Gendlin’s principles, described in chapter 2, I have elaborated on how the access to the felt-sense is a natural process, therefore participants do not need to have any experience in somatic practices apart from an open-minded attitude, an aspect that might be beneficial for the adoption of Focusing. More important in this case is the role of the facilitator, who should have experience transmitting the importance and values of the

technique, as well as its tacit lessons (Schiphorst, 2011), for instance by mindfully delivering the Focusing script, which translates to being attentive to the pauses, rhythms, voice, et cetera.

6.4 The design activity: Towards a Focusing-oriented design ideation method

This section describes the design activity exercises step by step, including the rationale behind each design step.

6.4.1 Bringing the context to mind

As a first step, participants were asked to have a ten-minute conversation to bring to mind some of the everyday practices happening in the context of the work environment. The idea behind this conversation was to put participants in the mood for reflecting on the office environment. The suggested questions mostly centred on trying to understand actual everyday practices, as illustrated in the following list:

- Tell me about the last time you worked in an office.
- Describe things you normally do from your desk.
- Do you have any everyday rituals associated with work?
- Do you take breaks from sitting sometimes?
- Is your environment social or tending towards individualism?

6.4.2 The Focusing guided exercise: The structural base of FOI

After the process of bringing the context to mind, participants followed a Focusing guided exercise, in which they had to reflect on the act of working in an office space. The guided exercise, which was specifically tailored for this brief, invites participants to stop and pay attention to their somatic responses whilst visualising themselves performing an activity, in this case working in the office environment. The theoretical principles of this technique applied to design are described in chapter 2 and 3, and also by Núñez-Pacheco and Loke (2016, 2017). A sample of the guided exercise applied for this study can be found in the appendix.

6.4.3 Describe to acknowledge

One of the objectives of integrating Focusing-oriented techniques into the ideation process is extracting aesthetic qualities of everyday experiences to serve as inspiration for design. The Focusing guided exercise is intended to heighten awareness on overlooked aspects of everyday interactions, such as how the body perceives those phenomena from somatic and affective perspectives. Focusing guided exercises can either lead to distinct insights or to fuzzy representations, which appear difficult to put into words for most people. As previously discussed (Fdili Alaoui et al., 2015; Höök, 2010), one of the challenges of integrating somatic techniques into the design process lies in the difficulties of describing those imprecise bodily qualities to be materialised into design solutions. Acknowledging this gap, FOI uses two main sources of concept-articulation:

6.4.4 Writing mementos as a design tool

In my methodology chapter 4, I have described the phenomenological approach to generate felt-sensing mementos. In this case, mementos are not only intended to be used as data collection tools, but also as design materials that designers can build on. Clark and Chalmers (1998) note how human cognitive processes rely on environmental support to a great extent. For instance, the use of pen and paper to perform calculations, or the use of keyboards, notebooks and other tools make evident how external assistance facilitates the process of thinking. In the case of written language in particular, this is useful not only to describe ideas, but also to shape them (Langer & Applebee, 1987). The act of writing facilitates the access to aesthetic qualities of experience in a similar way to the concept of 'aesthetic becoming' in architecture, where the visibility of physical gestures generate insights with regard to how space and form will take shape (Luck, 2014). The use of writing as a cognitive externalisation is used immediately after having experienced the guided exercise, therefore working as a tool to reflect and extend what was already experienced.

Although writing itself is an effective tool to become aware, there are two constraints to take into account in order to obtain useful descriptions:

- *Time constraints:* As mentioned in my methodology chapter 4, the most essential information is likely to surface when time is limited. In chapter 5, I also discussed how the given five minutes was considered as insufficient by most participants, generating

economical descriptions as a result. For this exercise, participants are given seven minutes to complete their descriptions. This timeframe has proven useful to facilitate the articulation of details, however without compromising the rawness and boldness of descriptions.

- **Content constraints:** In terms of content, there are some basic rules, which are inspired by some principles of phenomenological writing, particularly in how the process of documentation focuses on describing the nature of the experience (Van Manen, 1984). As described in my methodology (chapter 4), although there is nothing problematic about evaluative accounts, these are not useful as materials for ideation per-se. In contrast, a more descriptive strategy focused on feelings, sensations, memories and thoughts is encouraged.

6.4.5 Reflective listening to further articulate meaning

Besides the personal approach to articulate meaning through writing, a way of collecting further impressions is through an interview technique called reflective listening (also known as active listening) (Gendlin, 1978; Rogers & Farson, 1979). This technique is particularly useful to access empathically to the affective world of the interviewee (Weger Jr et al., 2014). In this technique, the interviewer (listener) tries to capture the essence of what the interviewee (speaker) is saying. It requires making a genuine effort to pay attention and deeply empathise with what the speaker is communicating. When the essence or meaning of what was expressed is captured, the listener 'reflects back' to the speaker, as a way to communicate that he or she has been paying attention and connecting with the situation. Additionally, the listener should adopt a receptive and non-judgmental attitude when trying to make sense of what the other person is saying.

Participants were asked to work in pairs and practice reflective listening with each other, by describing their experience during the guided exercise. After a five-minute interview, speakers and listeners were instructed to switch positions. Finally, they took notes about what additional lessons emerged during the reflective exchange.

6.4.6 Creating an inventory of notes

For this task, participants had to use two sets of coloured sticky notes, representing two different dimensions of experience: (1) Felt sensing qualities and (2) contextual information.

6.4.6.1 Felt sensing qualities: Green notes

In chapter 5, I described how the process of inventorying in the articulation of Focusing exercises worked as a way to scaffold the emergence of meaning. Following the principle of inventorying and to assist in the articulation of felt-sensing qualities, participants were given ten minutes to note down their bodily sensations, thoughts, ideas, memories triggered, metaphors and insights emerging from both Focusing and reflective listening exercises. Some rules were given to ensure the generation of more informative notes:

- Each note should be worded as a first-person description: In the practice of Focusing, it is quite common that phrases such as ‘I noticed,’ ‘I felt’ or ‘It felt like’ are mentioned during the description of felt-senses. Figure 23 illustrates this particular way of wording each statement, which is intended to enable the focus on specific, subjective qualities of each experience.
- Notes should be specific: Instead of describing the general aspects of the felt-sense (for instance: ‘I remembered lots of things about my workplace’), notes should illustrate the uniqueness of each situation (‘I remembered that although I was always thirsty, I rarely stood up from my desk to get some water’).
- One note, one insight: Each impression should be expressed in one note.

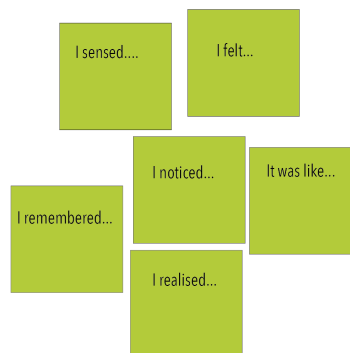


Figure 23 - Felt-sensing quality notes

Before working in pairs once again, participants had to explain the content of the notes to each other, discussing whether they discovered something new by trying to articulate their experiences through this format.

6.4.6.2 Contextual qualities: Yellow notes

This step was planned to bring more external contextual information back to the exercise. In this step of the exercise participants work in pairs and context is explicitly acknowledged through the articulation of yellow notes. These notes should contain the follow:

- Distinct characteristics of the space where things happened. Characteristics of infrastructure (For example: air conditioning, illumination, furniture)
- Everyday practices done in the space where the action occurred. These can be personal as well as interpersonal.
- Situations that might have occurred outside interpersonal interactions.
- Any other contextual information of relevance.

6.4.7 Creating ideas from felt-sensing and context

In the following step, green and yellow notes should be combined to inspire ideas. First, each member of the team works individually, trying to generate connections between both sets of notes. After that, ideas are discussed in pairs in order to refine them or join forces towards the generation of combined ideas. Resulting ideas were documented in orange notes. Participants were encouraged to generate as many ideas as possible.

6.4.8 Selecting and sketching

Each team was asked to select two ideas and develop these further through sketches and mindmaps describing the interactive flow. Participants were given the option to either work in collaboration or individually. At the end of the tutorial each team presented their ideas in front of the class.

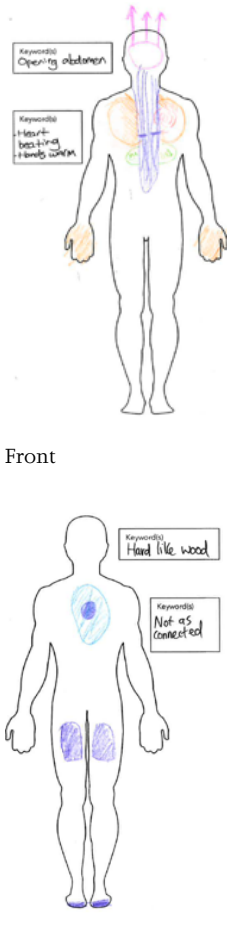
6.5 Results

The data was analysed through different lenses: a) Felt-sensing archetype analysis, which describes the type of engagement with the felt sense of each participant (Núñez-Pacheco & Loke, 2016), and b) open-coding analysis applied to the presentations of final ideas (Gibbs, 2008). The analysis of data was centred in different pieces of documentation generated by the participants during the activity, such as a) description of experience after the guided exercise, b) body maps c) notes taken after reflective listening and d) presentation of ideas to the class.

6.5.1 The articulation process: Materials

The importance of this systematic documentation process is illustrated in Table 26, where the participant acknowledged her realisation after the process of reflective listening. She expressed through her body maps that she did not feel strongly connected during the guided exercise, an aspect that also makes sense as she describes a disembodied involvement with her memory in her narrative (through a third-person observational stance). However, throughout the steps she started identifying herself with some concepts deriving from the conversation with her partner. At the end of the process she recognised an inner revelation, in which she questioned what she wanted for herself in the future.

Table 26 - Example of articulation process

Narrative after Focusing	Body maps	Reflective listening notes	Discoveries
Individual reflection	Individual reflection	Partnership	Individual reflection
<p>While I do enjoy my job, I took myself to the more negative things like feelings of stress, strains in my arms and questioning purpose. It was like my mind was watching this from (my body) as a 3rd person as I floated around looking at my workplace. Also want to note, while sensations of stress and strains came to mind, I was more of an observer so these feelings weren't negatively impacting my experience and it was more like watching them come and go, so I was calm through the whole experience.</p>	 <p>Front</p> <p>Back</p>	<p>I found that [my partner] and I had similar experiences, but by being a social listener and describing his experience back to him, I had found additional words that would also describe my experience, such as the feeling of "projecting" a certain image.</p> <p>I found it assuring to know [my partner] was not judging my experience (in fact, his was similar) but this really helped me describe the situation mindfully without rushing. The more I described, the more into it was I felt like my partner and I were almost re-living experience together.</p>	<p>While my partner and I both had similar "dream like" experiences, he entered the experience as a participant, feeling all the stress/nerves/pain associates with it, I was more of an observed, acknowledging they exist but no[t] directly attached to them and letting it come and go.</p> <p>During the note exercise also made me realise I wrote a more personal and vulnerable note that my partner said I didn't mention during the social listening, <u>questioning if working in an office is what I really want to do in life.</u></p>

6.5.2 Archetypical analysis of participants' engagement towards the felt-sense

As part of the data analysis, the theory-driven *felt-sensing archetypes analysis tool* was applied, which focuses on participants' levels of engagement with their felt-senses (Núñez-Pacheco & Loke, 2016). This centres in the analysis of narratives and body maps to categorise participants within different archetypical representations. Table 27 shows a summary of these possible features, represented through archetypes. It is important to note that designation of archetypes is not supposed to be mutually exclusive, as it is possible for participants to show some traits from two or more archetypes. Additionally,

Figure 24 shows how each archetype is situated according to its proximity with the felt sense. The shorter the distance, the closer to the felt-sense.

Table 27 - Felt-sensing archetypes and characteristics

Archetype	Narrative	Body Map
Writer of the Self [somatic]	Recalling past events through amplified somatic memory.	Representation focused on body part where memory was felt.
Writer of the Self [insight]	Discoveries / insights described.	Representation focused on body part where memory was felt. Some unfamiliar/abstract symbols.
Storyteller	Thorough storytelling of memory recalling.	Social conventions, colourful, artistic
Concealer	Describes structure of experience without much detail.	Varies
Evaluator	Evaluates the effectiveness of technique.	Cloudy, all over the body, diffuse
Dissenter	Doesn't listen to the instructions and relaxes.	Traces of body parts mentioned during body scanning.

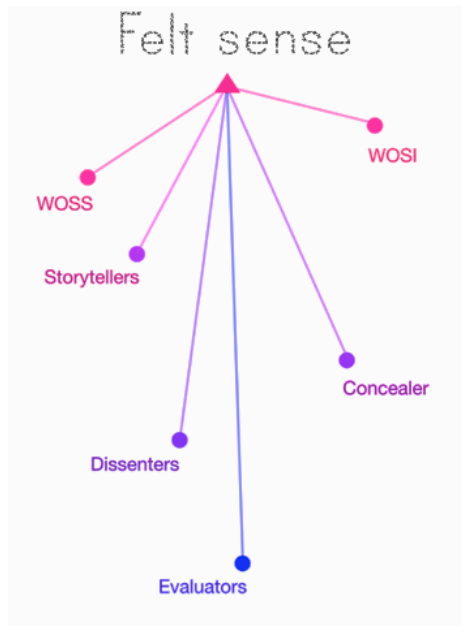


Figure 24 - Proximity of each archetype to the felt-sense

It was found that different archetypes responded in different ways to the idea-generation process.

- Writers of the somatic self (WOS): Coherent with their somatic focus, participants who fell into this category experienced very vivid episodes of somatic memory, particularly related to physical discomfort associated with long sitting periods and badly designed desks. Their focus to problem solving was directly addressing situations of physical discomfort, by focusing on the ideation of better furniture. One participant from this group decided to focus on someone else's situation involving discomfort. Another participant, with self-insight traits, ideated a room full of textures as a metaphor of her realisation, also showing a strong focus on the importance of physical sensing.
- Writers of the self-insight (WOSI): Participants from this category generated ideas inspired by their tacit realisations. For example, a participant realised the psychological pressure he was feeling in the office was related to having to project a specific image to make his family feel that everything was fine. In his design idea, images of beloved ones, along with personal achievements and goals would be displayed each time the user stands up as a motivational tool, and as a reminder that all the effort is worthwhile.

- Storytellers: In this particular study, the participant who fell predominantly into this category, shared some fundamental traits with the WOSI archetype. Her approach to idea generation was influenced by her realisation as in the previous example. Her narrative however, was more centred on describing the situational aspects of her memory rather than her realisation, which was later on revealed to her partner and to the group.
- Concealers: This archetype corresponds to participants who show some felt-sensing traits, however the joint analysis of narratives and body maps are not conclusive to decide whether the participant was engaged with her felt sense or not. Lack of time to assimilate the experience deeply, environmental factors or simply the decision to describe the structure of the experience without alluding to the experience itself are some causes why participants might fall into this category. Some of these participants worked collaboratively, integrating and combining other's felt-senses with their own experiences. The nature of ideas varied, mostly determined by their partner's main archetype. Other participants revealed information about their personal experience through the process of idea-articulation.
- Evaluators: Participants with evaluator traits mostly ignored qualities emerging from their guided experiences and created ideas unrelated to felt sensing. They used their creativity from a more traditional stance.

The following Figure 25 illustrates the analysis of archetypes emerging from the group experience. Although the majority of participants showed felt-sensing traits in their narratives or throughout the process of ideation, some others had difficulties in accessing some of these qualities, which became evident during the generation of ideas. In the following section ideas are categorised according to their response towards the felt-sense.

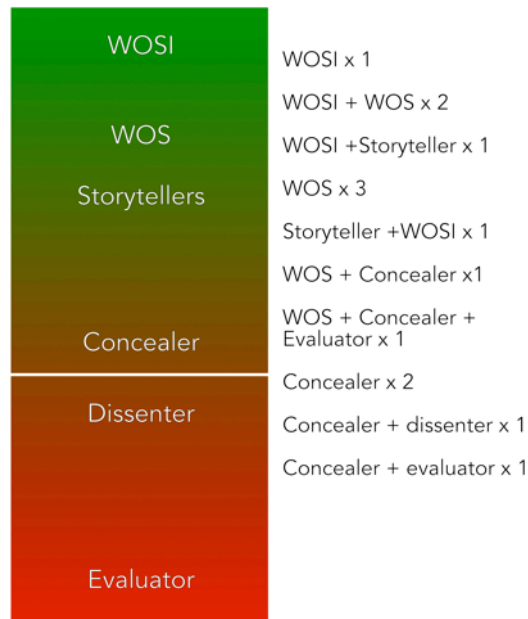


Figure 25 - Mapping of the different archetypes obtained during the ideation exercise

6.6 Main categories of ideas emerging from felt-sensing

Table 28 shows the types of ideas generated during the felt-sensing exercise, which have been divided into three main categories: somatic, insightful and elusive. Each category integrates felt-sensing qualities from different perspectives: somatic as more bodily-oriented, insightful as more realisation-centred and elusive as discarding emergent felt-sensing qualities.

Table 28 - General categories of idea generation

Main categories	Type
Somatic Ideas emphasise the importance of the physical body	Somatic memory amplification Sensorial aspects of experience were noticeably felt during the guided exercise.
	Body scanning as trigger The idea is related with aspects of body scanning, sometimes isolated from felt sense (example: focused on breath, relaxation, or meditation)
Insightful Realisations are translated into ideas in different ways	Transformative Emergent negative aspects were countered, or repelled by ideas that work as a way to establish a balance.
	Metaphorical

	Positive features of personal felt-sense are materialised as metaphors.
Elusive	Ideas are unrelated to felt-sensing, sometimes deliberately pointing towards a different direction

It is important to take into account that, although the *felt-sensing archetypes* and *general categories* contain similar labels, *general categories* were generated from an open-coding approach to analysis, whereas archetypes were generated from theory-driven analysis.

6.6.1 Somatic

One of the noticeable aspects of using a focusing-oriented technique is how the sensory aspects of the memory were noticeably prevalent during the guided exercise. As part of the Focusing guided exercise the facilitator delivers a body scanning session, which aims to get participants in contact with their bodily self-awareness before being instructed to bring to mind and body situations related with the design brief –which in this particular case was centred around the workplace environment. Physical sensations associated with memories appeared, as exemplified in Table 29, which contains some of the participants’ accounts documented immediately after the guided exercise. Some of these narratives already describe some everyday issues related to the work environment with potential for design solutions, an aspect that is particularly evident in the case of *excerpt a*.

Table 29 - Excerpts from participants' narratives, showing physical recalling

<p>a. My body felt stiff. My shoulders were in pain. I remembered I used to do a lot of stretch to relieve the pain. My hands are sweating. I remember the uncomfortable temperature on the [tablet for drawing]. Suddenly my eyes are relaxed. Then I noticed I was pressing my eyes the whole time. Also felt a little bit thirsty when I remembered I usually prepared a large cup of water on my desk, but was too focused on the job to drink.</p> <p>b. When I was asked to feel the temperature in that scenario, it was really interesting as I actually had some really strong memories at that and could recall all the times I felt hot or cold in my previous workplace.</p> <p>c. The session was little performing. I got myself immersed into character, and the character was a past version of myself. I could recall feelings, sensations, and situations in a very immersive way. Even things like smell, temperature, physical discomfort and other very vivid sensations were very tangible in my mind. The exercise goes beyond remembering, it's more like re-living.</p>
--

- d. I can feel the texture of the desk. I can clearly see what's out the window. The blackboard and marble floor.
- e. I can recall my feet and legs are rough and dry as they are exposed to the heater for a long period of time. I remember my fingers touching one part of my legs that felt really, really dry. My seat is softer and more comfortable at work.

In some cases, participants did not specify which kind of discomfort or sensations were felt during the first stage of documentation, however these were either documented later or tackled during the generation of ideas. In this somatic category, ideas were inspired by two sources:

6.6.2 Somatic memory amplified

Sometimes, Focusing opens up the door to the appearance of specific memories, which can have strong physical qualities. In the practice of this somatic technique, it is common that participants have revealed the emergence of emotions as physical sensations, such as cases where happiness is perceived 'in' the chest, or nostalgic feelings are sensed through the limbs, just to name a couple of examples (Núñez-Pacheco & Loke, 2017). Sensations that people might fail to notice in everyday experience become quite obvious during the guided exercise. In those cases, most participants who experienced those insights in the shape of somatic memory amplification addressed their problems by designing comfortable equipment or furniture, keeping in mind the importance of customisation and somatic differences. As in the following example illustrated in Table 30, the participant designed modular furniture inspired by his memories of physical pain.

Table 30 - Idea emerging from somatic memory amplified

Idea presented to the class: Modular and moveable furniture made with several spheres

“Imagining the past experience I remembered that I used to do a lot of stretching on my shoulders, because I had muscle pain. Now that I stopped working [in the office] my body is better. So I forgot [about this], but when I was imagining the past experience, imagining I was doing my work the pain came alive. In our offices right now our desks are the same, but we are all different. We don't need to fit all in the same tables or chairs. We should make these chair for us.”

Felt-sensing qualities inspiring the idea:

Re-living. Personalisation inspired by physical memory.

Describe your idea *We need to see ourselves to care for ourselves.
flexible environment . dynamic .*

Sketch!

Customised everything

plastic balls

movable when discharged

lights

the space moves so we meet new people

Hi

Haha

as chair

chairs move so you move

can be stacked as table

6.6.3 Body scanning as trigger

Although Focusing is intended to enhance the focus on a particular situation as well as on how this influences our body and emotions, in some cases participants interpreted the task as an opportunity for relaxation and meditation. On the other hand, having followed the instructions during the guided exercise, some participants might decide to direct their ideas towards the sensation of physical wellness generated during the body scanning. Those ideas tend to incorporate features from meditation and relaxation into possible design solutions, such as for example, a participant who ideated a meditation cushion with mood detector to aid relaxation. In such cases, it is difficult to tell whether ideas come from the revelatory quality of

the felt sense, or rather from a misinterpretation of the technique, leading to a straightforward association of Focusing with mindfulness meditation.

6.6.4 Insightful

Insightful ideas are directly based on inner-discoveries appearing during the guided exercise. These discoveries are generally very powerful, and examine complex issues involving everyday practices and assumptions, which are sometimes defied by the revelatory quality of the felt sense. In the following Table 31 the structure of an insight is illustrated through the experience of one participant, including the inner conversation occurring before the emergence of the insight.

Table 31 - A personal dialogue leading to an insight (underlined) and the resulting idea

<p>‘The experience was very comfortable as with most exercises that enable us to relax and focus on our breathing. Grounding myself was a way in which I can disconnect myself from this present world and transport myself to the environment in which I was thinking about. It was very quiet though, in the imagined environment since it felt very dreamlike. I then focused on myself working - working hard on a tedious task- designing forms, I started feeling nervous and stressed - perhaps from wondering how I have to keep impressing the boss - my designs been good so far, but I am afraid they might start to get repetitive. But my body is still strained and I was wondering what is causing this pressure? I started considering the eyes of the workplace on me, impressing my colleagues, or pressure from a job that is not too technical (design). <u>But the strongest feeling that I eventually received was from the fact that I was performing a mediocre job in order to prove to family back home that everything is alright over here.</u>’</p>
<p>Idea presented to the class: Family images and encouraging messages are activated when standing up from the desk.</p> <p>[The] idea we had was really based on when we did the felt sensing exercise... we went more into the metaphysical I guess... we started exploring more than just our physical sensations, into our emotional sensations, and a lot of things, at least from my side... was a lot of stress and pressure [...]. I also found I was reflecting on a need to... ‘project’ [...] I need to ‘project’ the feeling that I am okay, to people I left back home, to people that would know me as well... that everything is alright. So what we did was [...] when you are sitting at your desk for so long and it's frustrating and whatever, you just stand up, and when you stand up there will be images that will be projected onto the computer, of you know people that you love, people that mean a lot to you... our maybe even your achievements at work, some good comments. So you get this collection, and they will appear when you stand up. So at least you are... so the motion of standing up will activate a positive sensation</p>
<p>Felt-sensing qualities inspiring the idea:</p> <p>The need to project everything is okay in his work to his family back home emerged as a revelation and a reminder of the people that cares the most about him.</p>



Participants found two ways of dealing with the revelatory quality of insights when translated into ideas. These approaches are a) transformative and b) metaphorical

6.6.4.1 Transformative:

Even though the application of the Focusing technique as a design tool should be used for the reflection of neutral situations (for instance: 'working in the office' in contrast with 'the stress people experience in the office environment'), negative sensations associated to certain memories might appear during the process of noticing. One interesting aspect of dealing with these emotions is the transformative effect generated by the design process itself, including working in a partnership, where negative aspects are shared, discussed and somehow healed through the design idea. This transformative quality became evident in the way participants transmuted the negative, sad or melancholic sensations contained in the felt-sense into positive, humorous or out-of-the-box solutions. Table 32 shows the example of a participant who decided to counter the effect of a negative memory by designing an unrealistic, yet coherent solution. The idea itself might not be applicable (the participant recognised the unfeasibility of it, and yet decided to go down this path anyway), however felt-sensing qualities materialised through the design proposal are clear: The happy pack is the response

towards an authoritarian figure who affected the working environment up to the point of making it unbearable for everyone in that space.

In the example illustrated in Table 33 is shown a lateral solution to a common problem. The participant remembered how very long meetings were common in his work environment, and how these were considered a waste of time for everyone. A solution was unconventional, yet practical: An empty meeting room to keep meetings concise and efficient.

Table 32 - Transforming negative emotions by countering them through ideation

Idea presented to the class: The happy pack

'So, the idea behind this entire concept is more the fact that we view on happiness; and people, no matter how happy you are and don't matter how many sources of happiness you have, if you are working on a situation that you are constantly bombarded by negative feedback, [...] to tend to start becoming very negative and gloomy as well.

So, I came up with "The happy package". It starts with "the happy glasses". So, what happens is when you put on these glasses, no matter how negative and how gloomy people around you look, they all are now smiling. And here we have "the happy ears", which is just a wearable device on your ears... it can be earphones. So, no matter what your boss says to you, how he scolds you in, no matter how negative is the stuff he says, it comes out as positive feedback. Constructive feedback. So, if he says, "you suck", it'd come up as "I think you are great, however..."

Felt-sensing qualities inspiring the idea:


Transitioning between positive and negative sentiments during the guided exercise. Bad memories about his workplace were transformed into an idea symbolising the need for constructive feedback and a stress-free environment

Describe your idea

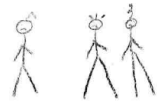
- ① Basically a visual device (like a pair of glasses) that visually connects everyone's gloomy moods in happy expressions.
- ② This one, a ear device that connects all negative scolding into positive & constructive feedback for work.

Sketch!

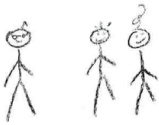
① Introducing...
THE HAPPY GLASSES!



Side of seeing gloomy people in the workplace?



Put on the Happy Glasses & everyone will be smiling & doing again!




②

THE HAPPY EARS!


"Hear ONLY the good things!!"

You!!! Unhappy because your boss always scolds you?




Put on Happy Ears & you will hear only constructive feedback!!

You are great! I just need you to change



=

Wah!



A very, very, very happy person at his workplace!




Table 33 - A lateral solution to a common problem

Idea presented to the class: An empty room

'So, basically it was a long, boring meeting with people unwilling to listen, just waiting their time [to present their reports]. So my concept is basically having a meeting room in the company with no furniture. So, it's an empty room and you don't get any other alternative. So whatever you need to have a meeting, just go to that room, talk to the people do you want to talk to, just walking around, and what actually this is like, since there is no furniture, no chairs, so you probably won't want to stand up that much, so you probably will get tired after 15 minutes. So you have to keep the meetings short and concise to the point as well.'

Felt-sensing qualities inspiring the idea:

A memory accompanied the realisation that meetings take too much time, including sitting time that could have been used for something else.



6.6.4.2 Metaphorical

Everyday experiences contain plenty of moments to cherish. Although the office space is often associated with stress, it is also linked to values such as friendship, collaboration, sense of achievement and other positive aspects. Consequently, these sentiments are commonly brought to attention through the Focusing guided exercises. This positive quality takes the shape of memories, sensations or insights. These revelations become values that are potentially transferred to design ideas. A metaphorical approach to idea-generation materialises positive features into a proposal, embodying some of those characteristics, such as in the example in Table 34. In her manuscript describing the impressions generated through the focusing guided exercise, she described how the calming presence of others was also tied to her sense of belonging.

Table 34 - Example of a metaphorical process

Narrative after Focusing

'I saw an abstract version of my last workplace, I felt that by focusing my attention on my body first I was going in somehow... into my mind and then saw my office and faces of people I worked with and listened to the office sounds around me. I mostly focused on co-workers, on our shared time, talking, having lunch, getting together to take a short break. The word I would use is "belonging", more than a set of memories I ended up recalling emotions I felt at that work, the "aura" or sensation each person gave me and how having them around made me feel.

I think that "to belong" is important for me right now, and that showed in this session. It's as if I had used the workplace theme as a stage for the feelings I've been having lately'

Idea presented to the class: A room full of textures

'Our concept was textural... it's a place where people can lay down, or roll around, walk or rest, whatever they want. We thought the entrance could be a tunnel, so you would be crawling. That gives you a different experience from just going through a door and working. And there are textures hanging from the roof of the tunnel, and these hit them on your face [...] So, you get inside, and there are textures around... long ones, fluffy ones, you might want to lay around or bury yourself in there... there are short ones to scratch... there are squeeze ones to grab, made with sponge. Pillows with different textures, so you can accommodate yourself, and if you want you can work there and play around.

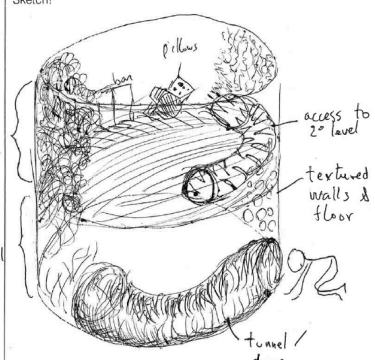
Well, the theme that inspired this was, we were talking about think that made feel good at our workplaces. And for me, what was important was how people can calm other people... relax people, so other people can make me feel more at ease. We tried to emulate that with a place... not with a person, that would have been hard. So, this is a calming place inside the office.'

Felt-sensing qualities inspiring the idea:





Sense of belonging. The calming sensation some people generate amongst their peers.

Describe your idea
 the texture room! A room to lie down, get submerged in texture, scratch the walls, take a nap or even work if you feel like doing it there.

Sketch!



types of textures

-  long ones to bury yourself in
-  short wavy ones to scratch
-  squeeze ones to grab
-  textured pillows

user experience

- 1° users crawl inside
- 2° they do whatever they want
- 3° scratch, lie down, roll around.
- 4° might even work/side

→ calming environment to emulate nice people !! and work in more position than sitting

6.6.4.3 Elusive

In a few cases, participants did not establish a connection with their felt senses, which ended up being discarded as a possible material for idea-generation. The main reason for this disconnection was the appearance of judgmental thoughts, which impeded participants to engage with the exercise. In one case in particular (Table 35), although the participant connected with the felt sense during the guided exercise, she decided to actively discard her sensations as a possibility for the articulation of design problems. As some of the personal memories were not positive, she interpreted this attempt to look inwards as unsuccessful.

Table 35 - Example of an idea that eludes the felt-sense

<p>Idea presented to the class: Four different ways to solve practical issues</p> <p>The first one is more plants in the working area, so people can breathe fresh air, and keep their minds clear.</p> <p>The second one is offering some food. So they can feel more relaxed and have enough energy</p> <p>And the third one... actually came up with it with [my partner]. This is [a flexible] timetable, so people can select the period of time to work, but it should be at least 8 hours a day. But they have to be in the office from 2 pm to [certain time], so they can talk about working together.</p> <p>The last one is... because the office feels cold, even with the same temperature the guys feel "oh, I am so hot", but I feel cold.... so it would be better if the office has two temperature areas, one colder and one warmer, so you can choose when you want to stay....</p>
<p>Felt-sensing qualities inspiring the ideas:</p> <p>Examining her documents, it is difficult to connect her personal experience with the felt-sense with these ideas. The third idea was inspired by her partner's accounts.</p>
<p>Sketch:</p> <p>① More plants. (Sketch of a branch and a potted plant)</p> <p>② Food. (Sketch of an orange slice)</p> <p>③ Time table. (Sketch of a calendar with checkboxes for 9am-6pm, 2pm-9pm, and 11am-8pm, each with a 'Name:' label)</p> <p>④ I like cool place. (Sketch of a person with a speech bubble pointing to a cooling unit)</p> <p>I like warm place. (Sketch of a person with a speech bubble pointing to a heating unit)</p> <p>Everyone should be work from 2-6pm.</p>

In sum, two main categories of ideas representing different felt-sensing qualities have been found: somatic and insightful. The insightful category is also divided into two possible qualities: transformative and metaphorical. Ideas inspired by the felt-sense have demonstrated that it is possible to make evident deep experiential problems emerging from the notion of purposely paying attention to the self. A third category (elusive) makes also evident how in some cases, the felt-sense can be actively discarded as a design material. In the following section, we will discuss the results in the light of some theoretical aspects, including an analysis on the effectiveness of the technique.

6.7 Features of FOI

The following are some features of FOI that make the method distinct.

6.7.1 Design practice as an opportunity for critical discussion

Being grounded in everyday and personal experiencing, some of the ideas generated through FOI challenge familiar ways of doing design. This phenomenon might find an explanation in the incompatibility of traditional human-computer interaction design goals such as efficiency, effectiveness, and satisfaction (Bevan, 2001), with subjective values elicited through somatic approaches, which put people in contact with their deepest motivations beyond societal expectations. Considering that product design generally reinforces capitalist values and critical design appears as an approach to defy the status quo (Dunne & Raby, 2001, 2013), somatic-oriented design practices appear as a critical possibility, as these might naturally contradict traditional design goals previously mentioned. The inwards examination of attitudes and aspirations, as well as removing the urgency to ideate feasible solutions, has been shown to elicit proposals that could be labelled as lateral and critical. The articulation of critical issues opens up the discussion as to whether design would have enough influence—or willingness—to address these and other societal problems. For instance, some critical commentaries of participants related to the way people have to deal with aspects such as rituals and hierarchies within the workspace, such as in the examples described in table 8 and 9. As a result, ideas are sometimes materialisations of unspoken desires which never see light unless behind the safety of a creative and intimate space. The non-judgmental attitude embodied by somatic practices might have had some influence in this regard. Ideation techniques such as brainstorming also

invite participants to actively suspend judgment (van Boeijen et al., 2014), recognising the importance of a safe space to generating as many ideas as possible.

6.7.2 FOI as a technique for problem articulation of somatic qualities

The FOI protocol was conceived as a generative ideation technique able to take into account the tacit dimension of experience, particularly by articulating the aesthetic dimension of everyday occurrences. By aesthetic qualities, we refer to the Deweyan definition concerning a sense of unity, flow and meaningfulness (Dewey, 1934), p.38). In terms of the unity or prevailing quality of the experience, FOI elicits the description of qualities that make the experience relevant, granting a sense of unity through the generation of meaning. In previous examples of narrative descriptions, such as in the case illustrated in Table 34, the emergence of a 'sense of belonging' appears as the unifying principle to inspire the generation of the design idea. Most participants accessed felt-sensing qualities and self-discoveries, as shown through the presence of a majority of felt-sensing archetypes within the group, namely writers of the somatic-self (WOS) and writers of the self-insight (WOSI), also combined with other traits. From a total of 14 participants, ten fell into the aforementioned categories, while two participants were categorised as concealers (meaning it is not clear whether they accessed the felt sense or not), whereas two were clearly not connected with their felt-senses.

This technique has also shown use as a way to articulate design problems concerning the body and emotions. FOI can be used during the discovery phase, as it reveals underlying issues regarding everyday acts. In this regard, its application also surfaces issues apparently outside the influence of potential design solutions. For instance, Table 32 reflects how the general wellness of a particular office environment was seriously affected by the presence of a mean boss. This and other everyday issues generally emerging from Focusing-oriented workshops raise questions regarding the nature and role of design as a human-centred activity. The discipline of design is generally associated with the execution of a series of techniques dealing with concrete problem solving. Focused on those issues, ethical questions concerning human dignity are frequently disregarded, although design as a discipline is meant to be grounded in those principles (Buchanan, 2001). Possible solutions to ethical problems are complex, but also design problems are naturally ill-defined (Cross, 2004).

6.8 Refining the process

6.8.1 From discovery to idea

It was observed that one of the most challenging aspects of this technique is in the transfer of self-discoveries into design ideas. There are two possible explanations for this: a) the importance of inner revelations does not match well with having to describe contextual information documented on yellow notes, or b) designers might not be used to generating ideas grounded in personal insights. A possible way to facilitate the idea-generation process is by introducing the metaphorical, somatic and transformative paths as possible reference points from which to channel new ideas. As already discussed, these dimensions are expressed as follows: a) positive sensations can be materialised metaphorically, b) physical memory can inspire ideas dealing with bodily aspects of the interaction, or c) negative issues emerging from reflection can be countered, transformed and therefore potentially solved. It is also suggested to use flashcards describing contextual information, as an alternative to participants trying to elaborate yellow notes themselves. As documented in the results section, resulting ideas have the merit to contain lateral and critical traits, as well as a clear integration of inner revelations into the results. Even though these ideas might appear as unrealistic, they can be if feasibility is actively indicated as a possible constraint.

Another suggestion to make the connection between design ideas and somatic qualities more evident is by instructing participants to translate their personal insights and resulting ideas as addressing a particular emergent quality of the experience. To do so, they have to identify what makes their experience particularly remarkable. For instance, a ‘sense of belonging’, or ‘time is valuable’ or ‘constructive criticism makes a big difference’ are possible insights potentially stimulating useful ideas. Having identified those values, the framing process should be translated as follows:

[Remarkable aesthetic quality] + [transform / materialise or transfer] + into [a general possibility]

‘I want to transfer my sense of belonging into a place for sharing with others’

‘Time is a valuable resource, and I want to transform the attitudes towards wasting it through a system, method or product’

‘I want to create something to transform destructive comments into constructive criticism to improve the general wellness in my workplace’

6.8.2 Documenting experiences instead of evaluating them

One of the issues noted during the documentation of reflective listening notes is the tendency of some participants to describe the structure of the exercise instead of the experience itself. Other participants assessed the effectiveness of the session without offering much inspiration for ideas. In this regard, the same rule applies to all the documents generated in the FOB protocol: Sticky notes, manuscripts, reflective listening notes and discoveries should refer to the lived experience of the participant in descriptive and reflective ways.

6.8.3 Incorporating additional framing techniques

The transference of aesthetic and somatic values into design ideas is complex. It requires the development of heightened somatic sensibility, which contradicts the general tendency to split mind and body, situating rational thinking over other life aspects, such as affect and intuition. Focusing-oriented techniques and other somatic approaches can function not only as strategies to extract unearthed personal insights and access creativity through a wholistic path, but also as a possibility to further develop empathy within the design team.

Although reflection might be the main precondition to access aesthetic and somatic qualities of experiencing, part of this research's future work contemplates the inclusion of some enactive elements before guided experiences, in order to naturally integrate affordances and constraints into potential ideas. Additionally, more sophisticated framing techniques are to be explored, including strategies from techniques such as the *frame creation model* (Dorst, 2015). Particularly compatible with the FOI method is the frame creation model approach to theme analysis, where designers try to understand and filter out the universal aspects of the problem situation by systematically refining and documenting texts, until finding the core insight. Although participants experience insights during the sessions, some extra tools for framing documentation can refine the presentation of subjective ideas into universal design problems.

6.9 Summary of outcomes

Three main categories of ideas grounded in felt-sensing qualities were generated through the application of FOI:

- Transformative: Negative aspects emerging from the guided exercise are reframed as a projective solution

- Metaphorical: Positive aspects emerging from the guided exercise are framed as a metaphor representing these values.
- Somatic: Ideas were projective responses grounded in heightened awareness of the lived body.

FOI has proven useful to articulate design ideas by highlighting the role of body and emotions in everyday experience. Additionally, as the somatic practice is grounded in subjective appreciation of the inner dimension, emerging ideas tend to bypass social conventions and expectations, towards a more authentic identification with the self.

Chapter 7

STUDY THREE: WEARABLE PROPS AND FOCUSING

How is experience shaped by external stimuli?

This chapter introduces a more evaluative dimension of Focusing-oriented bodystorming (FOB), by integrating Focusing reflection with the use of artefacts. As with FOB, *Wearable props and Focusing* (W&F) comprises two different formats of user studies initially motivated to envision the opportunities of interactive technologies in the practice of Focusing. Particularly, I wanted to find out if wearable stimuli, in this case gentle heat and vibration could amplify or jeopardise the access to the felt-sense. Beyond these polar possibilities, it was discovered that the use of stimuli on the body can shape the way personal stories are articulated, including the qualities of their aesthetic experiences.

This chapter was crafted by combining a set of unpublished material, plus content from the following papers:

Núñez-Pacheco, C., & Loke, L. (2017). *Tacit Narratives: Surfacing Aesthetic Meaning by Using Wearable Props and Focusing*. Paper presented at the Proceedings of the Eleventh Tangible, Embedded and Embodied Interaction Conference (TEI), Yokohama, Japan.

Núñez-Pacheco, C., & Loke, L. (Conditionally accepted). *Designing to support somatic contemplation: Aesthetic qualities of thermal and vibrotactile interactions as sensory materials for inner focus*. *International Journal of Design*

7.1 Introduction

This chapter describes various explorations with the use of wearable props and Focusing. As physical representations of open-ended questions, the props used in this study contain basic technology such as vibration motors attached to microcontrollers, as well as non-technological means and materials. The way props are used share a few similarities with technology probes (Hutchinson et al., 2003), specifically in regard to 1) their exploratory quality, and 2) the deliberate use of limited functionality, allowing the user to interact with open-ended artefacts and complete their own meaning. Their simplicity is intended to stimulate primary sensations and also support a broad provision of responses. The cyclical nature of the Focusing process reinforces and brings aesthetic qualities from the tacit dimension to the surface of people's consciousness, while wearable devices act as physical handles to reveal unexpected aspects from personal stories.

There are some motivations behind using vibration and heat. As described in my methodology chapter 4, initially I was interested in using tactile stimulation for Focusing therapy, inspired by some studies linking interpersonal touch with affect (Gallace & Spence, 2010), the calming effect of touch (Grandin, 1992) and also some experiences of tactile stimulation in the context of therapy (Westland, 2011). After my failed attempts to work with part of the Focusing community, I still considered it important to explore the potential impact of direct stimuli on our felt-senses. Then, the objective was to elucidate whether the use of heat and vibration was useful to acknowledge, anchor and amplify the presence of the felt sense, or, on the contrary, if the stimuli would remove people from their inner focus.

The skin is our largest organ, delimiting our presence in the world. The perception of gentle heat and vibration on the skin can function as doors to access affective memories and pleasure. According to the Oxford dictionary (2015), *warmth* is associated with kindness, enthusiasm and affection, as well as representing the intensity of our emotions. On the other hand, the act of *vibrating* is also associated with the person's emotional state, as well as with the general atmosphere of a place, as perceived and communicated intersubjectively. Additionally, to *vibrate with something* can also be interpreted as quivering with an emotion towards a situation in particular. Corporeality is strongly incarnated in the meaning of these terms, so the interest to support and distribute affective processes through the described means is not rare. Investigating the role of haptic stimulation in meditation tools using mobile phones, Bumatay

and Seo (2015) point out that vibratory output of respiratory patterns allows ease of use when following the meditation guide. Inspired by somaesthetical principles, Jonsson et al. (2016) describe their explorations on the use of thermal stimulation and its aesthetic properties in the context of the practice of the somatic technique Feldenkrais. As one of the findings, heat appears helpful to gently direct attention towards different body parts, therefore making the process of self-reflection easier. In a similar vein, Höök et al. (2016) describe the soma carpet, which assists in the task of directing awareness inwards during somatic exercises. Additionally, Rajko, Krzyzaniak, Wernimont, Standley, and Rajko (2016) discuss how haptic feedback can be used to create experiences which make users more conscious about their feelings.

In the context of how wearable technology has incorporated the affective dimension of perceptual stimuli to augment intimacy, the metaphor of warmth as being strongly affective has been explored by Lee and Schiphorst (2016), who describe their study on the use of wearable prototypes for interpersonal communication between parents and their children. The system was composed of an input device placed on the lower arm, and an output device receiving thermal information. Thermal messages were delivered as ways to convey affection and to notify children about everyday tasks. Children perceived those messages as loving attention, reminding them of real, physical connection with their parents. It was also perceived by the participants as an opportunity to discover and play, as thermal messages cannot be interpreted as easy as text messages. Finally, the researchers discuss how beyond the designer's expectations on how the system should work, human beings tend to naturally generate meaning independently (Sengers & Gaver, 2006).

Haptic interfaces can be useful to ground overwhelming sensations, as described by Vaucelle, Bonanni and Ishii (2009) in the design of a vest called *Squeeze me*, which was intended to lessen panic attacks in autistic children by simulating a hug. The vest also contains a safety system to prevent over-compression, therefore avoiding potentially harmful consequences with the wearable. In a similar direction, Duvall, Dunne, Schleif, and Holschuh (2016) have designed a wirelessly-controlled vest using shape memory alloy (SMA), potentially operated from anywhere in the world. However, beyond the strict functionality of therapy, sensory stimuli can be used as a material to convey storytelling through the body, therefore as a way to understand our humanness from a different perspective.

In the field of electronic arts, Stenslie (2010) has developed a body of work around the exploration of aesthetic qualities through the use of haptic stimulation on the body. For instance, his work *Erotogod* (Stenslie, 2010) explores the sensual dimension of haptic narratives by creating an immersive experience including visuals and an auto-erotic suit, which reacted to the wearer's unique patterns of touch. Understanding the potential of perceptible feedback to unearth more experiential qualities of interaction beyond data labelling, the following section describes the approach to prototyping, and how wearable devices were worn and used.

7.2 The study: Two modalities

The studies were conducted in two main formats: one-to-one interactions and a group workshop. Twenty-three participants have produced a total number of 33 narratives. In simple terms, the interaction consisted of following a Focusing guided exercise with the assistance of props. During the body scanning, the use of props was intended to be prescriptive as a sensitisation strategy. For instance, instructions were delivered as follows: *"Please use the wearable prop as I am mentioning each body area. Let's start with the throat and neck (pause). Then, move down to your chest and stay there"*. During the Focusing part of the guided exercise, participants were invited to use the prop in those areas where the felt-sense became more predominant.

7.2.1 One-to-one interactions

This modality of participation involves a Focusing dialogue between the participant and the facilitator. As the sessions need to be intimate and private, it is important to make sure the space is comfortable and quiet. The attitude of the facilitator should be relaxed and gentle without being patronising (as already discussed in chapter 4), to inspire trust in the participant, who is opening the door to his or her private world.

In the first iterations of this study, two devices were used attached to a glove-like portable pouch, called the *felt-sense pouch*: 1) a small microcontroller (Arduino Mini Pro) with a vibration motor activated by a soft push button (Figure 26). Participants were asked to select their preferred intensity of vibration before commencing with the exercises. Additionally, 2) a small hot water bag emitting a perceived heat of around 50C was also used. Considering the bodily quality of the felt-sense is generally sensed in the upper torso, the handcrafted props were designed to fit on the hand, and to be placed on the area where sensations were more distinct.

To avoid potentially distracting stimuli, pouches were crafted with insulating materials facing the palm of the hand.

A total of five participants were recruited for this first iteration, involving participation in two sessions each. Only one participant—a scholar visiting from abroad—was unable to attend the two sessions due to time limitations. As a result, nine narratives were collected. For a second iteration intended to collect additional data, six more participants were recruited.



Figure 26 – The felt-sense pouch containing a vibratory device or water bag

As explained in the methodology chapter 4, the Focusing process can be understood as filtering out ideas through the body, which means paying attention to the senses before commencing the intellectual dialogue. After a brief introduction to Focusing concepts, participants were asked to think of an object, memory, situation or activity they loved, which is inspired by Simon’s love exercise (Simon, 2015). This blissful memory becomes the main material to be explored through Focusing listening. One of the questions facilitated in the dialogue is “Ask yourself: what about this thing or situation is so important for me?”, which is key to prompt participants to explore within themselves. During this part of the process, they are instructed to pay attention to their bodily responses, and to place the prop or felt-sense pouch on those areas where the sensations are perceived. After allowing the sensations to set for a moment, they are suggested to define such experiences, by inviting them to find a word, phrase or metaphor representing the tacit dimension of their sensing process. Such a representation or *handle* has to be internally sensed back, in order to perceive whether it makes sense or not. This inner dialogue works in a similar way to the example of the writer described in chapter 2, yet with the assistance of the facilitator. The wearable output is also used as a handle to highlight or anchor where the felt sense is perceived. After some minutes of inner dialogue and open interaction with the device, participants are informed that the exercise will come to its end in a couple of minutes, before guiding them through a brief body scanning, to close the cycle by gently opening their eyes in

their own time. After the facilitation finishes, participants were asked to articulate their experiences through the felt-sensing answer kit instrument, as described in chapter 4.

7.2.2 Group Workshop of Somatic Evaluation

As part of the contents taught in the studio component of our Master of Interaction Design program coordinated by Dr. Lian Loke, we run a workshop on *somatic evaluation methods*, involving the use of Focusing integrated with other more traditional evaluation tools. A total of twelve students participated in this activity. Since Focusing applied as an ideation method had been introduced in lectures and experienced in some of our tutorials, students were already familiar with the structure of the somatic guided exercises.

Students were instructed to wear two types of devices (see Figure 27), one producing gentle vibration (a glove containing a small button and a vibration motor operated at 3v), and a second non-digital prototype generating a moderate amount of heat (a scarf-like pouch with a small hot water bag inside, emitting a temperature of around 50C). After some issues regarding wearability, the original *felt-sensing pouch* was changed for a scarf-like artefact, allowing a more active engagement of the hands during the process.

From a group of twelve students five wore vibration gloves and seven wore scarfs with water bags. In the first part of the exercise, they were asked to assess the stimulus generated by the device by applying it on different body parts located at the upper torso, which is the area where the felt sense is generally perceived (Gendlin, 1978). Aspects such as comfort and wearability were assessed, by completing Likert scales numbered from 1 to 9, where the higher the number the subtler and more positive the assessed feature. After this initial assessment the *love exercise* was conducted with the class. Different than in the one-to-one protocol where reflective listening was performed, students were instructed to keep emerging sensations to themselves, and document their ideas, sensations and felt-senses in their answer sheets. The rules for documentation and use of language were the same as in the one-to-one sessions.



Figure 27 - Wearable props used in the workshop: Vibration glove and scarf with water bag

7.3 Results

7.3.1 One-to-one sessions versus group Focusing

In both Focusing modalities, participants connected with their inner dimension in different ways, similar to what Ihde (2002) describes in terms of embodiment as *body one* and *body two*. While experiences described as being immersed in the situation are recognised as experienced by the *body one* or the sensorial body, a third person description of phenomenological experiencing is part of the construction of the *body two*, which can be understood as a conceptually constructed body. In the same vein, two predominant ways of describing embodied experience were found:

7.3.1.1 Documenting different experiential qualities of the experience as being there

One-to-one sessions demonstrated more intimacy, reflected in the experiential quality of participant's documentation. The quality of describing the experience as "being there" can be explained by the intimate effect of personalised reflective listening, as well as the inclusion criteria to recruit participants, which in the case of the workshop was not applied. As an example of this (Table 36), one of the participants reflected on a happy memory where she and her boyfriend went hiking on a rainy weekend, and described her sensations as she was immersed in the experience. During the session, she wore the vibratory prototype, which in her opinion helped to pinpoint the area where different sensations were emerging.

Table 36 - Participant description as being there

Dream state
A sense of nostalgia
Memory bubble
Peaceful, calm, carefree, content
Floating sensation
Warm, radiating.
Loving and feeling loved, secure.
Taking myself to a familiar place
A simple time... perfection, complete.

7.3.1.2 Documenting the structural elements of the experience through evaluative language

Even though half of the participants from the workshops also described their stories from the previously described experiential perspective, the other half “evaluated” the session without going into much detail about the source of happiness, despite the fact anonymity of responses was ensured. In the example in Table 37, the participant describes the structure of his felt-sensing experience, comparing his session with a Focusing exercise conducted in a previous tutorial activity.

Table 37 - Participant description of the structure of felt-sensing in evaluative language (excerpt)

The experience was different from the last one in terms of the effect at the bodily experience, which in this case lasted longer even when the exercise almost ended. The vibration I felt on my chest was normal in the start, but when I started visualising the scenario, which makes me happy, the vibration felt like spreading to a larger surface area than before. Also it started feel as if my body had become more sensitive to vibration (...)
--

Despite the differences, the collected narratives from our workshop explicitly articulated an enhanced connection with body and emotions, as shown in Figure 28 and Figure 29.

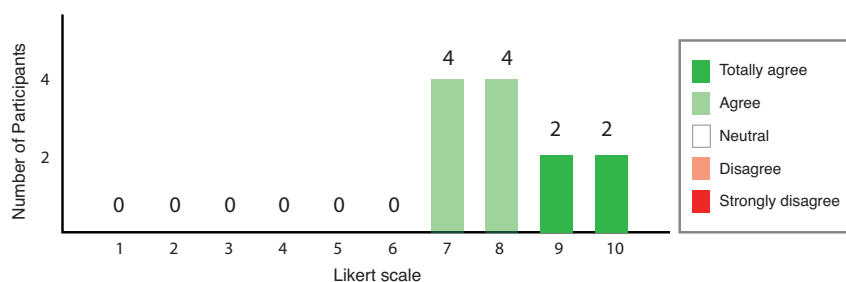


Figure 28 - Question 1 (Q1) 'The guided experience felt more intense than solely thinking about the situation'

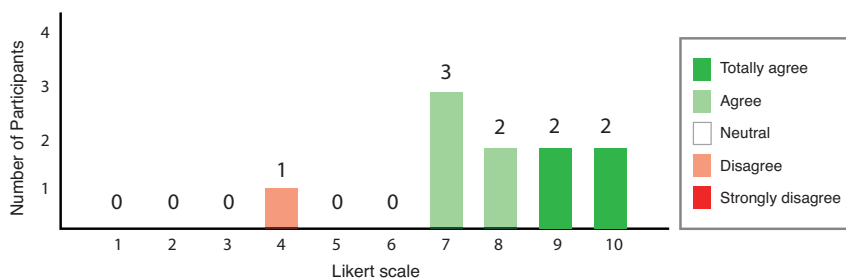


Figure 29 – Question 2 (Q2) ‘The guided exercise was useful to discover a new dimension of my experience’

7.3.2 Influence of perceived pleasure and comfort in the felt-sense

Participants from the second one-to-one iteration and the workshop were asked to complete two questionnaires consisting of Likert scales, assessing pleasure and comfort of stimuli applied to different body areas where the felt-sense generally emerges, which is around the torso (Gendlin, 1978) (throat, neck, chest, abdomen and lower abdomen). From a total of 24 samples, 13 participants interacted with heat and 11 with vibratory props. Scales were rated from 1 to 9, where 1 means very uncomfortable/unpleasant, and 9 means very comfortable/very pleasant. The first questionnaire was handed before the guided exercise, when participants were instructed to place the wearable prop on the different areas and evaluate. The second questionnaire was given after the guided exercise, to assess the quality of stimuli perceived during the guided exercise.

At an individual level, self-perception of comfort and pleasure showed small variations before and during the guided exercise. In most cases, the perception between pleasure and comfort overlapped. Although small, when analysed as a whole, those differences reveal a few recognisable patterns. Below, I will describe the most salient aspects apparent from the analysis.

Increased discomfort in the throat area: In general terms, this is a delicate area where people do not feel comfortable applying temperature or vibration. The use of props during the guided exercises made the discomfort more evident, as illustrated in Table 38, showing the scoring differences between before and during, both for heat and vibration. Different is the case of participants from the one-to-one sessions assessing heat (right below on the table), showing in most cases no changes or a slightly more positive assessment of stimulus. From the analysis of the narratives and data concerning placement of device in general participants did not mention the throat as a relevant area for their reflection.

Table 38 - Heat and vibration on throat: differences in score compared before and during felt sensing

Section	Participant	Stimuli	Pleasure	Comfort	Participant	Stimuli	Pleasure	Comfort
Workshop					W3	Heat	[-2]	[-2]
					W5	Heat	[-2]	[-2]
	W1	Vibration	[-4]	[+1]	W6	Heat	Same	[+1]
	W2	Vibration	[-6]	[+1]	W9	Heat	Same	Same
	W4	Vibration	[-1]	Same	W10	Heat	[-2]	[-2]
	W7	Vibration	[+4]	[-2]	W11	Heat	[-2]	[-2]
	W8	Vibration	Same	Same	W14	Heat	[-2]	[+1]
	One to one	Osh	Vibration	[-2]	[-4]	Osh	Heat	Same
Ohi		Vibration	[-2]	[-2]	Ohi	Heat	Same	[+1]
Omi		Vibration	Same	Same	Omi	Heat	[+2]	Same
Olo		Vibration	Same	Same	Olo	Heat	[+2]	[2+]
Oga		Vibration	[-2]	[-3]	Oga	Heat	[-2]	[-2]
Olu		Vibration	Same	Same	Olu	Heat	Same	Same

Chest as a felt-sensing core: This is one of the core felt-sensing areas next to the abdomen. When Focusers are reflecting on their feelings, they generally place their props close to the heart and stay there before exploring further. In most cases, stimuli applied during the guided exercise varied between unchanged to a slight increase in pleasure and comfort, except by the group of workshop participants interacting with heat, as illustrated below in Table 39. Looking at the narratives from this group of seven participants, five showed some felt-sensing traits, whereas two can be categorised as ambiguous, as they focused on describing their bodily sensations without offering much context related with their blissful situation. At this point, a slightly more uncomfortable and unpleasant interaction does not seem to prevent generation of meaning.

From a more general view, Table 39 illustrates the workshop participants' perception of pleasure and comfort of heat on the chest during felt-sensing. It is important to note that comfort and pleasure tended to overlap. Figure 30 shows that eight participants assessed the interaction as comfortable/pleasurable, three scored it as neutral and two as uncomfortable/unpleasant. From the two participants who perceived heat on the chest as a

negative feature, one described a quite meaningful revelation in his memento, which will be later analysed from the perspective of emerging themes (illustrated in Figure 32).

Table 39 - Heat and vibration on chest: differences in score compared before and during felt sensing

Section	Participant	Stimuli	Pleasure	Comfort	Participant	Stimuli	Pleasure	Comfort
Workshop					W3	Heat	[-1]	[-1]
Chest					W5	Heat	[-2]	[-2]
	W1	Vibration	[+3]	[+3]	W6	Heat	[-2]	[-2]
	W2	Vibration	[+2]	[+1]	W9	Heat	[-1]	[-1]
	W4	Vibration	[+2]	[+2]	W10	Heat	Same	Same
	W7	Vibration	[+2]	[+2]	W11	Heat	[-2]	[-2]
	W8	Vibration	[+1]	[-1]	W14	Heat	[-2]	[-4]
	One to one	Osh	Vibration	Same	Same	Osh	Heat	[-1]
	Ohi	Vibration	[2+]	Same	Ohi	Heat	Same	[+1]
	Omi	Vibration	[2+]	[2+]	Omi	Heat	Same	Same
	Olo	Vibration	Same	Same	Olo	Heat	[+1]	[2+]
	Oga	Vibration	Same	Same	Oga	Heat	[2+]	[+1]
	Olu	Vibration	[+1]	[+1]	Olu	Heat	Same	Same

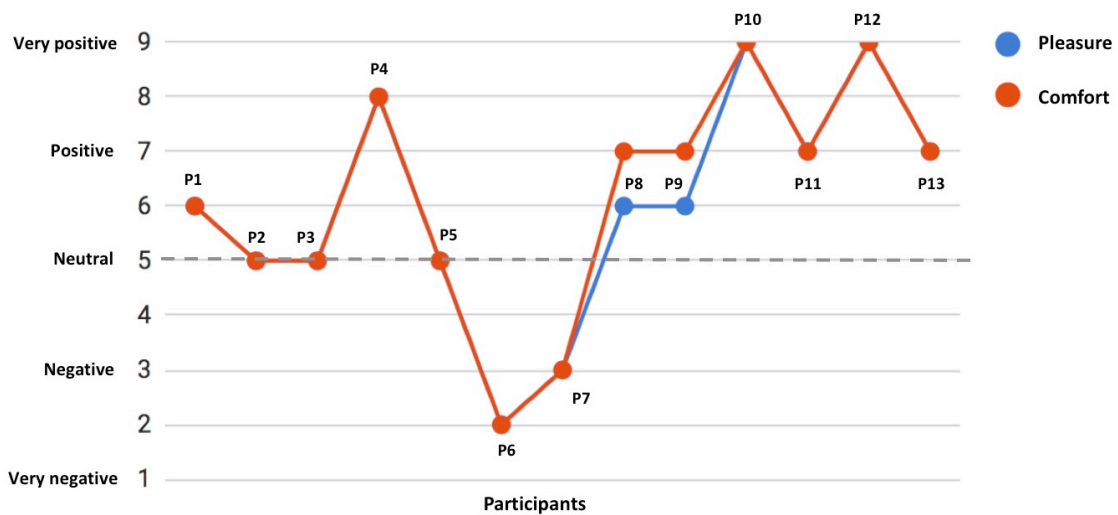


Figure 30 - Scoring representing pleasure and comfort perceived by participants during the guided exercise - Heat applied to chest

Abdomen: The perception of vibratory and thermic stimuli on the abdomen demonstrated to be pretty much stable as illustrated in

Table 40. It also shows that both stimuli were perceived as slightly more comfortable and pleasurable during the guided exercise. Looking at the narrative of the participant perceiving heat as slightly more negative (later described in Table 41), he still described noticeable felt-sensing traits and associated self-discoveries in his memento. As this participant felt that the

feeling on the abdomen was not making sense with his inner process, he stayed on the chest, from which his personal narrative started unfolding.

Table 40 - Heat and vibration on abdomen: differences in score compared before and during felt sensing

Section	Participant	Stimuli	Pleasure	Comfort	Participant	Stimuli		
Workshop					W3	Heat	[+1]	[-1]
Abdomen					W5	Heat	Same	Same
	W1	Vibration	Same	[+1]	W6	Heat	Same	Same
	W2	Vibration	[-1]	Same	W9	Heat	Same	Same
	W4	Vibration	[+1]	[+1]	W10	Heat	Same	Same
	W7	Vibration	Same	Same	W11	Heat	[+2]	[+2]
	W8	Vibration	[+1]	[+1]	W14	Heat	Same	Same
	One to one	Osh	Vibration	Same	[2+]	Osh	Heat	Same
	Ohi	Vibration	[+1]	Same	Ohi	Heat	[2+]	[+1]
	Omi	Vibration	[2+]	[+1]	Omi	Heat	[+1]	[+1]
	Olo	Vibration	Same	[+1]	Olo	Heat	[-2]	[-2]
	Oga	Vibration	[2+]	[2+]	Oga	Heat	Same	Same
	Olu	Vibration	[+1]	Same	Olu	Heat	Same	Same

When engaging in inner dialoguing, a slight discomfort does not seem to distract participants from their exploration. In most cases it did not prevent participants to access the felt-sense, whilst in other cases discomfort shaped the qualities of aesthetic experiences, as will be discussed later in the chapter. As participants had the option to explore with different placement on the body, discomfort on one area scaffolded exploration somewhere else. When the body is given spaces to be aware of itself, discomfort emerging from outside sources might be surpassed by curiosity, or personal motivation to stay in the inner world. This resilient capacity of the body to carry forward in spite of discomfort is something I have already suggested in one of my early research projects (Núñez-Pacheco & Loke, 2014b). Possibly, surpassing discomfort is linked to the set of possibilities and open-options granted by interaction. Yet, further explorations to elucidate at which point a slight discomfort becomes distraction is outside the scope of this thesis.

7.3.3 Experiential content and body areas

The movement in the felt-sensing body is not always explicit as an external phenomenon, requiring the explicit description by the participant during the Focusing session. However, the use of props makes evident how the felt-senses move around the body, as participants manipulate props in accordance to how and where they feel the emergence of sensations. Figure 31 illustrates the patterns of explorations with the prop related to the types of descriptions emerging from the felt-sensing sessions.

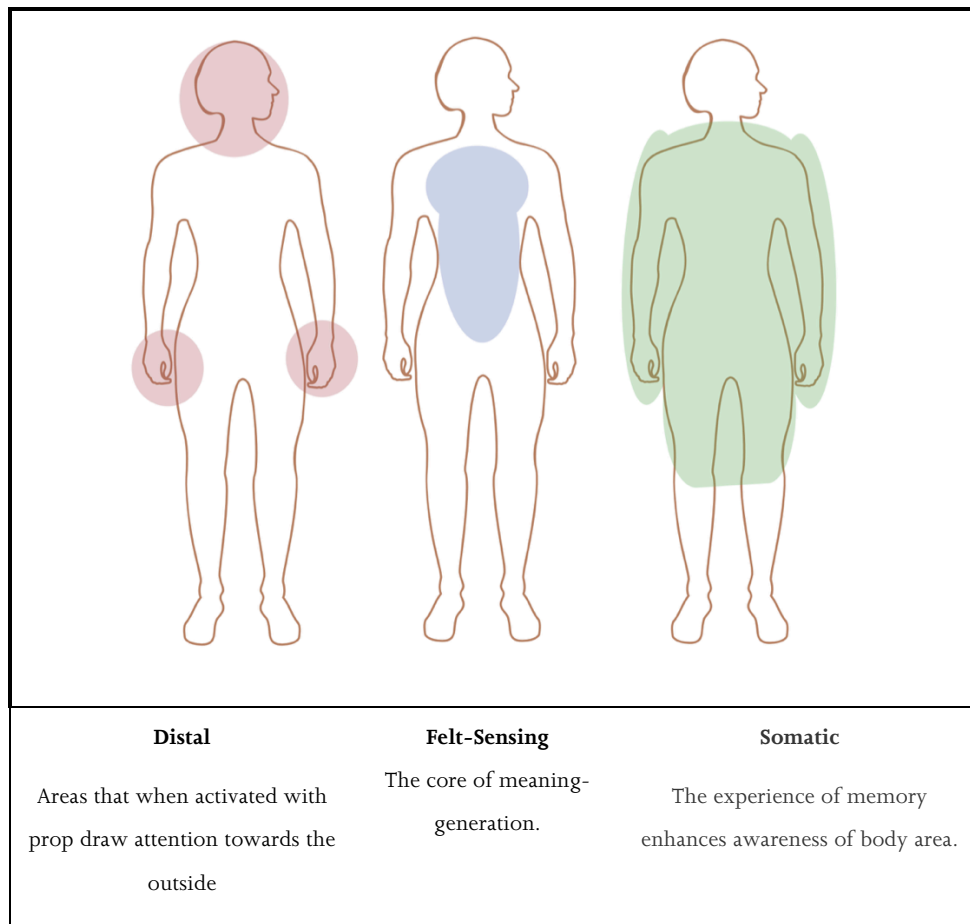


Figure 31 - Experiential content and body areas

7.3.3.1 Distal area: Head, neck and hands

The way participants approached the upper area of the body was generally exploratory, and rarely was content described when this area was activated with the prop. Most participants spent little time here, except for one specific case where the participant engaged in a detailed description of his happy experience while placing the prop on the forehead. It is not evident, however whether the impact of heat was important in allowing consciousness to flow, or rather the head was simply indicated as a statement and metaphor of thinking.

In some cases, placing the prop on the head might be understood as a metaphor of bringing memories to mind, or as a representation of creative thought. One participant was asked to place the device on the area where she was feeling the happiness generated by her specific memory. She asked the facilitator to wait for a moment to allow the sensations to set, then took the vibratory prop and placed it with decision on the forehead. After some seconds in silence, she described “somewhere here, and then it goes there”, while moving the prop down

to the chest. Immediately after this brief interaction and leaving the prop on the table, she started describing her memories in detail, for instance, the sunset she was painting, her enjoyment, the colours she was using and specific details about her room. Although the prop seemed useful to pinpoint the area where the felt-sense moved, in some cases the stimuli seemed too rough to be sustained.

As an important consideration to take into account, it was noted that the feeling of heat or vibration on the hands tends to remove the attention from the inner dimension during the exercises, possibly due to the active role of the hands in the perception of the outside world. For that reason, our prototypes contained materials insulating the hands from unwanted sensations.

7.3.3.2 Felt-sensing area: Upper torso

The upper torso is also what is identified as the felt-sensing area by Gendlin (1978), particularly the chest, abdomen and throat. This is not strange, as it is in the core of our body where we experience familiar ways of relating with the perception of various emotions. For instance, the metaphor of sensing *butterflies in the tummy*, or a tight throat after keeping our opinions unexpressed, or the feeling of tenderness irradiating from the heart are examples of how the body experiences felt-senses on a daily basis. However, it is important to point out that the sensitiveness of the throat did not go well with the explored stimuli, as they felt too disruptive and unpleasant to encourage further exploration, as I will further explain later in the chapter. As a result, the majority of participants associated blissful memories with the chest and abdomen area.

In terms of the role of wearable props during the articulation of experiences, most participants held the prop firmly towards the core and kept it there while describing their happy experiences. Some participants allowed the prop to carefully drift around the felt-sensing area, as they were following the movement of their sensations. In the following example (illustrated in Table 41 and Figure 32), one of the participants who kept the heat prop close to the chest, describes his happy experience of *mind silence* as appropriating the stimulus, which was integrated into his narrative:

Table 41 - Participant's narration - Heat prop

In this session, I saw myself in third person perspective on the train with my headphones on and wanted to revisit the moment of silence in my memory. Instantly, I was sucked into my mind (...) and it opened up to the infinite universe with countless stars. All time has stopped and I was right in the middle of everything. In the middle of the universe and the planets circling around me. At the moment of "time-stop" and silence, all energy was gathered to me and I felt heat. I felt fire. I felt energy and passion. My chest burst out in flames and I saw the sun. I was the sun. And the core heat in my chest was the source of all power. It was reignited.

Having the heat device created an association of energy, warmth and orange-based visuals for me. Furthermore, as compared to felt-sensing experiences without the device I was able to concentrate my energy and create more vivid visuals in my mind

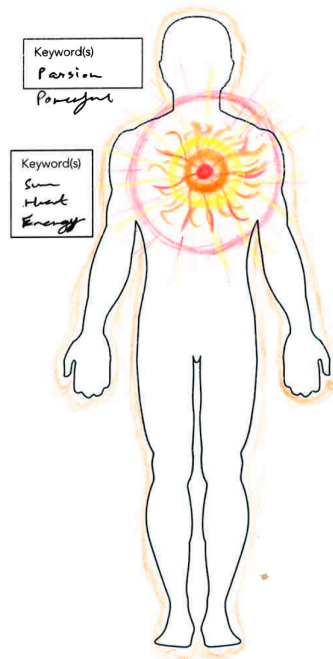


Figure 32 - Participant bodymap, showing the centrality of the chest area. Keywords: Passion, powerful, sun, heat, energy

7.3.3.3 Somatic area: Limbs, back, neck, core

One of the most interesting findings of this study is how our physical body is able to capture and re-live memories through sensing. The use of the wearable prop on certain areas gave a physical quality to the explored memories, as described in Table 42. In other words, memories can be sensed directly through the part of the body that was involved in the experience. It is

important to note that physical memory can go beyond the bodily areas described in Figure 31, however in our studies most people experienced memories in those areas.

Table 42 - Physical memory of touching rocks. Happiness perceived through different body parts when using the heat prop

After feeling my body through the scanning session, I was "transported" to the island. I was in a desert-like landscape, surrounded by rocks, feeling the sun. My feet felt the rocks and my forehead was hot. The sky was intensely blue. There was a pleasant breeze. I felt my shoulders and back, I touched them with the device and the feeling intensified. I felt my arms and hands, and I touched them as well, moving all the way to my left-hand palm. My hands were happy; my whole body was happy amongst rocks. The rocks were warm, they were "basking" all day in the sun and when I was touching them it was like touching the sun. The sun represents for me everything great and good in life - life itself. I touched my abdomen with the warm object. This amplified the sense of being alive, being happy, being embodied, being grounded.

7.4 General themes

This section shows how the use of artefacts influenced the course of felt-sensing, and in some cases, the articulation of stories and thus the process of meaning-making. Some predominant themes emerged from the analysis of the narratives obtained from the application of the *Love exercise*. In these, the stimuli generated by the devices had different effects in people's bodily self-awareness.

7.4.1 Device stimuli can bridge the tacit with the tangible dimensions

This theme refers to how the use of tangible stimuli and Focusing works as a handle to explore the tacit dimension, giving memories an enhanced bodily character. As a result, apart from its intellectual quality, the process of meaning-generation is perceived as a somatic experience. The use of wearable stimuli assisted in the generation of two main effects: 1) amplification of sensations, leading to the acknowledgement and confirmation of the source of happiness, and 2) the sensation of "being there", transported to the situation or memory. This act of being transported was not only intellectual or creative, but also somatic. As a result of *filtering out ideas through the body*, some participants experienced sensing their memories on specific body parts. For instance, participant OM1 pointed out: "Through reminding the happy moment with my [significant object], I realised that the memory comes from the body part it had contact with. I could remember something from the body part straight away."

The aesthetic merging between the worlds of the tacit dimension of memories and the tangible

interaction with objects appeared in several of our narratives. It is important to note how aesthetic experiences are ongoing building relations between artefacts and people (Wright & McCarthy, 2004). Even in more evaluative narratives such as in table 2, the participant describes how vibration was feeling normal, until imagining his happy situation made the sensation spread on his chest. Some of the adjectives collected in this process of immersing and recalling are: *spreading, expanded, amplifying, transported, thought enhancing, grounded*. Participant OM2 who reflected on playing cricket with his friends pointed out: “Heat helps generate feeling that you are “breathing into” the materiality of the body. E.g. The muscles, which tell a certain story about body, habits and past events”. By applying the stimulus in combination with Focusing, somatic qualities can be directly accessed through the exploration of the tacit.

7.4.2 Devices can function as tools for mapping the body geography of felt-sensing manifestations

As previously discussed, the felt sense is an inner state that not only contains feelings and memories, but also a strong bodily component (Gendlin, 1996). When sustained self-awareness is purposely practiced, we can start noticing that these somatic sensations change and move around the body. Our devices were useful to map the body’s terrain, helping participants to keep track of these series of inner movements as expressed in Table 43.

Table 43 - Some examples of devices mapping the body

WM3: “The experience was perhaps more profoundly felt with the hot water bag. It was possible to more accurately notice parts of the experience. The hot water was also a way to follow awareness/ sensations as it felt and moved through the body”
OF1: “The device served as a ‘detector’. It helped me detect a part of my body that reacted the most to the experience. It enhanced the sensations and brought meaningful links to what the concert signified for me” (Vibration)

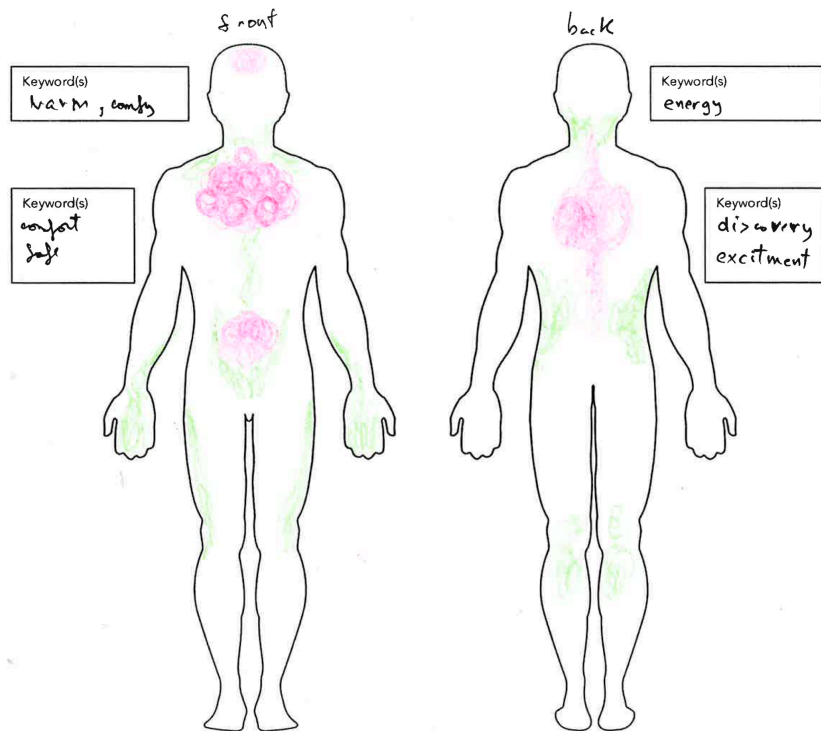


Figure 33 - Body map from participant WF9. Keywords: Comfort, safe, discovery, excitement

Table 44 - Observations of body language and possible meaning

How the body is mapped	Body language keywords	Possible interpretation
Participant places device on a specific part of the upper torso and stays there.	Calm. Smiley face. Head facing up, like imagining. The device is carefully being held.	Felt-sensing what is loved.
Participant places the device on different parts around the torso, taking some few seconds on each pause.	Slightly frowning, as expressing concentration. Careful movements.	Searching or following the felt sense, as it moves and changes.
Participant places the device on different parts around the torso before staying on one spot.	Slightly frowning, as expressing concentration at first. Then the facial expression changes to calm.	After searching and tracking sensations, the participant finds the felt sense.
Participant places the device on different body parts, taking some few seconds on each pause. Sometimes devices are placed up and down, following a linear trajectory.	Calm, Neutral Rapid movements.	Instead of felt-sensing, the participant is focused on the perceptual qualities given by the prop.
Participant places the device on areas where the felt sense is not generally perceived.	Calm, neutral.	The participant might be trying to match a specific physical memory with the stimulus (i.e. recalling riding a bike and the effort on legs leads the participant to place device on calves)

Different ways of mapping the felt-sense were observed, expressed through various forms of body language (Table 44). Beside the narratives, through the observation of participant's body language it is possible to determine whether a participant is felt sensing, exploring the relationship between body and thought or in the process of generating meaning. Body maps are also useful to complement these observations, as observed in Figure 33 - Body map from participant WF9. Keywords: Comfort, safe, discovery, excitement, where the participant WF9 expressed to have perceived the feeling of happiness accentuated by using the heat prop on chest and abdomen. During the session, our participant was smiling, and holding the prop as described in the first row in Table 44. After the workshop finished, the participant still expressed her satisfaction in regard to the idea of using heat to access memories. Although portability of devices is important to facilitate inner dialogue, flow, and to follow the felt-sense's movement the process of meaning generation experienced through the body, in part, transcends these design considerations.

In previous research (Núñez-Pacheco & Loke, 2014b), I have discussed the importance of trusting perceptible feedback to generate spaces for inner observation. When feedback is immediate and spaces for unreliability are less obvious (such as in the case of the stimulus generated by water bag), disagreements between the user's expectation and the perceptible feedback still might occur. These disagreements do not prevent the body to find its way in the process of meaning-generation, as discussed in chapter 2 through the concept of reiterated implying and carrying forward. These philosophical concepts are exemplified in the category below.

7.4.3 Mirror or scaffolding: Devices provide open-ended clues for the body to complete with meaning

Höök et al.'s framework on *Somaesthetic appreciation design* (Höök et al., 2016) introduces one interesting point about designing feedback that makes sense to the rhythms of the body. Since these props have been used to surface and shape information from the tacit, non-explicit dimension of our reality, such manifestations remain partially unknown until acknowledged. In the practice of Focusing, the body finds its way to generate meaning, even beyond our immediate, conscious understanding. As Gendlin points out (1993), the body already *knows* its situation, and by paying attention we get in contact with the interactional nature of our implicit dimension. As an example of this ongoing meaning generation, the use of reflective listening

in Focusing facilitates two possible responses: a) the meaning is mirrored to the participant/focuser, confirming and reinforcing the inner state of felt-sensing, or b) the wording might not be the one that *feels right*, stimulating the search for a new, fresh term representing the inner meaning more accurately. In Focusing, this active searching is a process that occurs continuously, as experiencing is interactional, as discussed in chapter 2.

Similar to the act of reflective listening, the stimuli generated by the props contain sensory information, which can work either as a *mirror that reflects back*, or as *scaffolding* for new meaning-searching. For instance, in Table 45, vibration was useful to accentuate the participant's felt-sense, acting as a mirror.

Table 45 - Male participant (WM01) - vibration as a mirror (excerpt)

My happy situation is the moment I came back from work, or finishing a big project, and got back to home, laying down on my bed. My body feels melting and I feel satisfied. When I used the vibration on my body, it emphasised this melting "feeling" [...]. The pleasure comes from the satisfaction of "finishing something", kind of a sense of accomplishment, other comes from finding all my stress goes away, no more deadlines, no more plans I need to worry about, I enjoy the "stress relieving" feeling. Is emphasised both physically and mentally.

In some cases, the stimuli generated by the prop did not *feel right* in the participants' subjective process, however these dissonances had a transformative character in the interactional construction of the aesthetic experience. We can see this process exemplified in the following narrative, as in the example in Table 46, where heat acts as scaffolding to new meaning making.

Table 46 - Male participant W13 - Heat as scaffolding

"The thought that I had chosen was my last visit to Watson's Bay – a beautiful beach. Now, I usually felt in these sessions the deeper meaning that I gathered was usually something familiar or close to the heart. Not this time. This time I felt the sensation of isolation and noise [...] I started questioning my reason for being there. The device felt like a foreign object from a different world- alive but strange. Its texture informed me on a furry animal, but its fluidity suggested something otherworldly. The creature had to move, but I did not know if it was defending or tucking me away! I realised then that I was staring at my own mortality. For the calming and chaotic nature of the beach was my personal symbol of death and inevitability. It was a calming and chaotic duality I had been observing all this time."

These narratives show how the complexity of human experience takes shape when open spaces of self-dialogue are facilitated. This process of self-dialogue can be insightful and pleasurable, as well as deep and sometimes confronting. Aesthetic aspects of interaction do not need to be solely focused on pleasure, as that would embody a reductionist understanding of the richness of our humanness (Petersen et al., 2004). Open stimuli can also act as a metaphor, shaped by the inner somatic process of the participant. In the light of these results, my initial interest of assessing artefacts under the sole dichotomy of distracting-enhancing to the practice of Focusing proved to be too simplistic.

7.5 Aesthetic qualities of heat and vibration in the context of the Focusing practice.

As discussed in chapter 2, the notion of the felt-sense shows some commonalities with the qualities of aesthetic experience, starting with the wholistic, complex nature of both. By using Focusing to prompt a detailed articulation of what is meaningful from the experience with interactive objects, aesthetic qualities of heat and vibration have been described, as illustrated in Table 47. The following are some qualities directly extracted from participants' narratives. These qualities represent different ways of accessing new meaning emerging from the interaction with prop within the context of Focusing.

Table 47 - Description of aesthetic qualities on the use of stimuli, emerging from participants' descriptions

Heat	Vibration
<p>Immersive focusing</p> <ul style="list-style-type: none"> • Blurs the outside world • Makes self-awareness easier <p>Following awareness</p> <ul style="list-style-type: none"> • It followed bodily awareness as the felt-sense moved around the body • Increases awareness of the body region • Highlights area of emerging sensation <p>Re-living the experience through body areas</p> <ul style="list-style-type: none"> • Meaningful memory emerges directly from body part • 'Breath into' the materiality of the body, where the muscles tell a story • A physical reminder of the materiality of memory • Related physical muscle feeling (from workout) with memory that emerged • Warm sensation similar to when I do something I enjoy <p>Enhanced positivity</p> <ul style="list-style-type: none"> • Intensifies experience • Helped to access happy memories, making the body feel good. • Keeps experience positive • Make positive feelings stronger in a gentle way <p>Happiness as an energetic sensation</p> <ul style="list-style-type: none"> • Creates an association of energy • Radiating, exploratory • Magnified, transported 	<p>Immersive focusing</p> <ul style="list-style-type: none"> • Useful to focus attention • Emphasised my "melting" feeling • Immersion, making explicit the physicality of memory • Creates a feedback loop, which allows 'capturing' and 'stimulating' the sensation <p>Following awareness</p> <ul style="list-style-type: none"> • Detector, provides meaningful links • Pinpoints area of emerging sensation <p>Memories through sensing</p> <ul style="list-style-type: none"> • Makes physical a "mental" emotion • Bring memories to mind <p>Calming and grounding</p> <ul style="list-style-type: none"> • Softening, getting away from agitation • Keeps unwanted thoughts away, without removing my attention from my inner body • Calming down excess euphoria, generating a different quality of sensation (like receiving a hug) <p>Spread the embodied terrain of happiness</p> <ul style="list-style-type: none"> • Expands the felt sense to other surrounding areas • Spreads the happiness on my torso • Positive physical feeling • As an intensifier • Enhancing sensations

Some studies in HCI reveal that heat might be gentler than vibration to facilitate self-awareness on the body. For instance, in the study conducted by Lee and Schiphorst (2016) it was concluded that the use of vibrotactile stimulus to transmit the sense of intimacy over distance could be interpreted as a mere notification instead of as an affective message. Jonsson et al. (2016) point out that vibration is perceived as being something external to the body, removing attention from our inner centre. Initially, I hypothesised a similar outcome, however the use of vibration also inspired interesting aesthetic experiencing, as will be further discussed in the following sections.

7.5.1 The body as an energy source: Heat as an embodied relation

As described in table 47, heat was reported to be predominantly effective to (1) facilitate inward focus, (2) as an enhancer of positive sensations, and (3) as a tool to re-live experiences through bodily areas. One of the particular aspects of thermal stimuli is its strong association with positive feelings. Heat assists in keeping the overall experience as energetic and radiating. Energy-embodied as heat-is something that comes from the inner experience of remembering, visualising or imagining, which resonates with Jonsson et al.'s (2016) observation of heat as being perceived as emerging from inside the body. As a result, heat works well to stimulate the inner dialogue and free association of ideas, and therefore the emergence of insights. This energy is then, interpreted as something appearing as an inner force towards transformation. Table 48 shows how interacting with the heat prop shaped associations and meanings around warmth as one of the central concepts.

Table 48 - Participant's narrative: Associations with happiness and warmth, underlined

I thought of the warm sensation I have every time I read a good book. One of my favourite objects in the world is a book about world myths I used to read as a child. I remembered the excitement I felt when I read it. It was a happy excited anticipation just like the one I have when I travel. I could feel then I face some new experience. Reading that book in my grandmother's living room, feeling the fabric of the couch on my skin, my legs over the pillow, the warm yellow light of the lamp and knowing that she would get upset when she found me there... all those sensations from my weekend at home, and the excitement of reading about other countries, people and worlds... that was a happy day for me then, and that is what traveling is for me now. Maybe the right word is 'discovery'.

Another interesting observation is how the use of heat assisted in re-living experiences from a physical sense, challenging the preconception of intellectual concepts as something detached from bodily perception. For instance, the memory of performing physical activities and sensing the sore muscles, the warm feeling of patting a pet, or remembering the felt sensation of collecting pebbles on a sunny day are some of the examples of the physicality of memory, which was facilitated through Focusing and enhanced with the use of the wearable prop.

7.5.2 A mantra is being sung through my body: Vibration as immersive loop

On the other hand, table 47 shows that vibration was perceived as predominantly (1) calming and grounding, (2) immersive, (3) useful to follow awareness of body areas and (4) as spreading feelings through a particular area. As with heat, which feels as if it is radiating from the inside of the body, vibration is perceived as a tool that enhances and augments the sensory experience. It intensifies, spreads, and expands the physical character of the physical memory. The use of haptic stimulation also allowed expanding the physical sensation of happiness from where it was initially experienced to other adjacent areas of the body. In some cases, vibration changed the quality of experience, from euphoric or agitated to a gentler, grounded sensation. As one participant pointed out: “It was less exciting, but in a good way. It was calm, but still it felt like a happy one. I will put it in a metaphor... it's like when you receive a hug: it helps you to ground the feeling”.

Another important aspect is vibration’s ability to enhance deep, inner focus when utilised in conjunction with less ‘narrative’ topics. The body experiences a loop of sensations, as perceiving the sustained humming of a mantra through the materiality of vibration. For example, being underwater, the melting sensation of pleasure when resting on the bed after a long shift, or as in Table 49, the emphasis on the lover’s smile are some of the stories that better responded to the stimulus. The participant who wrote this narrative stated: “The device creates a feedback loop, whereby span first awareness of a sensation, I am able to "capture" and "stimulate" it further in a somewhat controlled but fully aware manner.”

Table 49 - Participant's narrative: The body as a mantra

Lightness, blinding sunlight warm gorgeous day.

I look at the waves gently breaking at the shore, my feet buried in the warm sand.

She smiles.

The wind is soft, the sea breeze smells of sea salt, fun, calm and happiness.

She smiles.

I close my eyes.

I feel my heart beating against the soft vibration of my chest cavity. My eyes see a light, golden, orange pond behind my eyelashes. My throat is relaxed, my breath us at this very moment, life goes in, life goes out.

I feel warmth around my heart, my body feels at peace, my mind [breaks] in love.

When I open my eyes, the sea is glowing.

Two [feather] floating, swirling, dancing mid-air.

Gentle and happy and forever now. She is smiling.

7.6 Common aesthetic qualities

Despite the reported differences and the predominant qualities of each stimulus, the majority of the aesthetic qualities emerging from the use of props and Focusing overlap in general terms. Table 50 shows those similarities (and the presence of each feature marked with an 'x'), whilst also reporting on the subtle differences between how the two stimuli were perceived. The most noticeable variation between the interaction with the two materials is the *calming and grounding* quality of vibration, which was unique to this stimulus. In contrast, the quality of being *intensifying* was mostly associated with heat, although not exclusive to it.

Table 50 - Aesthetic qualities of heat and vibration: Overlaps and subtle differences

Aesthetic qualities	Heat	Vibration	Subtle differences
Following awareness	x	x	It was reported that both heat and vibration were useful to follow awareness of the changes happening in the body. Heat supports slow drifting around the body, whereas vibration helps to trace awareness from one specific point to another.
Shaping happiness	x	x	Heat <i>intensifies</i> the feeling of bliss, making it more evident. Vibration <i>spreads</i> the happiness from where it is felt to other surrounding body areas.
Memories through the senses	x	x	Heat makes memories more tangible, like 'being there' in the imagined/reflected situation. Vibration had less mentions, and it was described as more localised in the body.
Immersive	x	x	Both facilitate immersion. Heat's immersion is through imagination, tracing temporal connections and sensory identification. Immersion through vibration is more in a sustained, loop-like way.

Intensifying	x	x	Whilst vibration is calmer, heat appears more energetic and intense. Yet some participants reported to have had their feelings intensified when using the vibratory prop.
Calming, grounding	-	x	This quality was not mentioned as relevant for heat, yet it was reported several times in the case of vibration.

As advocated in the disciplinary proposal of Somaesthetics (Shusterman, 2011b), cultivation becomes a necessary activity to access self-knowledge. Additionally, it allows us to take advantage of the endless source of meaning encapsulated by the body. When the conditions are given and facilitated through designs that acknowledge our sensory abilities, the body is capable of finding its own way to interpret phenomena, as we have seen in the examples of how participants have shaped their meaning-generation process when using sensory props. Having defined the aesthetic qualities of heat and vibration, we can note that the aesthetic qualities in response to both stimuli mostly overlap. This may suggest that when using gentle stimuli on the body whilst practicing Focusing, the body assertively finds its way to interpret this tacit information, making spaces for varied representations of meaning.

7.7 Summary of outcomes

The use of props and Focusing has revealed a series of findings related with how participants integrate information. For instance, the application of slightly uncomfortable stimuli on the body does not prevent the generation of new meaning in the participant. Device stimuli in the context of Focusing work in different ways: (1) props bridge the tacit with the tangible dimension, granting ‘physicality’ to the memory, (2) props help the participant to map the body geography of felt-sensing manifestations. Two main embodied relations with prototypes emerged from interaction: (1) props function as mirroring the self, by confirming and gently guiding people’s meaning, whilst also (2) scaffolding meaning when dissention become apparent. In terms of differences between aesthetic qualities emerging from the interaction with heat and vibration in the context of Focusing practice, these are subtle. In general terms, heat enhances inner presence, whereas vibration works well as enhancer of meditative experiences.

Chapter 8

STUDY FOUR: SOUL

Storytelling the felt-sense

After having worked on several Focusing-oriented design studies and workshops, hundreds of narratives describing various ways of accessing the felt-sense have been collected. These fragments of subjectivities reveal intimate aspects of people's everyday experiences, including how they make sense of them. Assisted by both Focusing and sensory stimuli perceived through wearable props, some of these everyday accounts –particularly blissful experiences– have been used as materials to assist in the articulation of aesthetic qualities. Having elucidated how certain technology input can influence the way we make sense of the world around us, some of the questions I aim to answer in this chapter are: Is it possible to transfer felt-sensing qualities through interactive technologies for self-reflection? Which are the pre-conditions to guard as much as possible the integrity of felt-sensing qualities when using interactive devices as a medium? This chapter describes the research outcomes emerging from the artwork *Storytelling the Felt Sense- Story one: Soul*, which captures and interprets a particular moment of bliss articulated by one of my workshop's attendees after re-living it through Focusing. *Soul* is a one-to-one experience with an immersive art installation that uses sound, storytelling and haptic stimulation on the body as a way to transfer aesthetic qualities emerging from a blissful moment inspired by a particular memory, involving a concert of Japanese Kodo Drummers. Mediated by technology and the facilitator's role, the aesthetic qualities of the participant's narrative were reinterpreted as a tool for public storytelling.

8.1 Introduction

The richness of the narratives collected during my user studies has been illustrated and thoroughly exemplified in the previous chapters 5, 6 and 7, for instance by making evident how the linear and unremarkable characteristics of routine acts have the potential to become aesthetic when the role of the body in the meaning-generation process is adequately acknowledged. As a result of the process of foregrounding the body, aspects of the experience that are generally overlooked in everyday interactions start becoming apparent for reflection and self-discovery.

This chapter introduces the outcomes of the last study conducted as part of this doctoral research. From the exploration of Focusing as a tool to articulate aesthetic experiences, as well as the use of props to shape how these are perceived, some questions regarding the practical transfer of aesthetic qualities from felt-sensing into *interactive experiences for self-inquiry* still remain unexplored. Some of the questions I aim to answer in this chapter are: Is it possible to transfer felt-sensing qualities through sensory experiences? Understanding that aesthetic aspects of experiences are dynamic, and change from person to person, how do we make sure to guard as much as possible the integrity of felt-sensing qualities when materialised into technologies or artefacts? This chapter describes the outcomes of the artwork *Storytelling the Felt-Sense- Story one: Soul*, which captures and interprets the particular story of one of the participants as a material for public and somatic storytelling.

The reasons to use an interactive art installation as a medium –in contrast to traditional design prototyping- of inquiry about unanswered possibilities are varied. First, it allowed me to craft an interactive piece based on my personal interpretation of a particular person’s story, as well as to openly recognise how my personal and tacit experience as a Focusing practitioner and design researcher are embedded into the artefact design. Although participants assessed the effectiveness of the artefact setup and their impressions will be useful for potential future iterations, this device should additionally serve the purposes of transmitting part of the particular aesthetic qualities of someone’s experience (who is also described in this chapter as ‘the granter’), to a third person who receives it in the shape of a metaphor artefact. This particular person participated in one of my workshops and generated a felt-sensing memento, which was used as a material to design the artwork. Her ‘granter’ status is given by the fact that she agreed to facilitate her memento as a design material. The fact she was asked is not a mere

formality or consideration; as we will see later in the chapter, the role of the granter is fundamental in the process of design evaluation. Due to the fact the concept and installation were crafted under subjective parameters, the interest behind the artwork is more centred around how participants dialogue and interpret the experience rather than how to potentially adjust it to satisfy average users, which is one of the reasons why the objectives of user-centred design and interactive art mostly differ (Höök, Sengers, & Andersson, 2003). The artwork format, and particularly the inclusion of bodily stimulation as a strategy for storytelling, also opens the door for engaging in an active conversation triggered by the physicality of the artwork – hopefully informing the emergence of new theory.

It is important to clarify that despite the design of the artwork centring on the transference of key aesthetic qualities from felt-sensing, attempting to replicate aesthetic experiences is by any means an impossible and futile task. The way the granter perceived the sense of unity given by her original experience has been influenced by other surrounding life experiences perceived during that very particular moment in time. Dewey (1934) describes this sense of unity of aesthetic experiences as able to be singularised, therefore having their own uniqueness and rhythm (p.35). Perhaps the same situation occurring under different life circumstances would have resonated slightly different in the granter's subjectivity. Additionally, the narrative inspiring the artwork emerged as a *memento* from her reflection about that specific moment through Focusing, and involved haptic props that shaped the way the story was described. Having said that, one of the aims of this artwork was trying to understand in which ways aesthetic experiences are perceived, as well as the role of the sentient body in the sense making of the artwork.

8.2 SOUL as a tool for theoretical inquiry

As described in chapter 5, narratives created under the practice of Focusing have shown the ability to transform the unremarkable aspects of everyday tasks into descriptions of aesthetical aspects of these experiences. Elements such as a detailed inventory of sensory qualities, as well as the emergence of personal discoveries inspired the question as to whether the metaphorical richness of felt-sensing description could be materialised in objects and prototypes, and if this process would be useful to generate knowledge for future materialisations. This way of generating knowledge relates to the concept of *disciplined imagination* (Zimmerman & Forlizzi, 2008) where designers inquire about new possibilities by researching through design. In this

case, the artefact is not devised under traditional design parameters of usefulness, but it rather takes shape of an art installation using a particular felt-sensing memento as a core design material. The use of this non-traditional material aims to inspire *theory for design* (Zimmerman et al., 2010), including guiding principles in the generation of other artefacts transferring somatic qualities from felt-sensing mementos to aesthetic interactions.

As already discussed in Chapter 6, trying to preserve the integrity of aesthetic accounts emerging from somatic-oriented design techniques is a complex task. One of the proposed ways to mitigate the dilution of somatic values in the design process is by facilitating spaces for the articulation of personal ideas from beginning to end. For the design of the artwork *Soul*, the installation was crafted according to these principles as a tailored piece, as I will discuss in more detail below. By allowing aesthetic instances to be sequentially and schematically articulated by the individual subject we make spaces for intimate accounts to be formed uninterruptedly. One of the reasons I have decided to materialise first-person based design is in expectation that the trueness and sense of detail of the resulting mementos might resonate more deeply in the audience's process of self-identification, either positively or negatively. Describing the decision-making process leading to pragmatist-oriented artwork, Dalsgaard (2014) employs a similar logic, where aiming to design for specific aesthetic qualities implies making design decisions sometimes contradicting the tendency of selecting the most popular or accessible solution. As discussed in Chapter 7 through the concept of *mirror* or *scaffolding*, meaning-generation is not only stimulated around things that confirm our pre-conceptions (or mirror what is contained in the self), but also emerge as response to what defies them (scaffolding new meaning). In the presentation of results, I will discuss how this preconception was finally confirmed, as participants used their own experiences as references to relate with the world around them.

8.3 Recognising felt-sensing qualities from felt-sensing mementos

Narratives generated through Focusing are important not only as research data, but also in its material dimension. Felt sensing mementos or narratives represent a specific sample of an aesthetic moment in an individual's existence. One of the challenges of using felt-sensing mementos as materials for design resides in the preservation and understanding of what makes the experience important, which is key to the transmission of valuable qualities through interaction.

The selected narrative or felt-sensing memento to be later materialised as an artwork was chosen according to some specific criteria:

- *Evidence of felt-sensing description in the narration:* As felt-sensing qualities are used as the artwork's centrepiece, there should be evidence of the existence of these traits, expressed as clearly described memories, sensations, feelings, insights, and/or unfamiliar thoughts. Felt-sensing archetype analysis (Núñez-Pacheco & Loke, 2016) can be used for such a purpose.
- *Harmonious and logical match between the story and the utilised stimuli:* In some cases, the use of heat and vibration influenced the generation of mementos or perspectives mimicking the materiality of stimuli. For instance, the use of the heat prop inspired participants to perceive the energy of the sun, or the sensation of warmth generated by reading a book in front of a fireplace. For the creation of this artwork, I have decided to take advantage of those spontaneous connections.
- *Technical feasibility:* Although most analysed narratives are rich and contain plenty of felt-sensing qualities, the materialisation of certain ideas requires specific resources that might go beyond available tools.

The listed theoretical criteria were met by the granter's felt-sensing memento, as illustrated in Table 51. Her narrative contains a series of details that make it suitable for materialisation, including clarity, description of insights, bodily engagement and the explicit role of vibration in the construction of meaning.

Table 51 – The granter's felt-sensing memento while using vibration

I was in a concert hall that was dark and silent, with anticipation of the performance of Japanese Kodo drummers. There was a big drum on the stage. A drummer approached it and started drumming. It started so gently, like a flutter of butterfly's wings and the vibration was gradually building up, even so slowly and smoothly; until it became as loud as a thunder and it shook my whole body. I felt the vibrations in the air, in my chest, in my arms and legs, in my feet and in my hands. I felt an overwhelming joy inside - it felt like my spirit was moved. I felt I am one with the vibration, with the air, the chair on which I was sitting, with the drummers, with the entire hall. I felt connected on an atomic level. I felt I am a part of the whole. When I placed the device on the palm of my left hand I felt the feeling of connectedness intensified. It

was very pleasant. Both palms were pleasantly vibrating, and the vibration "climbed up" my arms and to my shoulders. When the felt sense session ended, I felt more grounded. I felt gravity more intensified.

In order to make her narrative more intelligible as a material for public storytelling, the granter was asked to include further information in her felt-sensing memento. For instance, she was required to add more details to the story context, giving some extra clues for the audience to visualise the scenario she had cherished in her memory. Regarding her felt-sense descriptions these were reproduced without being edited. The richness of her sense of expectation and, particularly, her feeling of connection with the elements were preserved for the final version of the storytelling piece. Finally, although her description on the role of the device was omitted in the final narrative, that excerpt was key to inspire and define the experiential goals of the artwork, particularly by aiming to enhance the sense of 'being there', and to provoke the audience to think about the sentient body as a source not only of physical sensations, but also as capable to influence the direction of our thoughts and stored memories.

The materialisation of personal aesthetic qualities into artefacts requires the recognition and direct use of personal features that makes the experience distinct. To make the artwork a more authentic reflection of her personal experience the granter was invited to record her voice for the narrative. The only instruction she was given for this task was to describe thinking that others would listen to her, however the pace and intention colouring her voice was left to her personal discretion.

Following the tradition of somatic practices and the importance of the transmission of tacit knowledge through practice, the aesthetic experience to be materialised through the artwork was ideated to be mediated not only by an impartial technology agent but also to be shaped by the facilitator's intervention. In the following section, I describe the importance of such a role as it shapes the meaning of the artwork, as well as the methodology of *facilitated interaction* as a strategy to facilitate participant's immersion with the experience.

8.4 Facilitated interaction

The role of the facilitator in somatic practices is fundamental for the transmission of experiential sensibility and specific values contained in such activities. In the context of somatic

facilitation in HCI, Schiphorst (2011) describes how second-person methods requires a series of skills, including...

...empathic mediation, resonance with the experience of others and personal familiarity with the various possible subtleties of participant experience, based upon the intimate preparation generated cumulatively from the experience of living deeply within the design process.

These values related with the construction of a common space of safety and intimacy granted by somatic techniques are not always acknowledged as relevant in the design process. Although pivotal in the Human-centred Design rhetoric, empathy is seen as an exercise of immersion and open-minded observation of someone else's life, however discarding the designer's experiential role. For instance, Kouprie and Visser (2009) describe through their framework on empathy how the designer acquires knowledge about the user through different stages, including immersion in users' experiences then returning to the designer's mode of being. In somatic facilitation, which implies the acquisition of tacit knowledge only transmissible through practice (as described in the methodology chapter 4), the lived experiences of the designer are fundamental to create those spaces for intimate exchange, as well as to facilitate the generation of heightened reflection, which becomes one of the distinctive products of somatic-oriented design. The role of the facilitator can be extended beyond the discovery and ideation phases of the design process (as described in chapters 5 and 6 respectively) towards the evaluation of the process itself. As the role of the facilitator matters in heightening awareness and developing a safe space of intimacy, the interaction between the participant/audience and technology can also take advantage of this mediation.

Participatory art brings interesting opportunities for HCI to explore the role of facilitation and evaluation, particularly when the researcher is also the performer. Art installations such as *humanaquarium* (R. Taylor et al., 2011) take the evaluation of practice-based research to be explored in the wild by artists that also embody the role of researchers. The *humanaquarium* is a small space enclosed by touchscreens where the researchers/artists interpret a musical performance. The presence of touchscreens designed for the audience to manipulate and shape the ongoing performance explores the temporal and interdependent relationship between the artist and audience.

Intimate spaces for the interaction with somatic-inspired technology find theoretical grounds

in the context of interactive art, and particularly through the *Facilitated Interaction Framework* as introduced by Loke and Khut (2014), who have developed a consistent body of work around protocols involving participatory art approaches in HCI (Khut & Muller, 2005; Loke & Khut, 2011; Loke, Khut, & Kocaballi, 2012; Loke et al., 2013). This model of experiencing the artwork uses guided facilitation to direct the audience through the interactive experience, offering safe spaces for aesthetic appreciation as well as eliciting deep immersion in the artwork. This type of engagement incorporates reflective tools that are part of the artwork itself, integrating experience and evaluation as processes evolving as a whole (Candy, 2014). In order to craft interaction protocols able to convincingly persuade participants to reflect on the self, artists might find some useful strategies in practices outside art, embodying for instance, the sensibility of somatic practices (Loke & Khut, 2014). Figure 34 shows the stages of the framework, which also acknowledges the role of the audience, who may witness the experience.

Facilitation of Experience, by artists			
Entry (Separation)		Core (Transition)	Exit (Incorporation)
1. Welcoming	2. Fitting and Induction	3. The Ride	4. Debriefing and Documentation
Witnessing of Experience, by audience			

Figure 34 - The Facilitated Interaction Framework by Loke and Khut (2014)

In some cases, the collective nature of the audience as witnesses is replaced by the intimate encounter between the sole participant and the facilitator. When the spectator or witness is omitted, the facilitator becomes the performer, who leaves the participant to fully reflect on the interactive sensory landscape. Following the taxonomy of spectator experience developed by Reeves, Benford, O'Malley, and Fraser (2005), such a one-to-one interaction modality falls into the category of *secretive approaches*, where the manipulations rendered by the performer (facilitator) are only perceived by the individual who interacts with the artwork. Considering the potentially powerful moment of connection established during this one-to-one exchange, the role of the facilitator also becomes a act of care for the other, where transmitting a sense of safety appears as a pre-condition for a successful interaction with the artwork. In a critical example exploring the subjective aspects of physical pain as a psychological, somatic and environmental phenomenon, the installation *Seeing is Believing* by the artist Eugenie Lee (3rd June

2016, personal communication) uses interactive technology to simulate physical pain on the body, as a way to make the participant reflect on the experiences of those who suffer chronic pain. The artist engages in a one-to-one experience with the participant, who is guided through three stages. These stages include a preparatory exercise intended to facilitate heightened awareness on the subjective nature of bodily self-perception and image. The second stage corresponds to an immersive experience occurring in a small anechoic chamber. Actuators simulating physical pain on the hand, a scenario of virtual reality and the use of tools to alter the participants' perception make the encounter with the artwork a confronting experience. In the last stage, the artist facilitates a brief grounding exercise to the participant, before going through an interview centred on how the experience was perceived. Having personally experienced *Seeing is Believing*, the artist's careful approach to facilitation was key to transmit trust and clarity about the objectives, implications and possible effects of interacting with the artwork. The artist's role of facilitation functioned as a powerful tool to transform a potentially distressing experience into a reflective, pedagogical and aesthetic one. Beyond the technical merits of the setup, without the artist's caring presence and attitude, the artwork neither would have been successful as a pedagogical device, nor might have made sense to audiences beyond being interpreted as an uncomfortable interactive experience. Uncomfortable interactions, when managed carefully and ethically, can transmit positive values, including enlightenment (Benford et al., 2012).

Inspired by Khut's biofeedback installations and the invitation to re-think the traditional boundaries between mind and body, one of my early works entitled *Eloquent Robes* (Núñez-Pacheco & Loke, 2014a, 2014b) engages in a discussion about the importance of offering spaces for self-contemplation and creative engagement through bodily self-awareness. In this interactive piece, the facilitator clothes the participant's body with a white paper garment, onto which abstract imagery representing the participant's heartbeat data is projected. The provision of a clear set of rules in regard to the interaction dynamics, plus the use of ambiguity of representation as a resource to stimulate reflection (Gaver et al., 2003) elicited participants' willingness to influence their physiological data, leading to self-identification with the artwork. The role of the facilitator was intended to avoid misunderstandings on the interactive steps and setup, as well as a way to elicit deep immersion, as previously discussed by Loke and Khut (2014).

As discussed in this section, the role of the facilitator assists the participant towards making sense of the experience. As the role of the artist is so relevant in this intimate exchange between herself and the participant, poorly articulated or improvised descriptions of objectives can jeopardise the transmission of the artwork's values and qualities, leading to misunderstanding the values incarnated by the interactive experience. For instance, the main objective of *Eloquent Robes* was facilitating the emergence of creative and reflective responses on the observation of personal biofeedback-data represented as coloured visualisations. During preliminary studies, participants were explained that representation of cold colours emerging from heart rate data meant calmness, whereas colours from the warm spectrum were associated with excitement. As a result, the initial iteration of the artwork was interpreted in terms of relaxation-excitement instead of functioning as a tool for open reflection and generation of self-theories (Núñez-Pacheco & Loke, 2014a). Consequently, the protocol of participation should be designed not only in terms of the participant's role, but also paying attention to how the facilitator delivers the instructions of each interactive stage.

8.5 The artwork: Soul

To highlight the importance of subjectiveness as a core material of the interactive experience, the artwork was named *Soul*. The word *Soul* is the English translation of the name of the person who generously granted her memento for my interpretation. As Spanish is my first language, the phonetic texture of her name triggers an automatic association of implicit meaning in my mind. As a result, *Soul* becomes a secret code between the designer and the granter, who is also aware of the meaning behind the artwork's name.

Soul is a one-to-one experience with an immersive art installation that uses a particular soundscape, storytelling and haptic stimulation on the body as a way to transfer aesthetic qualities emerging from the granter's blissful moment during a concert of Japanese Kodo Drummers. Held at the *Tin Sheds Gallery*⁵ space, the forty-minute artwork experience was comprised of three interactive stages: (1) Preamble: Reflecting on one's own bliss, (2) Interacting with the installation and (3) Debriefing. In the first stage, the participant is received by the facilitator (Figure 35), who briefly explains the nature of the artwork to be experienced as a '*tangible metaphor of someone else's moment of bliss*'. The participant is then instructed to think of a

⁵ Located in Darlington, New South Wales, Australia.

personal moment of happiness, which is explored through a brief six-minute Focusing audio exercise, containing a series of questions designed to stimulate reflection regarding what is particularly special about that specific moment in life. As in some of my previous studies (Núñez-Pacheco & Loke, 2017), this part of the protocol was inspired by Simon's Love exercise (2015). This preamble to the experience with the artwork is intended to induce participants to situate themselves in the correct mindset, guiding them to experience the notion of filtering out ideas through the body as a possibility of intellectual engagement. The following is an example of one of the guiding questions from the audio exercise:

'Now, I will ask you a question. Don't answer directly, but rather try to feel the answer first. We are filtering out our ideas through our bodies, so the following isn't necessarily a rational question. Ask yourself: what about the thing or situation I selected is inspiring this particular feeling?'

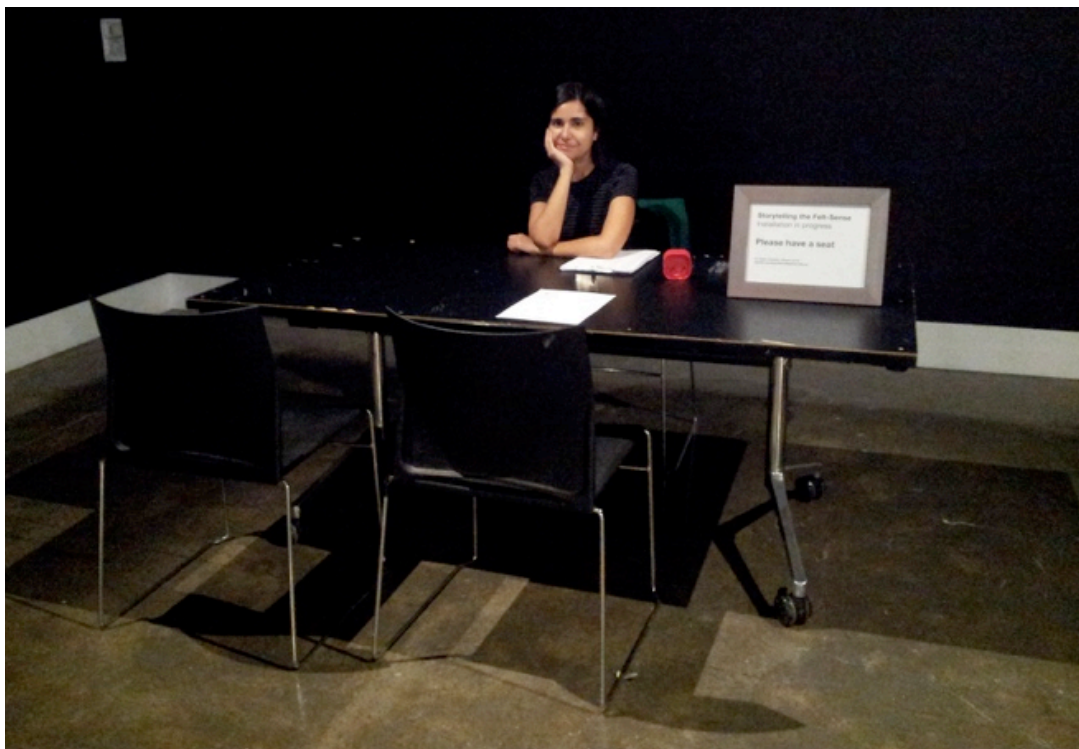


Figure 35– Reception



Figure 36 - The artwork

In the following stage, the participant is guided to a second room, where they find a mat surrounded by a semi-circle of sculptural light elements representing flowers. As the participant gets closer to the artwork lights softly fade-in. After explaining the objective of stage two, the facilitator invites the participant to take off their shoes and lie on the mat, as illustrated in Figure 36. Once on the mat, the facilitator hands a pair of headphones to the participant, who is also notified that the mat contains vibratory elements to be activated during the storytelling experience.

The twelve-minute audio experience consists of two main phases. In the first one, the participant goes through a second brief body scanning, before being invited to imagine himself or herself as the person who is about to narrate the story. The granter's narration is intercalated with drumming sounds, which are also complemented with vibratory stimulus felt through the mat. The facilitator, who manually operates the vibratory surface, listens to the narration simultaneously to the participant. After the storytelling ends, a brief grounded exercise closes the interaction with the artwork. Finally, the facilitator and participant return to the reception room, where they debrief the experience together. The summary of the complete process and setup is illustrated in Table 52 and Figure 37, as an adaptation of the Facilitated Interaction Framework by Loke and Khut (2014)

Table 52 - Soul: Interactive stages

Stage 1 10 minutes	Stage 2 15 minutes	Stage 3 15 minutes
Welcoming Induction Preamble: Guided audio 1 - Body scanning - Focusing on blissful moment - Closing	Induction 2 Fitting The ride: Experiencing the mat through guided audio 2 - Body scanning - The granter's story - Closing	Debriefing - Questionnaire - Interview

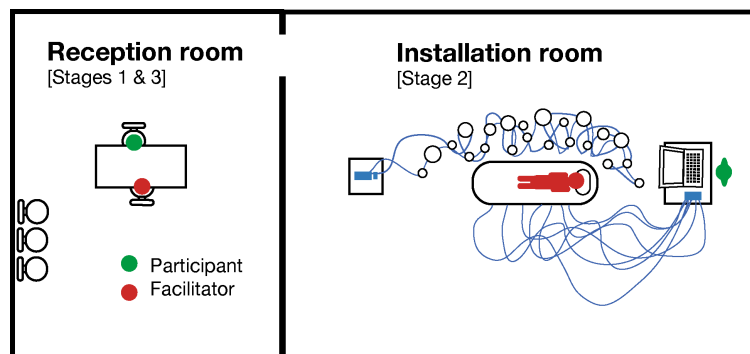


Figure 37 - Gallery setup and interactive stages

8.6 Results

During the four-day period the exhibition was open, twenty-two participants (seven males and fifteen females) interacted with the artwork. Approximately five hours of interview data were recorded. Most participants were artists, architects, designers or professionals from the humanities. Although I did not enquire about their experience with somatic or contemplative practices, most of them spontaneously expressed having some knowledge with meditation, whereas others recognised their total lack of experience with them. As a rare occurrence, I also

received the visit of five Focusing practitioners, from which three of them had more than ten-years experience.

The reception of the artwork was mostly positive, as participants connected with the artwork's invitation to make sense through sensory appreciation. The following results are expressed in terms of how the first and second stages of interaction were interpreted by the audience.

8.6.1 First interactive stage: Preamble or about the own bliss

8.6.1.1 Reception of structural elements of the guided protocol

As in previous experiences where the *Love exercise* was used as part of the protocol, most participants considered that reflecting through Focusing felt more powerful than only thinking about the situation by themselves. The *orderly* nature of the Focusing protocol and being guided through the experience were mentioned as an important factor to facilitate immersive reflection. For instance, participant P18 pointed out how listening to the instructions '*freed me to just feel more. And... I just went through whatever came... the images of the words... it was actually surprising.*' Two expert Focusers highlighted the pedagogical value of the suggestions used for the particular experience. The fact that the guided exercise lasted only five minutes was positively received by those participants with no experience in contemplative practices, particularly as it made the task feel achievable, in some cases generating a positive sense of surprise such as in the case of the participant P20, as illustrated in Table 53.

Table 53 - Participant P20 incredulity transformed into surprise

<p><i>I guess I wasn't expecting.... I am not really used to meditation, [...] because I find difficult to concentrate for even a couple of minutes. Concentrate so much that I stop every other train of thought. So I was intrigued that I was going to be able to concentrate, going through the guided exercise, but it was surprisingly ... effective! And as I was experiencing I was thinking... "If I had a device or an application on my cellphone that would guide me during exercises or something like that.... would I use it every day?"</i></p>

On the other hand, participants with some experience in meditation particularly, reported the opposite. The five-minutes exercise was considered as too brief to deeply connect with the body in a profound way. For the majority of this group, the audio was assessed as an interesting experience that could have been deepened by granting more time for the body and

emotions to set. Interestingly, for participants with experience in Focusing the response was the opposite to meditators. However, differing from the inexperienced group, Focusers were confident about their capacity to connect with their cumulative bodily knowledge as a source of discoveries. After being asked about the effectiveness of the brief guided exercise, participant P12 mentioned: 'We [Focusing practitioners] can drop into [our bodies] very quickly. But I don't think that for other people... don't having this focus on their bodies... would take them up to here.'

8.6.1.2 Effects of guided exercise on emotions

As in previous studies described in chapters 5, 6 and 7 participants once again documented heightened awareness of their body and memories (including somatic memory), with some of them additionally describing the generation of explicit insights. Despite listening to a guided audio piece in an enclosed gallery space, sensory aspects of their personal moments of bliss such as taste, colours, smell, warmth or coldness, et cetera, were mentioned as quite present by some participants. Despite reflecting on trivial situations as sources of bliss, some participants additionally discovered new aspects of their experiences, as expected from previous explorations. For instance, participant P10 who has no experience with somatic or contemplative practices described the following: 'I started to think about why... what was nice about it... what do I like about lying on the grass [...] what is about it that is different than to lying on my couch, or lying on my bed. And I realised that the thing that makes it so special is the feeling of ... you are still there in the middle of everything, but you still take a step back, so when you are lying on the grass so can't ignore the fact it is grass... you can feel it ... the tickling on your shoulders, it is impossible to pretend you are somewhere else'

8.6.1.3 Thinking about one's own bliss as an empathic strategy

Most participants expressed they found stage one as a good preparation for connecting with the artwork. Aspects such as slowing down through the body and entering into a stage of heightened awareness and relaxation were mentioned as useful tools. For instance, P3 pointed out 'The connection is ... it is much better than direct jump into that, so it is like a prelude, which warms me or prepares me. Although it is someone else's moment that we witness, I guess it helps in relating to that in a more intense way.' For some, going to a Japanese Kodo concert was not something they could have considered as a particularly blissful experience, however thinking about their own experience in the first place helped to value her process, and therefore enjoy the nuances of the story. For others, receptivity to the story was not pre-conditioned by the existence of stage one, but more

linked to how qualities apparent in the granter’s story were connected with some of their existing experiences, as I will also discuss in the following session.

8.6.2 Connecting with the granter’s story: Different embodied approaches

As an empathy tool, the artwork was successful to clearly articulate the granter’s evocative qualities of the experience, an aspect that was translated into a clear identification with her feelings (Figure 38).

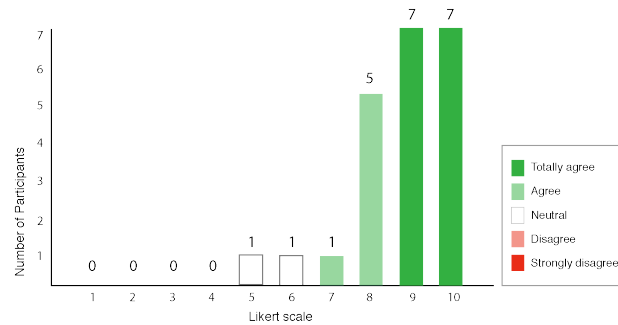


Figure 38 - Participant's identification with the granter's feelings

One of the most noticeable aspects common to all participants’ ways of empathising with the granter’s narrative was how their personal stories were used as references to make sense of the installation. Either from the qualities becoming apparent in stage two, or through memories triggered spontaneously during interactivity, participants predominantly related their level of connection with the granter’s story with their own experiences, which were used as handles for meaning generation. From this perspective, three ways of embodied responses were described: (1) *as being the granter*, (2) *as being there*, which is additionally divided into two sub-categories, and (3) *as not wanting to be there* as a result of rejection feelings towards some aspects of the artwork. Table 54 shows some general results on the number of participants falling predominantly into each category

Table 54 - Number of participants falling into different categories of embodiment

Type	Sub type	Number of participants	Percentage	
As being there	Adaptive and sustained	8	38%	76%
	Open and drifting	8	38%	
As being the granter	3		14%	
Do not wanting to be there	2		10%	

8.6.2.1 As being the granter

Three participants expressed that during the storytelling, they somehow felt as being the person narrating the story. For instance, participant P3 described: ‘In a way there were this switching between being in my body and being in that person's body. Because you hear her voice and you in a way you feel her sensations, but at the same time your body is experiencing some sorts of sensations, so that was a good experience.’

8.6.2.2 As being there

The majority of participants expressed their embodied relation with the narrative *as being there* in the experience, either from a third-person perspective, or as tracing spontaneous relations with their own personal experiences. Two embodied modalities were found in this particular group:

8.6.2.2.1 Adaptive and sustained

When experiencing the installation, some participants reported having to ‘scale down’ the proportion of their experiential referents to *adapt* them to the granter’s narrative (Table 55). These personal referents corresponded to the sensations and emotions still lingering from stage one, or their memories of having attended other concerts, theatres and events. The story delivered through the artwork was used as a foundational material, over which personal experiences were modelled. The sustained quality of this approach to embodiment is expressed

in the use of a particular memory or somatic quality as a tool to connect with the third person's narrative.

Table 55 - Examples of the Adaptive and sustained approach

<p>P.21. [...] maybe it was a bit too early but when she was saying about the concert hall and the curve into it I couldn't... I was initially measuring like a square concert hall and kind of 'shhhh--shhhh' [makes gestures with his hands, as it was changing its form] it kind of turned the perspective in my mind...</p>
<p>P.14[...] the experience I had [with the first stage], this picture of the 'belonging' was so huge, and bringing that in a space, especially when she was describing it was in a theatre... I had to sort of adjust the scale. Because I really had a strong visual image from the first stage and during the second stage from gigantic landscape into a small theatre... it took a little bit of an effort to okay... scale down... scale down.</p>

8.6.2.2.2 Open and drifting

Some participants purposely adopted an attitude of non-judgemental 'resetting' or bracketing the biases of personal experiences. In other cases, specific qualities from stage one were not directly transferred to the artwork, an aspect that was translated into participants paying attention to the artwork without following any particular agenda. As a result, an open dialogue was established between the participant's subjective 'being there' and the story. Participants from this group were mostly dialoguing with the artwork, including drifting the direction of their interests around different situations, which were triggered by emerging words and sensations. For instance, participant's P20 memories were stimulated by different aspects of the narrative, as illustrated in

Table 56. Some other things she reminisced about that were not documented in the table were: an acquaintance of hers (who was brought to mind triggered by the granter's voice) and a nice experience she had in a dark, isolated place during a vacation trip.

Table 56 - Open and drifting

P.20 'Actually, I think I remembered lots of different experiences of going to different concerts. That's interesting because they were quite different, one of them was opera, and the other one was a completely different type of music. Yes, I did think about both of them because I guess it's like because they make the room dark... so the theatre is dark, and you sort of... it's calming and it's soothing it's like really pleasant, usually nice temperature, so yeah... I was reminded of a couple of different personal stories.'

8.6.2.2.3 As not wanting to be there

Sometimes, interacting with artefacts makes sense in a way that opposes the intended effects of the designer. This aspect is discussed by Ihde (2002), [p.106], who has argued how interaction with technology necessarily reveals ambiguous and unpredictable options beyond originally intended functions. Employing a variant of the Facilitated Interaction model as a strategy to minimise such effects does not mean the process of sense making can always be directed towards a desired, specific effect. Although Soul was designed to engage in dialogue about bliss and its corporeal and symbolic qualities, it generated a clear sense of rejection in two participants, who considered the artwork's metaphor of bliss disconnected from their values. Participant P11 in particular (an experienced Focusing practitioner) was surprised with her strong reaction against the story, as illustrated in Table 57.

Table 57 - Participant P11 describe the structure of her rejection

P11. 'There is a part of me that was resistant to engage with this because... there is something going on there... something in me that doesn't wanna go there. Just noticing some resistance there. So, I was very conscious of all these things happening, so really I guess the fact that we have already coming [to see the artwork], taken the time to come to the body actually did make me more aware of everything that was happening in me.'

After having described the embodied modalities triggered by the interaction with the artwork in general terms, in the following section I examine the role of bodily stimuli in the generation of meaning.

8.7 Somatic storytelling: The role of physical senses in immersion

Following the premise that the interactive role of the body is crucial in the generation of meaning (Gendlin, 1962), the inclusion of vibratory stimulus as following the rhythm of the drums was envisaged to grant relational handles between body and experience. Different ways of responding to the incorporation of haptic stimulus in the storytelling were found, as illustrated in Table 58. In general terms, most participants considered that the inclusion of physical stimulus added positive qualities to the experience.

Table 58 - Different effects of the use of haptic stimulus in the body, reported by participants

Response	Number of participants	Percentage
An added layer of realism	7	34%
Enhanced feelings	8	38%
Facilitated metaphorical connection	3	14%
Distracting	3	14%

Originally, the intensity of vibration designed for the mat was based on previous explorations (some discussed in Chapter 7), where the use of subtle stimulus was considered more effective to connect with the felt-sense than strong, disruptive stimulus. Additionally, the study on artefact design for somatic practices by Jonsson et al. (2016) pointing out how haptic stimuli on the body tends to be perceived as coming from outside, removing the focus from inwards contemplation, was taken into consideration. Acknowledging the tension existing in our attentional focus, I have already discussed in Chapter 7 how the use of subtle vibration in Focusing does not necessarily remove the body from being aware of the inner self but sometimes shapes the generation of meaning in different ways. Having said that, although for the majority of participants the vibratory stimulus granted experiential richness to the storytelling, seven out of twenty-two participants spontaneously expressed their desire for stronger bodily stimulus, as illustrated in Table 59 by participant P14.

Table 59 - Example of participant wanting stronger bodily stimulus

P14. I actually wanted more sensations ... just rather than just from the back... I wanted some parts on my stomach area, on my chest maybe... because in the voice she said something like focus on your chest.... heartbeat. And then, when the drums started to get a bit intense I wanted to have this overwhelming assistance, because it... it could have gone stronger I think by surrounding me a little bit more physically, not only the back, but also the top. Because you know... when you feel something overwhelming... excitement, it comes from your guts, and your heart, and your chest...

8.7.1 An added layer of realism

For some participants, vibration added a layer of realism to the story, as exemplified in the accounts from Table 60, where participant P11 places the relevance of vibration over sound to assist in his experiential engagement.

Table 60 - Example of vibration felt as if it was real

P1. I think because of the sensations that were triggered in my body that perfectly interconnected with the vibration of the music playing, it made me feel like I was actually sitting in the auditorium, because I could feel ... because I think that you can feel sound through the body and I could feel that not only through the audio but also throughout my entire body

P11. Firstly because of the relaxation... my senses were all ... I was much more sensitive to everything. But yes... it makes a difference in imagining that actually feel of that, and by feeling that it tricks you into thinking you really are experiencing. You could have someone to talk about drums, and put the vibration... and without playing any drums, you could imagine hearing the drums. I didn't think you needed to have the drums...

8.7.2 Enhanced feelings

Most participants mentioned that the use of vibration assisted in enhancing feelings drawn from the narrative, either from personal memories or from the imaginative evocations triggered by the story.

8.7.3 Facilitated metaphorical connections

Removed from connections linking stimulus and realism, some participants found that the use of vibration assisted in bridging the story with their creative engagement, such as in the case of participant P.22, as described in Table 61.

Table 61 - Vibration stimulating participants' imagination

P22. Yes, the vibration gave... I don't know it gave me the sensation of movement. Waves of vibrations activating my imagination... so I saw... I've immediately imagined that I was in a boat. In a ship, in a war-ship, just going to battle. Every wave from the ocean shook the boat and it shook my body and I felt... I saw those big images of water people... eh... I don't know... making explosions with water and drums. Every wave on the boat draw these images of people, that's why I felt totally connected when she said that she felt it like forces of nature. Because they were forces of nature, like demi-gods drumming with your boat and I was imagining that... to make this experience greater you just need to add oscillating movements on the mat. Like a hammock.

8.7.4 Distracting

Although vibration was positive for most participants, for some it was irrelevant or seen as an undesirable element of their experience. As vibration was operated manually, one of the reported problems was the delay between vibration and sound, perceived particularly by two participants with some experience in sound production. In a different case, one participant with experience in Focusing and creative writing described how the vibratory mat felt distracting and unsettling (Table 62).

Table 62 - Vibration as distracting and unsettling

P5: '[...] the rumbling ground... that actually just... it made me feel unsettled. So those feelings... of being unsettled by the vibration distracted me and put me out of the story.

[...]

C: Why was that? Do you think it was just too unfamiliar?

P.5: I don't know... I mean... I think part of it is the newness, like I haven't experienced where Focusing and storytelling comes to vibration... that's kind of new... very new. So I think it was a strangeness factor, you know... with more experience I'd be more able to relax into it more, and use it as an enter point to my body, but as a first go it didn't work'

8.8 The granter's meta-experiencing with Soul

The granter was invited to register for an interactive session as with the rest of the participants. The facilitated protocol remained unchanged, as illustrated in table Table 52 and Figure 37. She was anxious and expectant to see the metaphorical representation of her story. Stage one was helpful to mitigate her excitement, to drop into her body, and discover something new

about her blissful reflection, which was centered on swimming in the Mediterranean Sea. When entering stage two, she took off her shoes immediately and lay down on the mat unassisted. After the interaction with the artwork was finished, she expressed having felt deeply moved by the experience, and so was I by her positive reaction.

Once back to the debriefing room, she revealed some extra information about her experience:

- She listened to herself as 'being there', from a third-person perspective. Listening to her own voice rendered some unfamiliarity to the situation, which was translated into perceiving herself from a different angle.
- She confirmed the visual component of the story was not relevant, an aspect that I correctly interpreted and articulated through the selected setup and interactive components (audio, haptic stimulation). Even though some participants expressed that more visual or descriptive clues would have added positive qualities to the narrative I would not have considered introducing such stimuli, as they would change the meaning of the piece.
- Regarding vibration, it enhanced her feelings of being there, generating a pleasurable sensation on her body. However, she pointed out an important difference between my interpretation and her memory, as illustrated in Table 63

Table 63 – The granter's description of her aesthetic experience compared to the artwork's representation

<p><i>I noticed that that was the difference between this one and the original experience. The anticipation... it's how to describe how the drums were so gently... they were building up from silence. So it was silence and then... vibration... and bigger and bigger. And the drums that I heard were almost like a heartbeat. There were pauses in between, but it didn't have this... crescendo, like... sound and then... louder... and I missed that, because it was the most exciting thing. <u>And the vibration followed it.... just like a breeze on your skin... and then it became really violent... you know? You felt beating of the drums on your chest and it wasn't violent enough, it was too gentle!</u> [We started laughing] That was sort of... the only think that could have enhanced the whole experience.[...] But apart from that, I loved everything... the vibration that was there, and my skin was so tingly. After it stopped, I still could feel my body vibrating... it was very enjoyable.</i></p>

In the light of these results, in the discussion section I will elaborate on how materialising aesthetic qualities from personal experience implies the active engagement of the granter in the design process, however not necessarily as a co-creator, but as a participant or user.

8.9 Analysing the narrative function of mementos: Searching for meaning

Designing experiences directly inspired by aesthetic qualities, particularly with focus on first-person perspectives, supposes some challenges related with skilfully capturing the specificity of each account. Although the granter was involved in part of the process development of the artwork, and an important part of the content corresponded to a reposition of her experiential material, I purposely decided not to follow a co-creative path towards the design of the artwork. The reason sustaining this decision relates with the view of this artwork as a research tool for knowledge generation (Zimmerman et al., 2010), rather than an end in itself, such as in the case of practice-based research outcomes (Candy, 2006). A co-creative approach would have possibly minimised the mismatches between the aesthetic expression and interpretation, closing the door for the emergence of scaffoldings articulating gaps and issues.

In terms of materialisation of aesthetic qualities from felt sensing, my interpretation of her experience was not completely successful to recognise the importance of key concepts from her narrative, however it was effective to function as a scaffolding for her to individualise with more clarity such concepts. Analysing this narrative piece more closely (Table 64), we find that each paragraph contains specific functions, making evident the systematic way the felt-sensing memento was described. An important aspect to highlight is how the words she used to describe some relevant qualities of her experience contain *strongly incarnated meaning*. Van Manen (2014) describes how texts with strongly incarnated meaning are composed by words not easily exchangeable with synonyms and other terms, as any alteration would compromise the specificity of the expressed meaning. In that sense, the *softness of the butterfly* and the *loudness of the thunder felt through the body* were described later on by the granter as the most memorable aspects of the original experience.

Table 64 - Analysis of narrative function

Felt-sensing memento or narrative	Section and function
<p>I was in a concert hall that was dark and silent, with anticipation of the performance of Japanese KODO drummers. There was a big drum on the stage. A drummer approached it and started drumming.</p>	<p>Prelude</p> <p>The granter started describing contextual aspects of the experience before specifying sensory qualities.</p>
<p><u>It started so gently, like a flutter of butterfly's wings and the vibration was gradually building up, ever so slowly and smoothly; until it became as loud as a thunder and it shook my whole body.</u></p> <p>I felt the vibrations in the air, in my chest, in my arms and legs, in my feet and in my hands. I felt an overwhelming joy inside - it felt like my spirit was moved. I felt I am one with the vibration, with the air, the chair on which I was sitting, with the drummers, with the entire hall. I felt connected on an atomic level. I felt I am a part of the whole.</p>	<p>Felt-sensing qualities</p> <p>This section describes how the whole situation made her to sense a particular kind of connectedness with the world. Although she describes the experience in past tense, her employed terminology is quite sensory, suggesting a strong influence of the felt-sense.</p> <p>In some sections, she uses strongly incarnated meaning in her textual description. For instance, the softness of the butterfly and the loudness of the thunder are specific metaphors that were later highlighted by the granter as fundamental aspects of the experience.</p>
<p>When I placed the device on the palm of my left hand I felt the feeling of connectedness intensified. It was very pleasant. Both palms were pleasantly vibrating, and the vibration "climbed up" my arms and to my shoulders. When the felt sense session ended, I felt more grounded. I felt gravity more intensified.</p>	<p>Role of device</p> <p>In this particular case, by pointing out how the feeling of connectedness was intensified <i>during</i> the guided exercise, she is also letting the reader know that the felt-sense was accessed. The device functioned as a mirror of her experiential memento, as the feeling of connectedness was intensified through the use of vibration</p>

Materialising aesthetic qualities directly into the creation of artefacts, especially if emerging from felt sensing and other somatic practices focused on self-observation, implies working

with narratives containing strongly incarnated meaning interlaced in their structure. Two strategies are proposed to deal with this kind of content:

- **Focus on one quality at a time:** This implies individualising relevant bits of information and asking the granter, *which are the most memorable aspects of your felt-sensing qualities?* Here, it is important to prompt the granter to provide further details.
- **A practical application of the dichotomy mirror/scaffolding natural to research through design:** Even though the granter was aware that I would be using vibration for the representation of her memento, she revealed the most memorable aspect of her original experience after the interaction with the artwork. In that sense, it is hard to tell if merely asking for the most important quality of her experience would have led to its identification. As the articulation of aesthetic qualities is elusive, it makes sense to consider non-linguistic strategies, such as the use of props and prototypes, as *projective artefacts* necessary to consequently elaborate consistent theory through design.

Another important aspect to take into consideration is embracing the elusiveness, ambiguity and open-endedness of aesthetics experiences. Even if correctly representing her described metaphor, at the end of the day it might not have been completely truthful to the granter's original experience regardless. Part of what she experienced remains in her tacit dimension, elusive even for herself. The fact the granter acknowledged the merits of the experience and was able to meta-recognise herself through it might have been enough to work as a starting point to allow other subjectivities to complete with their own meaning. This brings us to how the body constructs *gestalts* of meaning beyond existing representations, namely language or the creator's intention, an aspect that is also present in felt-sensing as a wholistic phenomenon where the body knows its path (Gendlin, 2012). As described in the presentation of results, without having elaborated any question in regard to the intensity of vibration, seven participants (including the granter) spontaneously expressed that vibration was too subtle. Considering the amount of vibration was set up according to observations of previous user studies, the following options can be inferred:

- Participants might have preferred stronger vibration for the sake of bodily pleasure, or to match their own contemplative-creative process, or

- Participants made sense of the aesthetic qualities of the story, regardless of the weak input of the body. Their connection with the granter's story transcended the metaphorical interpretation made by the designer. The need for stronger vibration appeared as a natural, tacit response emerging from the interaction with the artwork.

Either designing from the accounts of a particular granter or through more traditional ways of doing user research would lead participants to make sense of the experience by using their bodies and life experiences as referents. In the next part of the discussion I introduce a framework for the design of aesthetic experiences for somatic practices inspired by the accounts of a particular granter.

8.10 Archetypes of participants

Designing for impactful aesthetic experiences implies making decisions in terms of how certain features of the design that make sense differently to all of us need to be designed. In Table 65 I describe three main archetypical representations emerging from the collected responses. I use the term *pre-personas* instead of *personas*, as the latter rely on narrative representations of aggregations of individual people, particularly to be used as empathy tools for designers (Cooper, Reimann, & Cronin, 2007). The use of *pre-personas* shows more open-ended groups, in this case indicating their general response to the interactive experience. As *personas* are practice-based oriented, meaning that these are conceived for assuming a practical role in the design of concrete artefacts, my take on archetypes or *pre-personas* is intended to discuss the different interpretative possibilities emerging from the interaction with the artwork, which might later inspire the generation of different design paths.

Table 65 - Archetype of participants or pre-personas

	Meditators	Focusers	Inexperienced
Stage 1 Attitudes	Focused on their wholeness of the own bliss.	Awaiting the body to come up with answers. Actively engaged.	Trying to pay attention to the audio and follow the instructions.
Discoveries from stage 1	The inwards-looking process is the most relevant part. If any, discoveries are small, bodily qualities.	Drop-in the body quickly. Creative and active. Discover new things about their experiences.	Sometimes, discoveries become apparent. In such a case, the revelation brings surprise and a sense of achievement.
Duration of stage one	Too short to enjoy the process of bodily immersion in full.	Even five minutes is enough to connect with bodily wisdom.	Five minutes is great to prevent the mind to start wandering, as usual.
Stage 2 Vibration	Vibration enhanced feelings and the focus on the body.	It is a good tool if matches emerging metaphors. Otherwise it is distracting from the inner process.	Vibration makes sense with the story. It makes it feel more real.

Inexperienced participants and occasional meditators were the group that possibly took more advantage of the Soul's aesthetic experience. As meditators and focusers are more accustomed to engage in self-contemplation their self-discoveries are acknowledged without the surprise and candidness of the inexperienced group. For them, the fact stage one was quite brief (due to time limitations) was perceived as an advantage that granted the experience a sense of achievability. For most of them, vibration was associated with realism, bringing to mind personal experiences of having attended other concerts.

If I intend to re-design the experience to cater to meditator's needs, I would have added more pauses, silent spaces, at the same time reducing the amount of commands towards the discovery of self-insights, as for them the significance of dropping into the inner dimension resides in the process itself. As focusers tend to have varied responses when reflecting on the self and environment it would have not made sense to redesign the experience for them. However, experienced focusers showed a tendency to be more sceptical to try new ways of

dealing with external sensory experiences, as these could prevent them from the focus on their inner processes. As a focuser myself, I visualise an interesting paradox in experienced practitioners, where enhancing the focus on the sensorial body results in a distraction from their own bodily ways of engaging with meaning. On the other hand, beginner Focusers were able to engage in more open ways with the artwork, in one case responding quite creatively to the sensory stimulus on the body. Although not intending to engage in generalisations about how focusers tend to interpret phenomena, but rather offering possible paths for the design of enhanced experiences, these results might be suggesting that the purposeful use of stimulus on the body can function as a possible ‘prosthetic’ path to access meaning, which can be eventually abandoned as the body gets more comfortable with its own ways.

8.11 Summary of outcomes

In this chapter, I have introduced and discussed the outcomes of the artwork *Soul*, and its contributions to design. In sum, aesthetic and felt-sensing qualities can be interpreted and transferred through artefacts, however in order to do so it is important to preserve the integrity of the granter’s experience through the process of design. The transference of aesthetic qualities is still open ended, and depends on participant’s interpretation, including how the artefact actually fits with their previous experiences, practices and ways of being, which deeply influence the ways the artefact is interpreted. Different ways of embodied engagement with the story were discussed, as well as different reactions towards the use of sensory stimuli on the body to access the textural qualities of the granter’s aesthetic instance. Finally, in terms of meaning-generation, sensory storytelling inspired two ways of facilitating understanding, as previously discussed in chapter 7: 1) by mirroring the self (*‘I feel like her, and I understand her feelings’*), and by scaffolding meaning (*‘This experience doesn’t resonate, because I feel differently’*). Additionally, a third way to interpret the facilitation of meaning is by seeing the artwork as a *handle* to access memories and thoughts, from which the experience becomes more understandable and relatable, although from a third-person view. In that case, although the narrative is not interpreted in the literal sense of *‘feeling like her’* or even sometimes *‘being there’*, the emergence of thoughts and memories assisted participants to find their own individual ways to tacitly connect with the artwork.

Chapter 9

DISCUSSION

Findings into perspective

This general discussion is intended to reflect on the findings presented throughout the study chapters. The most relevant findings will be summarised, and explicated in terms of relevance for design and limitations.

This chapter was crafted by combining a set of unpublished data, plus content from the following paper:

Núñez-Pacheco, C., & Loke, L. (Conditionally accepted). *Towards a technique for articulating aesthetic experiences in design using Focusing and the Felt Sense*. *The Design Journal*, Routledge.

The comparative analysis of Focusing-oriented bodystorming (FOB) with other methods to access experience introduced in this chapter is also part of this journal article.

This chapter puts into perspective the most relevant findings of my studies, and discusses their relevance for design. From the standpoint of the Focusing-oriented design thinking branch of my research, I will offer a comparative analysis on how the methods of *Focusing-oriented Bodystorming* (FOB) and *Focusing-oriented Design Ideation* (FOI) shown in chapters 5 and 6 are situated in relation with other methods introduced in the literature review, including the strengths and limitations of my proposed Focusing-oriented approaches. From the perspective of the *Explorations with wearable props* and *Focusing* branch of research, I will discuss how studies on props and Soul described in chapters 7 and 8 relate. Finally, I will engage in a discussion on how the gaps emerging in the literature were addressed. Future challenges will be later described in the Conclusion chapter.

9.1 Discussion on Focusing-oriented methods for design

In this section, I will go through the discussion on studies concerning Focusing-oriented design thinking methods, namely *Focusing-oriented bodystorming* (FOB) and *Focusing-oriented design ideation* (FOI)

9.1.1 Study one: Focusing-oriented Bodystorming (FOB)

This exploratory study was designed to elucidate the potential applications of Focusing in the field of design. Participants were asked to reflect on different everyday scenarios with potential for design intervention.

9.1.1.1 Summary of main findings

- Focusing demonstrated to be useful for the extraction of aesthetic qualities from non-aesthetic situations, defined as those unremarkable everyday routines where patterns are repetitive or successions are loose and overlooked (Dewey, 1934). Aesthetic qualities are on the other hand, considered as wholistic bits of self-perceived meaningfulness. Meaningfulness is assessed in terms of the participant's access to discoveries, perceived intensity of experience and the use of textural language to describe the felt-sensing memento.
- This study suggests that reflecting on random objects through Focusing is less straightforward than reflecting on situations. This is likely because this very particular object was not previously experienced by the participants. When reflecting on objects'

qualities, the process of writing articulates the generation of meaning through a process of inventorying. It starts by defining the object's physical properties to move towards more experiential content. In some cases, participants felt the object as embodied part of themselves, which allowed them to relate it with personal values. In some cases, the object generated a strong rejection that surprised some participants.

- There are different ways in which the body responds to the felt-sense, and different ways to articulate meaning. This is reflected through the emergence of archetypes or patterns of responses. Felt-sensing archetypes show the presence of insights, centrality of bodily sensations in the generation of meaning and rich description of stories scaffolded by the guided exercises.
- As a result of these first explorations, FOB can be used as a data collection method, which allows access to a generally overlooked dimension of experience. It also can be used as inspirational material in the shape of personal stories, in a similar way to cultural probes.
- Instead of being inferred by the designer, in some cases the guided exercises allow participants to experience insights by themselves.

9.1.1.2 Situating FOB as a method to access experiences

Traditional techniques used in user-centred design and human-computer interaction such as interviews, questionnaires and observations reveal explicit needs and knowledge about our users (Preece, Rogers & Sharp, 2002; Visser, Stappers, Van der Lugt, & Sanders, 2005). Particularly in the case of interviews and questionnaires, people express what they consciously know and remember about their experiences. However, it is important to consider that a significant part of our lived experiences is accumulated in our tacit dimension (Polanyi, 1967).

Compared with other generative techniques used in design to access people's experiences, Focusing can be situated amongst techniques that reveal tacit experience of people in the context of their quotidian lives. Techniques that use artefacts such as contextmapping (Visser, Stappers, Van der Lugt, & Sanders, 2005) and cultural probes (Gaver, Dunne, & Pacenti, 1999; Gaver, Boucher, Pennington, & Walker, 2004) work within this domain, capturing rich experiential accounts from participants. Beyond the obvious difference where the application of Focusing does not necessarily use physical design kits and props, it is distinctive for its ability to act as scaffolding for people's insights, inspirations and self-discoveries in a flexible variety of settings.

Table 66 summarises high-level distinctions amongst techniques to access experience, across a set of dimensions. The details of this comparative analysis below will be mostly concerned with the differences and similarities of Focusing with context mapping and probes, as these methods can scaffold tacit knowledge. Even though the aforementioned design techniques can also facilitate the emergence of the tacit dimension of experiencing, they also contain some crucial differences with Focusing in terms of the aim of the technique, source of data, access to experience, and role of body, as illustrated below.

Table 66. Comparative table of techniques to access experience

DIMENSION	Focusing-oriented bodystorming FOB	Context mapping	Design probes	Interviews and questionnaires	Observation
Aim of technique	Accessing detailed and descriptive accounts of aesthetic experiences Using bodily self-awareness as scaffolding for people's discoveries.	Elicit contextual information, and bring it to a design team in a way that assists the generation of human-centred designs. (Visser, Stappers, Van der Lugt, & Sanders, 2005).	Understand cultures and everyday practices through subjective narratives. Obtaining inspirational accounts. (Gaver, Boucher, Pennington, & Walker, 2004)	Understand consumer perception, opinions, motivation and behaviour about product and services. Collect information from experts (van Boeijen, Daalhuizen, Zijlstra & van der Schoor, 2014)	Study what the potential user does in a specific context and situation
Source of data	Embodied inner dimension of participant.	Participatory idea generation	Private life accounts	Direct interrogation	Designer's observations of external phenomena
Access to experience	Through the practice of Focusing, participants access their tacit knowledge, revealing insights by themselves	Tacit dimension of experience facilitated by the designer using props to evoke stories.	Tacit dimension of experience inferred by the designer after examining the probe. Participant may reveal insights.	Explicit: Participants reveal what they think they know about their experiences.	Tacit dimension of experience inferred by the designer
Role of body	Inner bodily awareness facilitates the emergence of stories.	Bodily sensations can be elements of people's narratives	Bodily sensations can be elements of people's narratives	The role of the body is irrelevant, except when interrogating about it.	Outside view of users' bodies and behaviour.

9.1.1.3 Aim of technique

The aim of Focusing for design is accessing people's deep and tacit motivations to obtain rich and authentic descriptions grounded in bodily knowing as a source of meaning-generation. As a result, it is expected that information will contain references to intimate aspects of the self, such as feelings, bodily sensations, memories, self-dialogue and insights. By inducing participants to focus on a particular situation while paying attention to their bodies, Focusing scaffolds the generation of textural, detailed descriptions and tacit discoveries. Such discoveries become material for design use, from the standpoint of *inspiration* and *information*. This use of data differs from probes, where Gaver, Boucher, Pennington, & Walker (2004) point out that probes are mainly useful for obtaining inspirational material, while at the same time criticising the tendency towards the over-rationalisation of these tools. As with Gendlin's idea that experiences can be analysed (1962), FOB subjects experiential data through the lens of categorisations, at the same time respecting its integrity and authenticity. People's acknowledgement of their own discoveries becomes a crucial element to confirm the authenticity of each story. On the other hand, techniques such as contextmapping (Visser et al., 2005) focus on studying the context of products' use, to gain empathy towards the user and create novel products. The authors are clear to emphasise that their method focuses on *context* rather than *experience*, as context contains spatial and temporal connections, whilst experiences are ephemeral and only perceived subjectively. In contrast, FOB sees experiences as self-contained unities that can be constantly re-visited from an infinity of perspectives. Therefore, although ephemeral from the standpoint of action (for instance, having watched that special movie during a specific moment in time), the sense of meaningfulness generated by this event remains in our affective memory. In that sense, FOB contributes with the difficult task of helping participants to articulate those elusive qualities that make the experience meaningful. Other techniques such as interviews focus on accessing people's stories (Doody & Noonan, 2013), yet participants respond only about what they know about their experiences (van Boeijen et al., 2014). FOB on the other hand, aims to access the tacit dimension of people's experiences, which becomes explicit after Focusing and the articulation process through the felt-sensing answer kit. This focus on the tacit and personal greatly differs from techniques such as observation, which aims to understand aspects concerning social interaction, analysed from the perspective of different observers to minimise subjective bias (Caldwell & Atwal, 2005).

9.1.1.4 Source of data

As described in Table 66 the source of data through Focusing emerges from the act of paying attention to the experiential dimensions of the inner self. Intimate aspects such as feelings, bodily sensations and subjective experiencing in regard to a specific reflective theme are carefully explored and documented by the participant. This approach is somewhat similar to probes (Gaver, Dunne, & Pacenti, 1999; Gaver, Boucher, Pennington, & Walker, 2004), where participants reveal aspects of the private dimension from their everyday experiences, yet are mostly concerned with the contextual aspects of it. Commonly utilised artefacts such as disposable cameras are useful to document a particular instance of people's private relationship with their environment. As a method to access experience, cultural probes carefully scaffold the participants' description of their own process, allowing them a high level of control in the information they disclose. This is one of the aspects I have tried to capture through FOB and the generation of data from private accounts. Although it is hard to generate the conditions of safety given by probes as responses are given in participants' territories, FOB uses the piece of blank paper as a silent space for private self-reflection, trying to minimise the researcher's influence, and giving the participant the option to withdraw or simply to leave the memento unanswered.

In Focusing, the use of props such as cameras are not necessary, however the metaphor of *memento* which refers to capturing an instance of people's experiences can be applied in the way the guided exercise brings to the surface a particular aesthetic moment in the life of the participant. Focusing instructions go beyond the act of collecting an instance for inspiration (such as in the case of the photograph in probes) by also generating a rich set of textural data for designers to analyse, and later materialise into artefacts, as described in chapter 8.

Similarly to FOB, in the case of contextmapping data analysis focuses on people's emerging stories during co-design sessions, which are materialised in the shape of artefacts (Visser et al., 2005). In FOB, participants do not use artefacts, but rather articulate their experiences directly through writing, granting a private space for further exploration of their felt-senses. Techniques such as observation source data in two common ways (1) as a participant observer, or (2) as a non-participant observer or *fly on the wall*. In both cases, the focus is on observable aspects of the interaction amongst people and context. In the case of interviews, the source of data is provided by the participant in response to different questions elaborated beforehand.

Even in the case of unstructured interviews, at least some guidelines or general research questions are needed (Doody & Noonan, 2013). The provision of general guidelines is similar to the use of general themes for reflection in FOB, granting openness to potential responses. However, the constraints provided by the rules of phenomenological writing in FOB shapes the data towards the description of experiences and their qualities. In contrast, more evaluative responses, which are less relevant in FOB, might emerge freely in the context of other techniques.

9.1.1.5 Access to experience

FOB accesses experience by using the body as the primary source of knowledge, which for Gendlin is considered as a door for making explicit tacit knowledge (Gendlin, 1992). As discussed in the literature review, this knowledge corresponds to a representational bodily knowing, which can be symbolised. This process of symbolisation carries new meaning. One of the unique characteristics of Focusing is it can elicit the generation of insights experienced and articulated directly by the participant. Focusing exercises sensitise participants to access deeper meaning, generating a sense of *aesthetic completeness* to be articulated through language. The context mapping technique also uses sensitisation strategies (Visser, Stappers, Van der Lugt, & Sanders, 2005; Visser & Visser, 2006) requiring participants to interact with probe packages composed of different artefacts before the participatory session. The interaction with artefacts is intended to inspire and provoke participants to give informative and surprising responses in regard to specific topics to be discussed during the generative session. The differences between the sensitisation process of both techniques are: a) Focusing is used to directly sensitise the participant's lived body, which becomes the starting point in the generation of stories, before integrating the context and past experiences. The context mapping process relies on the use of design kits to sensitise participants and prompt them to reflect, starting from the context of action. "Gut reactions" are seen as superficial feedback in contextmapping; thus the sensitising process is crucial to obtain the essence of the process and concept (Visser & Visser, 2006). On the contrary, Focusing considers those bodily reactions as raw materials for the generation of felt-senses, which are processes containing valuable encapsulated meaning. Additionally, different than contextmapping, the Focusing process inquiries from body to context b) Contextmapping design kits include a series of pre-defined tasks to be completed by the participant days before the generative session, while in Focusing

the reflective aim is directly communicated right before the guided exercise, and reinforced during its facilitation. On the other hand, the use of Focusing is intended to obtain new information about experiences that reside in the tacit, therefore communicating the task beforehand would lead to over-rationalised accounts and preconceived ideas to potentially take over reflection. Finally, c) while in context mapping and probes (Gaver et al., 2004) the use of artefacts is fundamental to reveal people's stories, these are not necessary in the application of Focusing. Yet, FOB recognises the role of design tools as scaffolds for meaning. For instance, body maps and writing are considered as fundamental to articulate the nuances of the reflective process. In cases such as the reflection on everyday objects, writing is also fundamental to allow the felt sense to set and make sense through *inventorying*.

In observations, the body is used as a tool to visually track other bodies' space, yet the focus is placed on interaction and behaviour (Caldwell & Atwal, 2005), rather than situating the body as the main focus of interest. In the case of interviews, the means to access people's stories differ from techniques such as contextmapping and probes. Specific approaches to interview such as elicitation techniques developed by Petitmengin (2006) can access deep aspects of people's subjective experiences by facilitating heightened attention. Yet, this approach is not widely used as an interview technique, being overlooked for more traditional methods that tend to bypass the role of felt experience in the articulation of meaning, paying attention to already known facts or situations. Different than any interview technique, FOB give participants space to privately document their experiences, taking an intimate approach to self-reflection.

9.1.1.6 Role of body

The role of body is fundamental in Focusing, since stories are filtered out through inner sensing before the participant comes to any particular conclusion. Rome (2014: p.24) describes this approach as *dropping the story line*, which would prevent participants to generate immediate interpretations of the experience before making sense through perception. Yet, as discussed in chapter 5, the facilitator is to deliver instructions in a balanced way, inviting participants to put existing ideas aside without being too prescriptive. Otherwise, facilitation might generate the opposite effect, restricting participants from exploring their feelings with

authenticity, as they might feel overwhelmed by the challenge that supposes dropping their preconceptions.

In other techniques used to access experience the role of the body is not fundamental, but instead circumstantial. For example, in context mapping (Visser, Stappers, Van der Lugt, & Sanders, 2005) the role of experience is highly relevant, facilitating the generation of rich descriptions of memories and feelings during the sessions. However, participants are not necessarily prompted to directly speak through their bodily knowing as the centre of the narrative. Probes can potentially reveal interesting insights from people's private experiences, with inquiries about corporeal qualities a possibility to explore. As an example of this approach, Koefoed Hansen and Kozel (2007) use probes to investigate the phenomenon of embodiment in interactive and personal technologies, by highlighting the importance of bodily experience as the starting point of intersubjective connectedness. In Focusing, the body is not a mere possibility for exploration, but the core element that shapes the specific texture of data obtained. In the case of traditional interviews, the role of felt-experience is not relevant as part of the technique itself, yet the body can emerge as a particular topic of inquiry during an interview session. In the case of observation techniques, bodies are observed as an external phenomenon, embedded in the importance of context and interaction (Caldwell & Atwal, 2005).

9.1.2 Study two: Focusing-oriented design ideation (FOI)

Drawing upon FOB, this study incorporates design tools to facilitate the articulation of meaningfulness. Additionally, it aims to generate ideas from the felt-sense and through the systematic process of articulation scaffolded by design resources. It combines Focusing with reflective listening, the felt-sensing answer kit (used as an idea-generation tool) and sketches. Although FOI is a method to practice within design teams, it privileges the concept of *partnership* grounded in Focusing practice over *teamwork*.

9.1.2.1 Summary of main findings

- It was found that ideas grounded in the felt-sense can be defined according to their following qualities: (1) Ideas can be highly somatic, which means grounded more specifically in its lived dimension. Descriptions of how the body relates with the environment are nuanced, detailed and linked to everyday actions. These make evident

aspects of the experience previously overlooked; (2) Ideas can be responses to emerging insights. In such a case, there are two recognisable patterns of response (a) ideas can be transformative by repelling the influence of negative aspects emerging during the guided exercise, or can be (b) metaphorical, by capturing the beauty of emerging aesthetic meaning.

- Additionally, ideas emerging from FOB can be considered as lateral. The laterality of thinking through the body can be interpreted as a new way of looking at the problem and solution instead of engaging in a problem-solving mentality by utilising the usual resources (De Bono, 1970). As heavily relying on intimate and personal aspects of experience, societal expectations were naturally bracketed during the session. As a result, some ideas evidenced deeper issues, which were materialised through ideas that can be considered as defiant of societal rules. These ethical and social issues are sometimes seen as outside the scope of design intervention, yet these ethical discussions are necessary in design (Buchanan, 2001). The open-endedness of Focusing exploration and the non-judgemental nature of FOI can potentially bring these themes to the surface. Ideas emerging from the method are also grounded in Dewey's concept of aesthetic meaningfulness, where design ideas embody values emerging from somatic exploration (for instance: Sense of belonging).

9.1.2.2 Situating FOI as a method to generate ideas

The techniques referenced in this analysis (Table 67) share some fundamental similarities with FOI. These similarities are mostly related with the fact that the body is used as a source for exploring and generating ideas for the majority of the methods here discussed. The inclusion of brainstorming (Osborn, 1953) in this analysis was taken into consideration as it embodies the fundamental rule of promoting a non-judgmental attitude towards idea-generation as discussed in chapter 5, which has also greatly influenced the spirit of the methods discussed in this analysis (Buchenau & Suri, 2000; Lee et al., 2014; Márquez Segura, Turmo Vidal, Rostami, et al., 2016; Oulasvirta et al., 2003).

As previously discussed in the literature review (chapter 3), the main difference between the majority of the abovementioned methods and FOI is the fact that the latter is not enactive. One of the themes emerging from the discussion of gaps is how enactive methods generally focus on the *action performed* rather than the inner process of those who experience the action. Tracing relationships between techniques, including how they are executed, FOI is situated closer to

brainstorming, as discussed in chapter 5. In contrast brainstorming is based on generative fast thinking (Osborn, 1953), rather than the slow and attentive nature of FOI, which aims to articulate experience through inner exploration. FOI also shares some similarities with Somaesthetic reflection (Lee et al., 2014), as it uses self-reflection as material for design. However, it also contains two main differences: (1) somaesthetic reflection mostly uses outcomes from body scanning as a design material, in contrast to FOI which scaffolds the articulation of tacit meaning through the Focusing instructions designed for such a purpose, and (2) somaesthetic reflection uses group verbalisation of outcomes from the guided exercises, whereas FOI uses the concept of *partnership* to avoid the dilution of aesthetic qualities. This dilution happens through common design practices such as having to negotiate ideas and concepts before enabling the aesthetic qualities to be acknowledged in full.

Table 67 - Different ideation techniques in relation to FOI

	Brainstorming (Osborn, 1953)	Bodystorming (Oulasvirta et al., 2003; Schleicher et al., 2010)	Experience prototyping (Buchenau & Suri, 2000)	Embodied sketching (Márquez Segura, Turmo Vidal, Rostami, et al., 2016)	Somaesthetic reflection (W. Lee et al., 2014)	Focusing-oriented ideation FOI
Aim of technique	Free participants from inhibitions (generated by criticism) to facilitate the generation of as many ideas as possible.	Reduce time to study documents from user observation, allowing a prompt evaluation of ideas in the wild	Understand, explore and communicate experiential aspects in the interaction with prototypes	Support ideation by including the bodily experiencing early in the design process. Enhance creativity through play and playfulness	Appreciate and facilitate the development of somaesthetic sensibility, to be used as a material for design ideation	To access and articulate aesthetic qualities and overlooked aspects of everyday interaction by accessing self-discoveries
Source of ideas	Group collaboration in the design studio/team	Observation and interaction in the wild	Simulation of scenarios and direct interaction with prototypes	Physical engagement and the exploration of different design resources in the context of play activities	Physical engagement and somatic reflection	Tacit dimension of experience accessed through the Focusing protocol/ embodied self-awareness

Role of experience	Experience is accessed through collective creativity instead of by means of direct engagement	Experience is very important, as interacting with the environment allows a direct observation of constraints and affordances	Experience is considered as dynamic, involving the inseparable relationship between objects and people	Experience is accessed through bodily exploration. It references principles from practical somaesthetics	Experience is accessed through bodily exploration. It references principles from pragmatic and practical somaesthetics	Experience is an ongoing phenomenon. It doesn't need to be recreated to access overlooked and aesthetic aspects of it.
Role of body	One of the habits for successful brainstorming sessions refers to get physical by bringing materials to the session.	'Being there' interacting in the wild is key. The body is a tool for action in the world.	Physical engagement is inseparable from interaction itself, as both compose experiences simultaneously.	A deliberate use of applied somatic fundamentals puts the body in the centre: practical somaesthetics	A deliberate use of applied somatic fundamentals puts the body in the centre: practical and pragmatic somaesthetics	A deliberate use of applied somatic fundamentals puts the body in the centre: Focusing and the body as a source of meaning-making
Use in the design process	Ideation	Ideation To reduce time of analysis	Ideation Prototyping Evaluation	Ideation Co-design Sensitisation technique	Ideation Sensitisation technique	Ideation Discovery Articulation of aesthetics and somatic qualities

9.1.2.3 Aim of technique

FOI is an ideation technique that aims to make explicit aesthetic and somatic concepts and qualities emerging from the act of felt-sensing, to be used as sources of idea generation. To do this, FOI delays the solution-seeking process, facilitating a deep understanding of the problem from a subjective perspective before sharing any outcome with the design team. FOI uses a series of steps to facilitate the description of what makes the examined experience particularly relevant. Through the notion of filtering out ideas through the body, salient concepts and issues related to the design brief become apparent to people's consciousness.

The generation of insights or personal discoveries is one of the main pursuits of the FOI technique. Autobiographical aspects of experience that might be considered otherwise as anecdotal or marginal are those 'aesthetic bits' giving substance to the idea-generation process. Different to the enactive techniques mentioned in this comparative analysis (Buchenau & Suri, 2000; Lee et al., 2014; Márquez Segura, Turmo Vidal, Rostami, et al., 2016; Schleicher et al., 2010), FOI uses reflection through inner presence (as discussed in the literature review, chapter 3). This means that FOI does not use the body as a tool for representing situations in

simulated or real settings, but rather for re-living experiences through reflective, contemplative means. A careful exploration of past, real experiences is fundamental for the success of this technique. Although action and perception cannot be separated (Merleau-Ponty, 1962) and it makes sense to enact the situation in order to perceive possible overlooked aspects of it, it is also true that direct interaction with the environment is not always sufficient to unearth detailed aspects of the experience as already discussed in emergence of gaps from the literature review (chapter 3).

It is important to say that the point of doing Focusing is not recalling experience as it was in the past, but rather to re-live experiences from the standpoint of a new, fresh perspective granted by the felt-sense. This aspect is not very different to techniques that use reflection-through action, where situations are acted out in order to get close to the experience, such as in the case of bodystorming (Oulasvirta et al., 2003), or experience prototyping (Buchenau & Suri, 2000). The validation of experiences in FOI is granted by the sense of meaningfulness acknowledged by the designer participating in the sessions, which as previously discussed, can be traced through the analysis of mementos as well as the projective nature of the ideas generated.

In comparative terms, the objective of enactive techniques does not differ dramatically with FOI in their acknowledgement of experiences as pivotal sources of information. For instance, experience prototyping is a method that acknowledges the intertwined connection between artefacts and environment, focusing on experiential aspects emerging from the interaction with prototypes (Buchenau & Suri, 2000). Bodystorming is used to better understand how the setting where interactive experiences occur influence how users behave (Smith, 2014), in line with the goals of ubiquitous computing towards designing natural interactions (Oulasvirta et al., 2003). Embodied sketching is a design approach that uses ideation methods, aiming to design for and from bodily lived experience (Márquez Segura, Turmo Vidal, Rostami, et al., 2016).

Different than the previously referenced techniques, brainstorming is an ideation technique that aims to reduce inhibitions and spaces for criticism, to ensure the generation of as many ideas as possible (D. W. Taylor et al., 1958). FOI shares the non-judgemental spirit, yet as brainstorming heavily relies on group interaction, inhibitions might still emerge during the exchange of ideas due to the mere presence of others (Dunnette, Campbell, & Jaastad, 1963).

In contrast, for FOI the expression of subjective felt-sensing qualities is crucial for the success of the technique. Additionally, instead of focusing on quantity as with brainstorming, FOI focuses on developing an enhanced connection with one unity of experience, from which several qualities might emerge.

9.1.2.4 Source of ideas

In FOI, the primary source of idea-generation is the tacit dimension of experience, which is accessed through a sustained and systematic process of inner-observance. This self-reflective process is grounded in the notion of noticing how our senses perceive everyday situations in order to construct meaning. This idea of noticing is particularly relevant in somatic practices, and it is based on the understanding that embodied self-awareness is inseparable from environment, action and interaction (Mehling et al., 2011). Most everyday acts remain in the background of our attention, requiring some effort to purposely reflect on them.

As an ideation technique, FOI aims to facilitate the act of bracketing automatic assumptions through assertive self-observance. Automatic assumptions or fast thoughts are highly efficient in responding towards routine tasks, however these can be highly biased to pre-conceived ideas, and thus not quite effective to engage in deep analysis (Kahneman, 2011). Having said that, although the act of ideating through Focusing is situated closer to slow thinking, it also depends on the close examination of manifestations recognised as belonging to the fast spectrum, such as intuition and emotions. Intuitions, for example, are particularly important because as felt-senses they bring content arising from our unconscious mind to our conscious dimension (Gendlin, 1996). Following this line of thought, the difference between intuitions and the felt-sense resides in the speed these manifest themselves. While intuitions can appear suddenly (Gilhooly, 2016), the impreciseness of the felt-sense can take some time to be formed, and sometimes requires purposely attending to it. In other words, the inclusion of Focusing-oriented tools for ideation transforms intuitions and feelings from being fast, automatic responses to slow, reflective manifestations. In some cases, this reflective observation of intuitions can lead to insights or realisations, as the act of examining these is rare in everyday experience. Unlike enacting everyday situations as a source of intuitive idea-generation, FOI tries to access some of the qualities that make the interaction particularly relevant, helping to articulate meaning of such intuitive acts. This slowing-down process of noticing facilitates the description of concrete somatic properties, which are expressed through

words or metaphors. As discussed in the literature review (chapter 3), enactive methods use *reflecting through action* as a source for ideas, which makes the emergence of representational bodily knowing difficult to achieve. Enactive ideation methods such as *bodystorming* (Oulasvirta et al., 2003), *embodied storming* (Schleicher et al., 2010) and *experience prototyping* (Buchenau & Suri, 2000) do not require actively slowing-down to notice, but rather to reflect through collaborative action, taking advantage of fast thinking, which generates mostly non-descriptive ways of bodily knowing. In the case of embodied sketching and its approach influenced by principles of practical somaesthetics, play and theatre theory (Márquez Segura, Turmo Vidal, Rostami, et al., 2016) uses sensitisation strategies based on bodily cultivation as a tool for designers to access somatic qualities, sustained in action. An ideation approach with similar principles, but also integrating principles of pragmatic somaesthetics, was also explored by Lee, Lim and Shusterman (2014). Somaesthetic ideation combines somatic reflection with direct exploration of bodily movement. Although somaesthetic ideation and embodied sketching explore the concept of self-observance, the way they articulate somatic qualities greatly differ. Embodied sketching for instance, uses a tool generating high-level description of possible actions and the inclusion of tools as a way to generate playful ideas (Márquez Segura, Turmo Vidal, Rostami, et al., 2016). Somaesthetic reflection relies on verbalisation of accounts within the design team to inform ideas (W. Lee et al., 2014). In the case of FOI a sustained phenomenology-based documentation of the inner process becomes an extended tool for meaning making. As in phenomenological research, writing is seen as a wholistic act of reflection in its own.

“Phenomenologists have commented on the reflexive character of writing. Writing (like “*se décider*”, the French word for deciding; i.e., making up one's mind) is a deeply reflexive activity that involves the totality of our physical and mental being. To write means to write myself, not in a narcissistic but in a deep, collective sense” (Van Manen, 1984a, p. 28)

Brainstorming on the other hand, uses a kind of reflection that is neither situated as in the case of enactive ideation methods, nor grounded in inner presence as FOI. Instead, it uses a mixture between more traditional ways of imagination (as suggested by the use of ‘brain’ in its nomenclature) as well as more distributed understanding of meaning making, where meaning is grounded in social interaction (Y. Rogers & Ellis, 1994). From this comparative analysis, brainstorming is the only ideation method that is not enactive as FOI, yet beyond this link

there is an essential difference in terms how ideas are sourced. While brainstorming uses team interaction and imagination, FOI harnesses the subjective, which is carefully articulated and used as a design material.

9.1.2.5 Access to experience

FOI accesses aesthetic experiences by means of reflection through inner presence, using embodied self-awareness as a door to re-live situations through the felt-sense. Rather than accessing experience and tacit knowledge directly through enactment, FOI uses the ongoing repertoire of experiences that is collected through our senses. Having said that, in order to understand those experiences in more nuanced ways, somatic sensibility requires training and time to be assimilated (Shusterman, 2011b). Yet, one of the positive features of working with the felt-sense as a material resides in its presence and natural emergence in everyday activities (Gendlin, 1978). Although participants get more attuned to their bodies and more sensitive to the nuances of the felt-sense over time, an important part of this connection with their bodies is already there. In that case, *the role of the facilitator* is crucial in creating a non-judgemental and safe space for people to connect with their bodies. In contrast, as explained in the gaps emerging from the literature review, most techniques mentioned in Table 67 (specifically experience prototyping, embodied sketching and bodystorming) use *reflection through action* as a tool to access knowledge. Somaesthetic reflection (Lee et al., 2014) uses reflection through inner presence, yet the way outcomes are articulated differ from FOI, as it relies on *subjective experience* and articulation of aesthetic values as major materials for design. For somaesthetic reflection applied to ideation, articulation is relevant, however it is limited to verbal expression amongst team members. One of the issues challenging the adoption of Focusing-oriented techniques resides in a dominantly held view of the subjective as invalid, which discourages designers to consider their personal experiences as relevant in the design process. For instance, the use of personal accounts integrated into the design process has been considered as biased and as contradicting elemental principles of user-centred design (Neustaedter & Sengers, 2012a). Although the role of designers is to fulfil human needs of others, purposely denying personal experiences as a possible factor to take into account might be closing the door for lateral ways of crafting and articulating design ideas. As emerging concepts are close to people's experiences these have the potential to be quite detailed and rich, revealing the elusiveness of what makes an experience aesthetic. This approach placing subjective experience

at the centre should be neither an impediment to later validate emerging ideas through traditional user evaluation methods (such as described in Chapter 9 on the artwork *Soul*), nor prevent the utilisation of additional methods for problem articulation.

Different than FOI and its utilisation of subjective experience as the centrepiece of the method, in most techniques described in the comparative analysis (Table 1) the role of teamwork is quite relevant. Even in the case of techniques with a strong subjective focus such as embodied sketching, co-design tactics are used as resources for ideation and engagement (Márquez Segura, Turmo Vidal, Rostami, et al., 2016). In the somaesthetical approach, personal experiences emerging from bodily exploration are shared in group ideation sessions (W. Lee et al., 2014), which as previously discussed might weaken the transference of meaningful insights into design. Context and setting are inseparable from artefacts and people, which make methods such as bodystorming (Oulasvirta et al., 2003) and experience prototyping (Buchenau & Suri, 2000) eminently team-based. Instead of placing the emphasis on group collective engagement, FOI exercises are practiced in the modality of partnership. In that way, we try to guard as much as possible the richness of aesthetic description as well as the integrity of the insight, a consideration that I have discussed in my literature review (chapter 3), through my experience with Somaesthetic reflection. In the practice of the Focusing technique, partnerships are fundamental to allow focusers to facilitate the generation of the felt-sense through describing and reflecting what is perceived. The primary role of the partner is to put in practice the act of listening, which is one of the fundamentals of Focusing as a therapeutic technique (Rappaport, 2008). Although FOI is not related to therapy, it imports the benefits of unconditional listening into the ideation process, as described in chapter 6.

9.1.2.6 Role of body

As already discussed in chapter 2, as FOI is grounded in Gendlin philosophy, the body is seen as an ongoing, permanent source of meaning in itself. As it constantly collects information from the environment, the body is the bearer of knowledge of which we are not always aware (Gendlin, 1978). In line with embodied interaction principles (Dourish, 2001), enactive techniques equate the act of experiencing with direct interaction between people, context, places and artefacts. As experiences are enacted, bodystorming and experience prototyping (Buchenau & Suri, 2000; Oulasvirta et al., 2003) use the body as a tool to access experience.

Yet, conceptual bodily knowing in itself is not the main focus of these method, but rather the situations and interactions occurring where the body is situated.

Approaches such as embodied sketching (Márquez Segura, Turmo Vidal, Rostami, et al., 2016) and somaesthetic reflection (Lee et al., 2014) pay a heightened attention to the lived body as a source of ideas, yet in the case of embodied sketching, it focuses on tacit and non-linguistic manifestations of bodily knowing for the design of artefacts in the context of physical activity. FOI on the other hand uses representational bodily knowing to explore an endless variety of topics inspired by everyday interactions. In the case of somaesthetic reflection, outcomes emerging from body scanning sessions are incorporated into varied design ideas. Yet in FOI, the focus is placed on transferring representational bodily knowing into design ideas, thus body scanning sessions might not be sufficient to facilitate inner dialogue as pointed out previously (chapter 3). The use of Focusing, which also incorporates body scanning at the beginning of the guided exercises, is intended to extract more specific qualities of experiences to be systematically described, an aspect that differentiates FOI from other somatic-oriented methods.

9.1.3 Focusing-oriented design methods: Considerations

The following are some of the considerations to take into account when applying the FOB and FOI methods.

- Gendlin (1978) claims that the emergence of the felt sense is a natural occurrence, thus the practice of Focusing should be disseminated outside the boundaries of therapy. In light of the results, to take advantage of methods such as FOB and FOI it is advisable to reflect on situations from everyday life, in order to extract aesthetic meaning from apparently anaesthetic situations. Conversely, participants can be asked to reflect on positive situations, which would add new layers of richness to already aesthetic and meaningful experiences. Having said that, the use of Focusing for the exploration of overly sensitive and negative topics is not advised. The reasons are twofold: 1) Focusing could maximise the perception of situations (as expressed in the results section), transforming the overall experience from sensitive to overwhelming for the participant, and 2) as the feelings of negativity become noticeable and take over the experience, the emergence of the felt sense is compromised, blocking the generation of discoveries. In cases where the exploration of sensitive topics is

required the use of other techniques such as design probes is advised, as artefacts mediate the conversation. Having said that, negative feelings are also a part of life and acknowledging this consideration is not a way of denying their relevance. Negative memories and feelings might emerge, yet the guided exercise is not explicitly directing the participant towards them.

- The structure of the felt-sensing answer kit used in FOB and FOI functions as a coherent whole. The questionnaire inquiring about discoveries and intensity of experience is relevant to make sense of the data, and to validate the existence of discoveries. Although discoveries are sometimes evident and embedded in the mementos, it is not advised to omit the questionnaire. Post-experience interviews might also be useful to further clarify the nature of discoveries.
- Although rich and textural, felt-sensing mementos are not easy to analyse, which has motivated the creation of the *Felt-sensing archetype analysis tool* (Núñez-Pacheco & Loke, 2015), as a way to categorise data according to different archetypes or pre-personas. As seen in the result section of FOI, archetypes and ideas tend to relate.
- Revelations grounded in bodily exploration make evident unexpected aspects of our interaction with the environment. As a result of allowing the body to speak assertively, ideas emerging from FOI in some cases exceeded the boundaries of the design brief. From the step between articulation to idea generation, it is important to keep the brief in mind to avoid the generation of ideas that might be too removed from the original design challenge.
- Using a particular memento and related idea to directly inform design as suggested by FOI implies breaking user-centred ideas entrenched in traditional design thinking. The importance of designing through subjective experience has been acknowledged by some design researchers (Desjardins & Wakkary, 2016; Neustaedter & Sengers, 2012a; Tomico et al., 2012; Zhang & Wakkary, 2014), yet there is still a long way before this notion becomes widely accepted. Ideas emerging from self-contained aesthetic bits of experience might be enough to inform design directly before being subjected to open user evaluation (see chapter 9). This aspect connects with the point below.
- As ideas emerging from FOI are representations of meaningful aesthetic units, their adaptation might not always be negotiable. Negotiation can take place only if drawing upon the meaning of the self-contained insight (for instance: *designing for the sense of belonging*).

Otherwise we risk destroying the integrity of the aesthetic bit, trivialising the aesthetic qualities of it and therefore missing the point of using the method. The personal example I have described in the literature (chapter 4) about how my insight grounded in smallness was adapted to fit another person's ideas, who also ended up dissatisfied, illustrates this point clearly. In that sense, it is better to treat insights as self-contained wholes, and select the 'best one' according to external factors such as feasibility, availability of resources and concordance with general societal values. The person who created the selected memento then becomes the one who grants an instance of his or her experience, and evaluates the resulting reinterpretation as an expert of it. As already seen in chapter 9 with the art installation *Soul*, designing from the granter's experience showed evidence of facilitating meaningful connections between the granter's experience and other subjectivities. This point will be further discussed later in the chapter.

- The practice of focusing-oriented design activities requires safe spaces for the open revelation of personal stories. As participants reveal inner accounts, confidentiality and mutual respect are crucial for the successful application of this method. Hence, FOI is advised to be practiced either in design groups showing active interest in somatic practices, as well as within consolidated design teams that aim to spark their creativity by defamiliarising their habitual patterns. FOI and its approach to listening and telling have the potential to enhance not only creativity, but also to heighten empathy. Mutual trust makes participants more receptive to self-discoveries and less prone to judgment. Another aspect to consider is that although Focusing can be practiced by anyone and it can be adapted to different scenarios outside therapy (Gendlin, 1992), FOI might require a couple of attempts before getting designers in contact with their felt-senses. During the initial design sessions, it is advised to sensitise the design team with a preliminary guided Focusing exercise, inviting them to reflect on an everyday situation that makes them feel good on a personal level (Simon, 2015). As the group evolves their ways to access somatic sensibility, sensitisation strategies can be omitted.
- Another challenge is the key role of the facilitator in the elicitation of experiential qualities. As stated in chapter 4, a certification in Focusing is not essentially needed to engage in its practice. However, the facilitator still needs some command or experience in somatic practices to contribute actively and effectively in the generation of discoveries. Schiphorst (2011) highlights the importance of the role of somatic connoisseurship, as the facilitator

can import new knowledge from practice as well as somatic sensibility into the design process. Otherwise, it can be difficult to perceive the benefits of importing these practices into the design process.

9.2 Discussion on embodied explorations of Focusing and Design

In this section, I will discuss the outcomes of the two following studies: *Exploration with wearable props* and *Focusing (W&F)* and *Soul: Storytelling the felt-sense*. Then, I will engage in the discussion on how both relate, particularly in terms of embodiment, interaction and meaning.

9.2.1 Study three: Exploration with wearable props and Focusing (W&F)

Beyond the applicability of Focusing into the design process, this exploratory study aimed to understand how wearable stimuli could shape the generation of stories, and which kinds of qualities would be associated with the use of props emitting gentle heat and vibration in conjunction with Focusing.

9.2.1.1 Summary of main findings

The use of props during the Focusing practice has shown the following features:

- Props bridge the tacit with the tangible, by transporting participants to the physicality of their memories. The use of additional stimuli grants the sensation of 'being there'. This quality re-emerged during the interaction with the artwork *Soul*.
- The use of props serves to map the body terrain, and to pinpoint the area of the body where the felt-sense emerges.
- Props follow the same logic as the use of words in the facilitation, acting as either *mirrors of the self* or as *scaffolding new meaning*. The mirroring process occurs when the stimuli matches and amplifies the perception of the memory and felt-sense. The scaffolding process happens when the stimulus does not feel 'right', stimulating the search for fresh meaning repealing this disagreement. This finding makes evident that interactions do not need to be always smooth or transparent to facilitate inner dialogue and self-understanding, or to surface aesthetic meaning.
- In line with the previous point on disagreement as scaffolding meaning, the perception of lightly diminished comfort and pleasure does not necessarily seem to interrupt the formation of the felt-sense. Rather, it seems to open a playground for a more acute

connection with implications and occurrences. In various cases, the use of stimuli was felt as slightly more uncomfortable during felt-sensing compared with solely placing the prop in contact with the body before the exercise. Yet, this slight discomfort did not prevent participants searching for meaning. As a result, slight discomfort facilitated the process of sense-making and active searching for spots on the body towards *mirroring the self*.

- Heat and vibration facilitated the emergence of different aesthetic qualities. Initially, I hypothesised that vibration would feel too crude, however participants found ways to make sense of both heat and vibration. In general terms, metaphors related with heat are associated to energy, warmth and bliss, whereas vibration is perceived as a feedback loop generating a calming, grounding effect.

9.2.2 Study Four: Soul – Storytelling the Felt-sense

This final study entitled *Soul* combines two branches of research, including exploration with technologies and design methods. The resulting artwork integrated storytelling and stimuli on the body. This study made use of one of the felt-sensing mementos obtained in the previous studies to create an art installation, at the same time proposing a *method to design from the granter's experience*.

9.2.2.1 Summary of main findings

The interaction with this artwork designed from the standpoint of a granter's memento inspired different modalities of embodied engagement:

- As being there: The artwork generated the sensation of being in the concert hall. This kind of engagement was embodied in two ways: (1) Participants made sense of the narrative by connecting it with their past experiences, and (2) Participants adopted a position of non-judgemental bracketing or 'resetting', engaging in an open dialogue with the artwork.
- As being the granter: Some participants felt *as being her* during the interaction moment
- As not wanting to be there: In some cases, the installation generated strong rejection, either because of the story, the setup or the stimuli on the body.

The inclusion of vibratory stimulus through the mat generated different responses in making sense of the story as it:

- Added a layer of realism

- Enhanced feelings of immersion
- Facilitated metaphorical connection
- Felt distracting

The granter's response to the artwork:

- The granter experienced Soul as 'being there', from a third person's stance.
- Although the granter enjoyed the interaction, she considered the representation of her memento missed an important part of the essential and nuanced aspect of her real aesthetic experience.

Response from a design perspective:

- Although the personal aesthetic qualities of the experience were not interpreted in full, it made sense to others who completed it with their own meaning, generated creative interpretations, et cetera (see previous points).
- The fact the aesthetic qualities from the granter's story were not interpreted in full does not mean the artwork was unsuccessful, but rather that more iterations might be needed to refine the missing qualities. It is important to note however that the exact replication of a previous experience is impossible. Yet, designing from the standpoint of the granter's experience is intended to transmit the essence and nuances of aesthetic qualities as much as possible.
- The artwork scaffolded a response in the granter, materialised as a detailed account on the missing aesthetic qualities, and how these should have been depicted to represent her experience with further fidelity. That might have been possibly difficult to articulate if not through the direct interaction with the device.

9.2.3 Discussion: Adopting an embodied position for design

In chapter 3, I have offered some examples from the HCI literature showing how the provision of open-ended interactive experiences can scaffold affective dialogue, and by extension meaning generation. This meaning generation process is not necessarily intended to guide the user towards a prescriptive answer, but rather to support multiple interpretations. This multiplicity of meanings is linked to the concept of *ambiguity as a resource for design*, which rather than being a property embedded in artefacts, corresponds to a quality of interpretation (Gaver et al., 2003). In the same way, aesthetic qualities of interactive experiences do not reside in

artefacts, but instead are linked to the meaning these elicit (Petersen et al., 2004). The richness of both ambiguous interactions and aesthetic experiences depends on how these facilitate the emergence of different types of meaning. Although appearing as a related term, the meaningfulness granted by ambiguous interactions appears as the opposite of fuzziness, or loose succession as described by Dewey (1934) when referring to the characteristics of anaesthetic experiences. Gaver et al. differentiates fuzziness and ambiguity as follows:

“[Its interpretative quality] distinguishes ambiguity from related concepts such as fuzziness or inconsistency: these are attributes of things, whereas ambiguity is an attribute of our interpretation of them. Things themselves are not inherently ambiguous. They may give rise to multiple interpretations depending on their precision, consistency, and accuracy on the one hand, and the identity, motivations, and expectations of an interpreter on the other.”(Gaver et al., 2003, p. 235)

Whilst fuzzy interactions are anaesthetic, and thus confusing as meaning cannot be elicited, an interaction that offers the conditions to generate meaning through different links could be interpreted as aesthetic. The artwork *Soul* supports aesthetic ambiguity in the sense it does not try to impose any meaning to the participant. Instead *Soul* adopts a position represented by the particularities of the granter’s aesthetic experience. Adopting a position does not mean the interactive experience closes the doors for multiple interpretations, but rather adopts a worldview that is provocative, eliciting a variety of reactions as a result. *Soul* is not a neutral piece of technology and does not mean to be, yet its partial position aims to scaffold meaning and facilitate a direct dialogue with the *essence* of the presented aesthetic experience. This aspect of adopting a position has also been explored by Dalsgaard (2014) in his design of a museum art installation embodying theoretical concepts from Deweyan aesthetics.

As analysed through the emerging theme of *devices as scaffolds* from my study on wearable props and Focusing (chapter 7), and also through the *transformative* character of a negative felt-sense towards idea generation (chapter 6), rejection is seen as a potentially generative tool for meaning-generation. As discussed in chapter 2 and speaking from Gendlin’s views on embodiment, when the occurrence process does not fulfil our implications, the body insists in its implying. When this insistence overcomes, then immobility becomes *generative*, allowing the body to find alternative ways to fulfil its needs (Gendlin, 2012). This fulfilment process is also

mentioned by Dewey, who considers the act of carrying forward as an aesthetic experience grounded in *maturation* (Dewey, 1934).

Felt-sensing qualities, or those that give the experience its particular sense of meaningfulness (sensations, words, thoughts, overall impressions) cannot be transferred literally. As discussed in chapter 8 and highlighted previously in the summary of results of *Soul*, different embodied relations emerged from the interaction with the artwork, including rejection towards the narrative. Sometimes, participants can appropriate part of someone else's experience, making it their own (for instance, "I felt like being her'), yet this is only one possibility from many. As discussed, a homogeneous response to the artefact was not the intent of this study, as this would prescribe meaning instead of facilitating it. The connection between the granter's experience and the participant resides in how the felt-sensing qualities presented through an artefact opened the door for raw and intimate manifestations of meaning making. In terms of how the artwork connects with different subjectivities, Gendlin's definition of the body as connected with the environment of relations of implications and occurrences is useful to understand the experience of fulfilment (or carrying forward) as the basic unity of our interaction with the world. The philosophical premise behind the artwork is that when connecting with our meaning generation process through the body, we are connecting with something *essential* that shapes how our environment is constructed (Gendlin, 1993; Ikemi, 2014). Materialising a subjective position through design leads participants to carrying forward with their meaning making process, either by mirroring the self, or by scaffolding new meaning.

It is important to point out that my take on *adopting a position* through design, refers to the endeavour of crafting *from subjective experience*, respecting the integrity of the aesthetic experience granted for creation. In this approach, the felt-sensing memento is analysed to extract relevant aesthetic qualities, which are used as design materials informing design directly. Some might argue that by adopting this position, we are disregarding other experiences, yet it is difficult to assure that design solutions granted by traditional methods necessarily acknowledge the nuances and complexities of diversities of experiences anyway. Different than the goal of the sciences related with the pursuit of truth, design moves within the domain of *appropriateness* and adaptability (Cross, 2006). From a standpoint of how knowledge is constructed, design basically follows the model of privileged societies, an aspect that can be exemplified through the current focus of the *critical design* discourse, which although motivated to challenge the

status quo tends to disregard the fact that dystopic future scenarios occur now in reality, outside first-world consumerist societies (Oliveira, 2016).

Although designing from the granter's experience starts from a subjective piece of aesthetic account, applying this perspective should not be considered as an exercise of bespoke design. This method (as any other) cannot replicate aesthetic experiences, but it rather aims to offer a careful interpretation of a meaningful moment, materialised through artefact design. As described in chapter 8, the granter perceived the interpretation of her memento as being a new experience observed from a third-person perspective, or what Ihde (2002) calls from the standpoint of the 'body two'. The impossibility of replicating aesthetic experiences also resides in the fact that mementos are specific captures of aesthetic possibilities encapsulated in the ongoing richness of our bodily knowing, which are assessed in retrospective when compared with the design interpretation. The fact aesthetic experiences cannot be fully replicated is not seen as a problem itself, but rather as an opportunity for applied assertiveness; as the replication is impossible, it is quite likely the interaction with the resulting artefact would generate a series of responses in the granter (including dissention), giving further information to carefully iterate the piece. This is a key point to justify scaffolding meaning making through prototype interaction, instead of opting for co-designing with the granter. Even though aesthetic qualities belong to the granter's intimacy, integrating him or her into the design process might generate premature fixation towards design paths that might not be optimal. This approach also reclaims the role of design expertise, while positioning the user as an expert of his or her own subjective experience, which is valued and carefully listened to.

The meaning represented through the artefact designed from the granter's experience works as a polyphonic novel as described by Wright and McCarthy (2005), where the story articulated through artefacts is designed to connect with others. Artefacts designed from felt-sensing qualities should introduce participants or users to their inner conflicts and to capture nuanced aspects of humanness to reflect on. In that sense, designing from the granter's experience works as a piece of literature; the novel speaks to the reader from a specific position or conflict, which can be either embraced (mirroring the self) or left behind (by scaffolding difference).

It is important to acknowledge that the idea of designing from the granter's experience is still quite incipient. Felt-sensing mementos might be replaced by other methods to access rich

experiencing, yet as discussed throughout this thesis, Focusing connects us with a kind of knowing that resides naturally in the lived body, with potential to be articulated, yet which is generally disregarded by most methods. The felt-sense offers a path to articulate experiences with rawness and assertiveness, aspects that are motivated from the very configuration of the Focusing technique itself. Some of these characteristics where increased assertiveness is developed through practice are related to (1) how the focuser is in charge of managing her feelings during the exchange, (2) having the capacity to initiate self-democracy, (3) and to carry forward when her implying process is finally achieved (Bundschuh-Müller, 2000). This assertiveness and capacity to access self-democracy is one of the features accessed by thinking through the body, although it is generally overlooked. This feature might explain the appearance of ideas removed from social conventions, as described in chapter 6 on Focusing-oriented ideation (FOI).

“Focusing is a useful phenomenological practice for contemporary activists because the ‘individual’ body-sense has a continuity that reaches out to a deep consensual community with other people. Focusing brings democracy to each individual body and each body into the workings of democracy. Focusing-style democracy slows down decision-making so that the whole being of each person has the potential to be involved in the process.” (Madison, 2016, p. 334)

This assertive quality embedded and delivered through the Focusing method naturally facilitates the mirror and scaffolding process, yet a third perspective became apparent only through the interaction with the artefact, generating a different embodied relation that I defined as a *handle*. This third way happened when the participant did not feel predominantly like being the granter, or did not observe the situation as an outsider, but rather connected with his or her own memories of having experienced other concerts, some of them quite removed from the Kodo drumming genre. In the next chapter 10 on *contributions for design*, I will introduce a framework of *assertive embodiment* covering in detail these three embodied relations with technology and meaning.

9.2.3.1 Designing through reflective inner presence

Reflection through inner presence is common to somatic practices, which are concerned with first-person phenomenological experience making use of the body-materiality perceived from within (Hanna, 1988). Although most somatic techniques use physical movement as a material

and tool for inquiry, therefore using a mixture between reflection through action and inner presence, Focusing can be categorised within what Shusterman describes as ‘somatic disciplines of inner experience’, (Shusterman, 2012a). It is important to note that, as I have mentioned in chapter 3, most somatic methods referenced in HCI literature link *bodily knowing* with attuning our senses to *movement*, which makes us certainly more sensitive to how our bodies react through direct perception, yet not necessarily attuned with their role in our representational meaning-making process. Focusing-oriented methods in that sense fill a currently unexplored gap.

Figure 39 shows the types of bodily reflections discussed in the presentation of gaps, including some examples of methods and approaches connected with these different modalities. There are different ways of engaging in *reflection through inner presence*. Focusing and Mindfulness meditation are situated closely in the inner presence end of the spectrum, yet these differ in how inner presence is handled. In the presentation of my methodology (chapter 4), I have discussed some essential differences between mindfulness meditation and Focusing, as participants tend to use mindfulness as a reference to make sense of Focusing (see some narratives from chapter 8). These practices are not only different from their attitude towards awareness and the present moment; while Focusing is more concerned with unlocking the process of reiterated implying (Gendlin, 2012) by filtering out concepts through our bodies, mindfulness focuses on letting go to stay present (Kaparo, 2012). This difference of response is exemplified through the types of participation emerging from *Soul*. While for meditators the time of the experience was perceived as insufficient for their immersion, Focusers came up with insights and discoveries in spite of the limited time interacting with the installation. In that sense, for mindfulness the end resides in being immersed in the loop of now-presence, whereas for Focusing it relates with establishing meaningful connections with the self through self-dialogue.

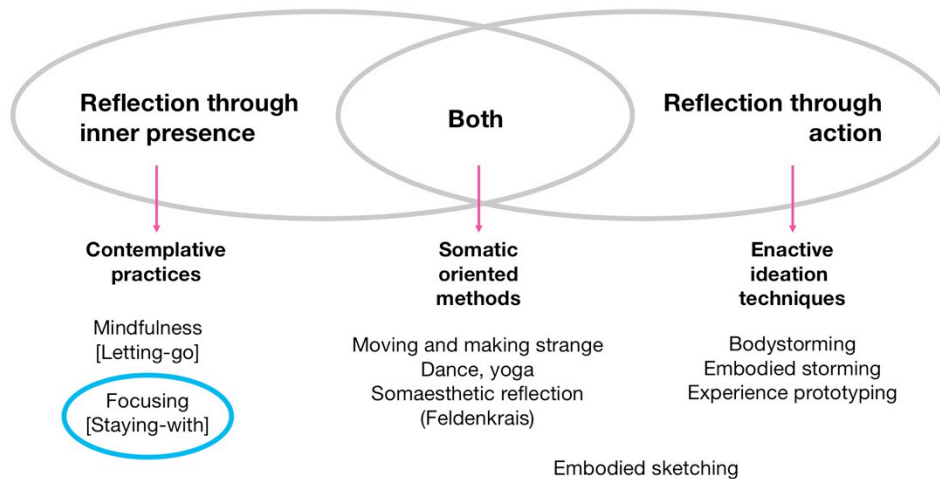


Figure 39 - Bodily reflection through action and inner presence

Designing from inner presence is not an easy task, particularly when the product generated by this kind of reflection is non-linguistic, as in the case of mindfulness meditation. One of the aspects that distinguishes mindfulness from Focusing is how, although both heighten awareness on the present, mindfulness keeps this awareness in a non-articulated dimension (Welwood, 1980). Yet, the mindfulness attitude and aesthetics can be embodied in artefacts and frameworks, for instance as done in the work by Zhu, Hedman, and Li (2017), who define the qualities of mindfulness tools promoting *presence in and with nature* as (1) bare attention to the present moment, (2) integration with daily life, and (3) aesthetics for non-judgemental acceptance. To explain the concept of bare attention, the authors cite Nyanaponika (1973) who describes the concept as attentively staying in the present, without entering into any type of judgement or reflection. As a result, artefacts embody aspects clearly articulated in the shape of philosophy, however the practice of mindfulness itself does not encourage a revision of inner attitudes, or a generative self-dialogue such as in the case of Focusing.

One of the advantages of Focusing-oriented methods introduced in chapters 5, 6, 7, 8, and later in chapter 10, is how these use the product of self-dialogue as a material for design, trusting in the subjective process of the person experiencing the insight. This trust towards the *subjective process* opens the door for a clearer articulation of insights, which connects designers empathically with the resulting stories. As a result, trusting in the subjective process leads to an intersubjective identification with the material produced, in the same way we connect with a well-written novel that skillfully depict human emotions and experiences. Wright and

McCarthy (2008) explains how narrative approaches in the field should capture the values of novels, not necessarily to facilitate a profound connection between the designer and the participant, but rather by “looking for a meeting marked by understanding what it feels like to be the other” (ibid p.642). Still, Focusing-oriented methods go beyond merely understanding the other, by applying trust directly in the design process, as discussed in chapter 8 through the design of *Soul*, based exclusively in the granter’s felt-sensing memento.

I suggest that designing through reflective inner presence requires integrating the somatic activity into design language, creating smooth transitions between the two. The way Focusing is practiced, including logistic aspects (for example, the fact that exercises are performed in a sitting position) makes it particularly suitable for its adoption in the design realm. In the conclusion chapter 11, where I discuss how emergent gaps were addressed, I will further elaborate on how other somatic-oriented techniques applied to design sometimes struggle to integrate concrete lessons into practice, offering some suggestions grounded in my own research.

Chapter 10

CONTRIBUTIONS TO DESIGN AND RESEARCH

Focusing-oriented design methods: Towards an embodied subject-oriented methodology

This chapter summarises the final contributions of this research for design theory and practice. These contributions correspond to the iterated version of my user studies, described in chapters 5, 6 and 8 respectively. Four methods are illustrated in a prescriptive manner to allow their practical application: (1) Focusing-oriented bodystorming, (2) Felt-sensing archetype evaluation method (3) Focusing-oriented design ideation, and (4) Designing from the granter's experience. These methods emerge from the adoption of the Focusing technique across different stages of the design process.

In terms of theory, it also summarises a framework on *Assertive Embodiment*, which captures the spirit of Gendlin's philosophy, both in terms of his notions on embodiment as well as in the idea of Focusers as being self-responsible for their own inner process. This framework consists of an interaction model that contemplates meaning making from different perspectives, including *assertion*, *negotiation* and even *dissention* as a successful feature in technology for self-awareness. Dissention during interaction is articulated through the concept of *scaffolding*, which differs from mere distraction or lack of interest as these latter states lead to interruption of the meaning-making process. The concept of *assertiveness* is presented as an attitude where subjective reality is spoken from the inner self, facilitating the meaning-making process, which is materialised into a model for the design of aesthetic experiences.

10.1 Towards a Focusing oriented design methodology

The set of methods introduced in this thesis has been created as a result of several iterations and explorations and are inspired by Gendlin's theory, which in its richness still has much to offer to our field. Figure 40 shows the potential methodological steps towards a subject-centric design methodology to create aesthetic experiences. The first path illustrated as A, starts with the data collection process through *Focusing-oriented bodystorming*, which captures symbolic representations of aesthetic experiences. This data can be analysed through the lens of *Felt-sensing archetype evaluation*, to determine if narratives contain felt-sensing traits that could be utilised to inspire the design of aesthetic experiences. From the set of collected mementos, a particular account is selected, informing the prototype and evaluation process through the practical application of the *assertive embodiment framework*, a theoretical contribution described later in this chapter. A second path (B) starts with a *Focusing-oriented design ideation session*, which collects mementos in the same way as *Focusing-oriented bodystorming*, yet used this time as material for ideation amongst designers. When the selected memento and associated primary idea is selected, *Felt-sensing archetype evaluation* can be performed to further elucidate details about the particular memento. Then the selected memento is analysed, its aesthetic qualities materialised as a prototype and later evaluated through the lens of *Designing from the grantee's experience method*.

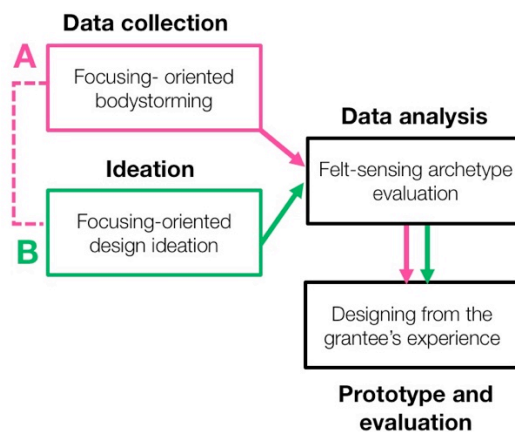


Figure 40 - Towards a Focusing-oriented design methodology

Next, I will present four methods and a framework in detail. As the theoretical rationale behind these methods has been discussed before, the way the methods are introduced is prescriptive, facilitating their direct application.

10.1.1 Method 1: Focusing-oriented Bodystorming

The Focusing-oriented bodystorming method is the baseline for all the Focusing-oriented approaches generated throughout this thesis. As discussed in chapter 5, this method is intended to extract aesthetic qualities from everyday experiences, by using Focusing-driven reflection directed towards a particular topic. It can also be used to reflect on everyday objects, obtaining detailed description of their properties and potential stories associated with them. The material generated through felt-sensing answer kits or mementos act as an existential capture of a moment in time, in a similar way to cultural probes (B. Gaver et al., 1999). Tracing some similarity between Focusing-oriented bodystorming and probes, particularly in terms of constraints, probes should be perceived as achievable in order to be meaningful. This achievability is shaped by material constraints granted by the artefacts, intended to facilitate the dialogue between the participant and the artefacts (Wallace et al., 2013). In a similar way, felt-sensing mementos are crafted through the constraints of time and phenomenological writing rules, in order to avoid dissipation and the generation of overly-rationalised evaluative language.

Focusing-oriented bodystorming can be used both to collect inspirational material, similar to the case of cultural probes, and extract aesthetic qualities potentially inspiring design. It also can be part of additional tools to access people's stories and information. Focusing-oriented bodystorming should be applied in the discovery phase of the design process, involving experience exploration and data collection. A step-by step set of instructions is described below (Table 68).

Table 68 - Method 1 - Focusing-oriented Bodystorming

Steps: Focusing-oriented bodystorming

Before the workshop: Instruction for designers

1. Define a design theme. Frame it by using neutral wording, avoiding any articulation of biased sentiments.

2. Design a theme-oriented Focusing guided exercise for the workshop. Aim for 15 minutes approximately, to avoid mind wandering. These exercises should contain the following elements:
 - a. Body scanning: Place the importance on the upper torso area (from throat to abdomen).
 - b. The focusing six steps: Composed by clearing a space, felt-sense, searching for a handle, resonating the handle, asking and receiving. The two first steps can be merged, to avoid distractions in non-experienced Focusers. For more details, see chapter 4 on methodology.
 - c. Closing: Make sure to let your participants know the exercise is about to finish.
3. Prepare felt-sensing answer kits, including other materials such as coloured pencils.

The workshop: Instruction for participants

1. Pay attention to the theme to explore.
2. Try to adopt an open attitude about the theme; a beginner's mind.
3. Close your eyes, and follow the guided exercise. Allow the body to sense before jumping to any conclusion.
4. Complete the answer kit in seven minutes per instrument (total 21 minutes).

Note: The written part should follow these rules: (1) Descriptive over evaluative: make sure to describe feelings, sensations, memories, words and other representations emerging from your experience. (2) Grammar conventions are disregarded: Do not worry that much about those. (3) If stuck, allow your stream of consciousness to flow.

After the workshop: Instructions for designers

There are three ways of dealing with this data:

1. Direct interpretation: Analysis is not necessary. Emerging qualities are used to inspire design.
2. Direct analysis: A particular memento is selected according to its richness, and level of detail. Then, a textual analysis to extract the main aesthetic quality of the memento should be conducted. Following instructions are described below, in the *Designing from the granter's experience* method (see Table 74). An additional method to analyse information consists in

performing the *Felt-sensing archetype evaluation method* (see Table 69).

3. As part of a data collection set: This method can be useful to collect data on how people experience the given theme. In case clarifications are needed, this method can be complemented with other traditional approaches to data collection (example: post experience interviews).

10.1.2 Method 2: Felt-sensing archetype evaluation

The *Felt-sensing archetype evaluation method* is a theory-driven tool for data analysis, created after tracing common patterns amongst a set of felt-sensing mementos collected throughout the studies. This tool is composed of six different archetypes, named (1) writers of the self insight (2) writers of the somatic self, (3) storytellers, (4) concealers, (5) dissenters and (6) evaluators. The felt-sensing archetype evaluation method is useful to categorise the elemental felt-sensing qualities present in mementos. For instance, the importance of the body in narrations or the presence of descriptions, helps to determine if the felt sense was reached and, if that is the case which are the most immediate somatic and aesthetic qualities apparent in narrations.

The process of generating the felt-sensing archetypes started with the FOB workshops, corresponding to the first explorations of the technique. However, labelling those modes of being with the felt-sense was crafted from the analysis of participants throughout the different studies undertaken in this research. Although the archetypes or traits became quite evident from the first set of 45 analysed mementos from the FOB study, these were further refined with the addition of more mementos into the analysis. In total, 92 felt-sensing mementos were analysed in order to shape and contribute to the robustness of the method. Additionally, a random sample of 20 mementos was analysed in parallel with a second researcher to compare the archetypes emerging from the data. Data was categorised in terms of agreements and disagreements between the two analysts, categorising the results in three groups: (1) agreements in the allocation of main traits of primary archetype, (2) agreements in the identification of traits, however with some differences and (3) disagreements in the identification of archetypes. As most mementos show traits of more than one archetype at the same time, group (2) refers to detection of the same archetypical traits, however showing some differences in selecting which was considered as the main archetype. The analysis

produced mostly agreements in the identification of archetypical traits with 12 agreements in group (1) and six in group (2), and produced only two disagreements.

By comparing and discussing the results obtained by myself and the second researcher, we came to the conclusion that although the tool offers some reasonable level of robustness for analysis and detection of felt-sensing traits, its value resides in the conversation these disagreements motivate. Felt-sensing archetypes should be used as a guidance towards understanding different ways of approaching the felt-sense rather than being interpreted as prescriptive tools for analysis.

Felt-sensing archetypes are elucidated as a result of a mixture between *inductive* and *abductive* thinking (Kolko, 2010a). Inductive thinking is applied as these patterns are traced as a result of a structured process of recurrence. However, these patterns are not always conclusive, as the information contained in the felt-sensing mementos is *necessarily* incomplete. As it is impossible to access all the nuanced aspects of our tacit, bodily knowing, the reasoning applied when finding patterns of participation is also *abductive*. As such, these archetypes might not represent the experience accurately, yet these are still useful to analyse content through the lens of Focusing theory, which is unfamiliar for most researchers and designers.

One of the ways of understanding the logic of felt-sensing archetypes is by considering them as *pre-personas*. These pre-personas are sets of general, open-ended traits showing a determined kind of attitude towards the felt-sense. While personas are archetypes deriving from composites of people's motivations and frustrations (Cooper et al., 2007), felt-sensing archetypes are collections of common patterns of felt-sensing qualities, materialised into a representation.

To analyse information through the lens of this method, we need the *three* instruments contained in the felt-sensing answer kit: a felt-sensing memento, a body map and the questionnaire.

- **Felt sensing mementos:** Mementos are the most relevant tools for analysis, generally dictating the resulting type of archetype. Additional tools such as body maps and questionnaires support in making the analysis of mementos more conclusive.
- **Body maps:** These tools generally confirm the outcomes from the analysis of mementos, or add additional qualities or traits.

- **Questionnaire:** Questions related to *discoveries* and *intensity* of experience during the guided exercise are useful to validate the presence of discoveries, which are pivotal for confirming the presence of the felt-sense in descriptions.

In line with the main characteristics composing the felt-sense defined in *chapter 2*, the presence of the following traits in the memento (and reinforced by body maps and questionnaire) can be indicative of felt-sensing presence:

- Discoveries, even if subtle.
- Reference to the body in narration.
- Sometimes, descriptions of bodily sensations moving around the body.
- In terms of narrative, there is evidence of detailed description of situation, feelings, memories and thoughts, including some sensory details (temperature, light, textures, et cetera). It can also display poetic, unfamiliar language.
- Sometimes, it is also possible to find evidence of self-dialogue, as the felt-sense might unfold through writing.

In the following Table 69, I have included a set of instructions to determine the presence of the felt-sense by analysing mementos. I also define the different archetypes and their characteristics.

Table 69 - Method 2 - Felt-sensing archetype evaluation method

Steps: Felt-sensing archetype evaluation method

1. Collect the data. Number each felt-sensing kit with a folio number
2. Read the information carefully. Ask the following questions in order to **identify felt-sensing traits**:

a. Did the participant discover something new, no matter if subtle or obvious?

If discoveries are described by the participant, it can be considered as evidence of the felt-sense's presence, especially if articulated in the memento and confirmed through the questionnaire. It is important to check both instruments in order to come up with a conclusive answer. Sometimes, discoveries are scaffolded by the very question, being also a valid way to access the felt-sense.

b. Is the participant mentioning the body in any way in the description? Is the body

map highlighting bodily presence or specific bodily areas, or does it seem diffuse?

When the felt-sense is perceived, the participant generally describes bodily presence in the memento. If not directly in the narration, it might appear in the body map (as unambiguously highlighting specific qualities or body areas and related keywords), or in the questionnaire. In terms of body maps, diffuseness, and ‘out-of-body’ cloudy representations are generally (although not always) related with lack of focus. When felt-sensing, even a sensation perceived as ‘wholistic’ tends to be delimited in the upper torso.

c. Is the description of bodily sensations meaningful in general terms? Or does it seem disconnected to the rest of the story?

Description of bodily presence in the memento does not guarantee having experienced the felt-sense. It is important to check if these descriptions of bodily presence add meaning to the overall experience, and if these flow with the narration. For instance, a description of body unrelated to the story would look like the following: “*I did not come up with anything, I only felt some bowel movement distracting me*”.

d. Did the participant describe his/her memories, images or contemplative experience as being immersed in it, or instead describes the ‘structure’ of the experience?

Participants experiencing the felt-sense will describe the nature of the memory, image or experiential moment. However, in some cases the participant might describe the structure of the experience instead of describing experiential content. It is advised to categorise these cases as ‘ambiguous’ (concealers).

The following table describes the archetype categories, with some features corresponding to each category

ARCHETYPE	NARRATIVE TRAITS	BODY MAP
Writer of the Self [somatic] (WOSS)	The physical presence of the felt-sense is predominant in descriptions. Participant describes the situation as ‘being there’. Generally, he/she describes how body areas were engaged in the story, recalling past events through amplified	Representation focused on body part where memory was felt. Generally use few abstract symbols,

	<p>somatic memory. Re-lives physical sensations pain, discomfort, temperature, or pleasure through the body. Yet, the description of somatic presence is open and curious. The participant admits having discovered something.</p>	<p>centralised in the upper torso</p>
<p>Writer of the Self [insight] (WOSI)</p>	<p>The felt-sense is evident in these types of descriptions. Memories, feelings, sensations and other representations appear making ordinary situations extraordinary. The participant describes a realisation or discovery about his/her situation. These descriptions tend to be poetic. Mementos might refer to somatic presence, yet in a less emphatic way than WOSS.</p>	<p>Representation focused on body part where memory was felt. Some unfamiliar/abstract symbols</p>
<p>Storyteller</p>	<p>Storytellers are good describing situations and memories. Their narrations are rich, detailed and possibly structured, showing a variety of feelings. They generally rely on their affective memory or creativity. The presence of the body is not very relevant in their narration. The felt-sense is less obvious than in the previous archetypes, yet the richness of their descriptions could have been facilitated by the process of felt-sensing reflection. It is common that storytellers expressed having discovered something.</p>	<p>Social conventions, colourful, artistic. Some physical traces of the felt-sense might be present in the body map instead of the memento (for instance, in the shape of symbols or keywords).</p>
<p>Concealer (Ambiguous)</p>	<p>Describes structure of experience without much detail. For instance, comments such as: “I discovered interesting things during the guided exercise”, without describing phenomena of interest. Conversely, the participant might express the lack of connection due to lack of time or personal reasons.</p>	<p>Varies.</p>

Evaluator	Evaluates the effectiveness of technique. Describes good and bad aspects of the experience. In some cases, they question the effectiveness of the technique.	Cloudy, all over the body, diffuse. Sometimes the head is highlighted as a metaphor of thinking.
Dissenter	Mostly ignore the Focusing instructions. Adopts a 'letting go' attitude, common in mindfulness meditation. Self-dialogue is absent; instead the participant enjoys the present moment. As a result, <i>relaxation</i> is generally mentioned as a dominant feature.	Traces of body parts mentioned during body scanning.

3. Some general considerations:

- **Archetypes are not mutually exclusive.** It is possible to obtain several traits from more than one archetype in one participant. The most common combination is a dominant archetype with an additional trait from another archetype, or two traits of similar influence.
- **When used to analyse data from design teams,** for instance when applying it as Focusing-oriented design ideation, the somatic and aesthetic qualities of ideas, values and the archetype of the designer are generally related. These overlaps allow using the archetypes not only as a first-high level analysis tool, but also as a way of grouping design ideas. The following are some found correlations. Note that as concealers are ambiguous archetypes, their ideas can correspond to different dimensions. Conversely, the projective nature of ideas can also give some further clues on which archetype Concealers might belong to.

Main categories	Type	Corresponding archetype
Somatic Ideas emphasise	Somatic memory amplification Sensorial aspects of experience were noticeably felt during the guided exercise.	Writers of the somatic self

the importance of the physical body	Body scanning as trigger The idea is related with aspects of body scanning, sometimes isolated from felt sense (example: focused on breath, relaxation, or meditation)	Dissenters Writers of the somatic self
Insightful Realisations are translated into ideas in different ways	Transformative Emergent negative aspects were countered, or repelled by ideas that work as a way to establish a balance.	Writers of the self-insight Storytellers
	Metaphorical Positive features of personal felt-sense are materialised as metaphors.	Writers of the self-insight Storytellers
Elusive Ideas are unrelated to felt-sensing, sometimes deliberately pointing towards a different direction		Dissenters

Next, I will proceed to describe some examples showing the elucidation process of archetypes through abductive reasoning, showing the method in action. Here, I am introducing two cases: One ambiguous archetype (concealer), and one clearly representing a specific type. Further examples of felt-sensing archetypes were already illustrated in chapter 5.

10.1.2.1 Example 1: Memento lacks experiential content [Concealer archetype with WOSS traits]

In some occasions, Focusers keep experiential content to themselves, which make their mementos difficult to use as a design material. The following narrative corresponds to one of the participants from the workshops on wearable props and Focusing (chapter 7). They were instructed to think of an activity, scenario or special object able to trigger happiness, as illustrated in his memento illustrated in Table 70. It is important to note that the participant did not provide details about the content of his memory.

Table 70 - Describing the experience in structural terms

“The experience was different from the last one in terms of the effect at the bodily experience, which in this case lasted longer even when the exercise almost ended. The vibration I felt on my chest was normal in the start but when I started visualising the scenario, which makes me happy, the vibration felt like spreading to a larger surface area than before. Also it started feel as if my body had become more sensitive to vibration. As I moved towards the lower abdomen and them my thighs, the affect at the vibration felt more intensified.”

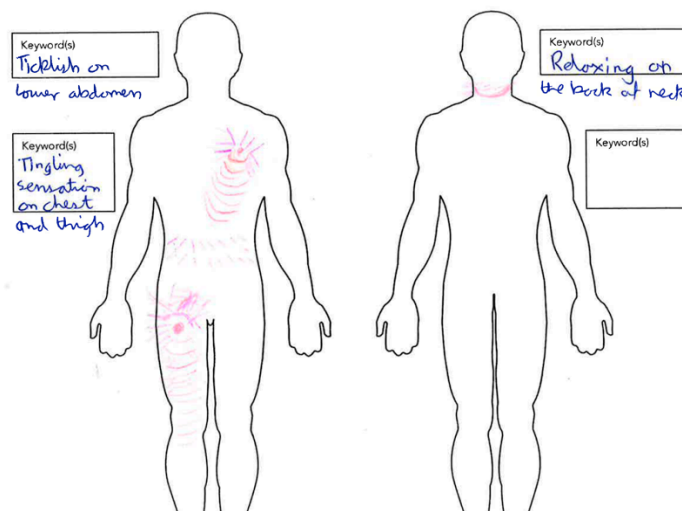


Figure 41 - Participant body map

In terms of how this narration ‘tick the boxes’ in terms of accessing the felt-sense: (1) it describes bodily experience, (2) there is evidence of movement of the felt-sense around the body, (3) when the scenario was visualised through Focusing something shifted. Regarding whether he experienced discoveries, the participant expressed his disagreement (4 out of 10 on Likert scale) "Even though the sensations I felt were more intense through this exercise, but I have previously have had those sensations before as well. So technically these wasn't anything new which I discovered."

When analysing this narrative, we have two conflicting situations: First, judging by the description, it seems the participant has reached the felt-sense. The shift and the spreading quality he describes are clear indicators in this regard. However, the narration neither refers to how the shift occurs, nor to the nature of the blissful situation as experienced. Secondly, the reason behind his response regarding discoveries might have two possible responses: (1) the participant did not discover anything new, which is what he expressed in his response, or (2)

the idea of 'discovery' might differ from those who have a higher level of familiarity with somatic disciplines. Discoveries might be as subtle as realising that the body becomes more sensitive to vibration, or that happiness moves around the body instead of staying still. Discoveries can also be overwhelming and insightful. I suspect that the participant might have discovered something if he would have paid more attention, yet there is not enough evidence to assert this. As a result, the participant is categorised as a *Concealer* as a main archetype. Considering there is movement around the body, and evidence that happiness was vividly relived through the body, I could also indicate that this participant shows some *writer of the somatic self (WOSS)* traits. His body map indicates movement of the felt-sense in the body, without illustrating any particular discovery in the shape of a symbol. This representation fits more clearly with the WOSS description than with other categories.

10.1.2.2 Example 2: Experiential discoveries [*Writer of the self-insight archetype*]

The following is a memento generated by a participant who experienced a series of insights during the guided exercise. This memento emerged from the interaction during one-to-one sessions with props, where she was asked to reflect on a blissful moment, which in her personal case was about 'swimming, moving in an open space with few waves'. In terms of her somatic experience at the time of the session, she had participated in two Focusing workshops run for master students described in chapter 7. Table 71 illustrates her memento and Figure 42 shows her body map.

Table 71 – Description evidencing insights

<p>I felt there are two opposite sensations, being free in the ocean and a time in my life where I felt trapped by circumstances and issues. The images that came to my mind were a small dark room and its opposite, the beach and me floating in the middle of an empty beach looking at the coast. Where I found comforting was the sense that the sea was there all along even after and while I was feeling trapped. Freedom was still real, even if I couldn't see it, it was still out there, waiting for me to swim towards it. I found that this deep conviction is what gives me hope in life and in goodness in general. I had never been able to verbalise this before. The physical sensation of happiness felt very similar to the physical sensation that I experience with fear, these waves of something that starts in my chest and move towards my stomach, the vibration made me aware of that.</p>

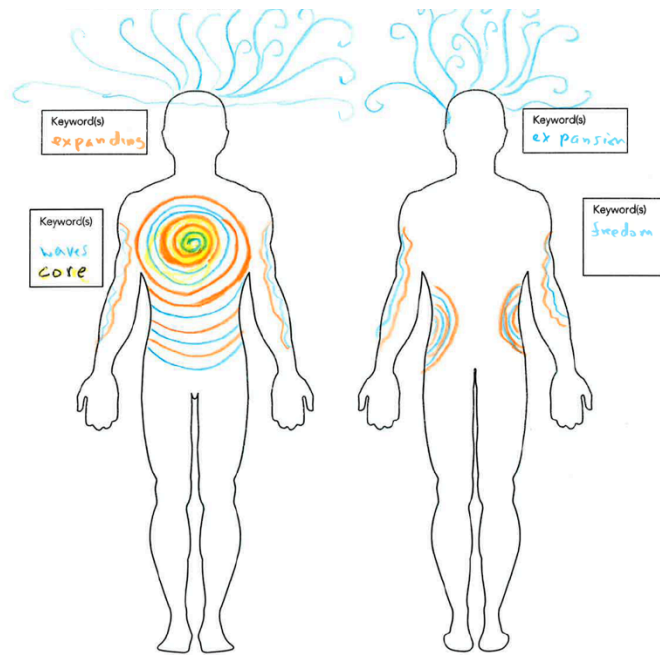


Figure 42 – Participant body map

This memento contains clear experiential content, in the shape of (1) emerging images, (2) articulation of feelings, (3) insightful realisations, (4) mention of physical sensations. When asked about discoveries, she answered with a ‘totally agree’ 10 out of 10, explaining: “I understand myself better and how my hope for goodness and happiness is rooted in happy memories... I keep being amazed by these connections between body and emotion that Focusing shows me”.

In terms of categories, this memento falls into *Writers of the self-insight* (WOSI) quite clearly. If we go to the archetype description, she had articulated her discoveries and visions throughout the narration. In her memento, the body has been involved (an aspect that is also highlighted in her responses), yet she refers to her body in general terms, instead of focusing on specific body parts. Her body map shows a clear focus on the felt-sensing core. We might argue that this memento could contain some storytelling elements, however her use of present tense suggests the experienced was re-lived instead of being re-created as a memory. Her body map seems to confirm this information: it looks descriptive of her felt-sensing experience, which was perceived mostly in the core.

Further examples of archetypal representations can be found in chapter 5, describing the outcomes from the FOB study. The analysis of archetypes is neither straightforward, nor an exercise of exactness. It requires understanding the nature of the felt-sense both in a theoretical

and practical sense, so even though these descriptions might suffice to elucidate archetypes, it is important to experience Focusing before attempting to use this tool.

10.1.3 Method 3: Focusing oriented ideation

Focusing-oriented ideation is a method that can be incorporated into design team dynamics, opening up spaces for intimate collaboration through partnership towards the full articulation of subjective aesthetic experiences. This collaboration should however respect the integrity and full formation of felt-sensing concepts before ideas are assessed through the lens of other merits, such as feasibility. Table 72 describes the method in detail.

Table 72 - Method 3 - Focusing-oriented design ideation

Steps: Focusing-oriented design ideation

Before the workshop: Instruction for facilitator/designer

This first stage uses almost the same steps as Focusing-oriented bodystorming

1. Having a specific design brief, reframe it as a theme; making sure it is open ended. This is to facilitate the generation of different ideas from various perspectives. Frame it by using neutral wording, avoiding any articulation of biased sentiments.
2. Design a theme-oriented Focusing guided exercise for the workshop. Aim for 15 minutes approximately, to avoid mind wandering. These exercises should contain the following elements:
 - a. Body scanning: Place the importance on the upper torso area (from throat to abdomen).
 - b. The focusing six steps: Composed by clearing a space, felt-sense, searching for a handle, resonating the handle, asking and receiving. The two first steps can be merged. For more details, see chapter 4 on methodology.
 - c. Closing: Make sure to let know your participants the exercise is coming to a close.
3. Prepare felt-sensing answer kits, including other materials such as coloured pencils.

The workshop: Instruction for designers

1. Pay attention to the theme to explore.
2. Try to adopt an open attitude about the theme; a beginner's mind.

3. Close your eyes, and follow the guided exercise. Allow the body to sense before jumping to any conclusion.

4. Complete the answer kit in seven minutes per instrument (total 21 minutes).

Note: The written part should follow the following rules: (1) Descriptive over evaluative: make sure to describe feelings, sensations, memories, words and other representations emerging from your experience. (2) Grammar conventions are disregarded: Do not worry that much about those. (3) If stuck, allow your stream of consciousness to flow.

5. Reflective listening: Pair up with someone you are comfortable with, and have a conversation about your experience with the guided exercise. Take turns to describe the experience. This conversation should follow certain rules:

- a. One person speaks first. The other person listens carefully
- b. The speaker should try to describe in detail, referring to feelings, sensations, thoughts, memories and different situations emerging from the guided exercise
- c. The speaker should feel as she/he speaks.
- d. The listener should listen without judging.
- e. The listener should try to capture the essence of what the speaker has said.
- f. The listener should reflect back the essence of the speech to the speaker, making sure to not interrupt him/her.

Some considerations:

- g. Reflecting listening should not be misinterpreted as 'parroting', therefore it is not necessary to repeat everything back.
- h. The listener should be mindful of his/her body language, as well as of the speaker's body language. The listener should assert and show interest, yet look natural.
- i. Make sure to avoid interrupting each other.

6. Take notes of the things you have discovered about your experience through reflective listening.

7. **Articulating concept values:** Take time to read your notes. Identify the main value, quality, lesson or discovery emerging from the guided exercise and/or reflective listening. It doesn't matter if what emerged was not positive.
8. Think of ideas. Keep in mind the design brief, yet your concept values are more important. Sketch. According to the nature of your concept, ideas can be:
 - a. Metaphors of positive concept values
 - b. Transform the negative into positive
 - c. Represent a physical sensation or memory

Decide which one represents your idea best.

9. Describe your idea according to the following model. This is your felt-sensing concept:

I want to [transform / materialise / transfer] + [Remarkable aesthetic quality] + into [an idea]

Example: 'I want to materialise my sense of belonging into a place for sharing with others'

10. Present your concept and preliminary idea to the rest of the team. Describe the felt-sensing qualities informing your idea. If you want, refer to your discoveries, guided exercise, et cetera.
11. The design team selects the best idea/concept according to factors such as: Clarity, originality, feasibility, closeness to the brief, et cetera.
12. The selected idea/concept puts the granter/designer in the position of the group director, and primary idea tester. The following instructions to inform the creation of prototypes and their evaluation can be found in method 4 'Designing from the granter's experience'.

Before going through the description of the fourth method 'designing from the granter's experience', I will refer to my framework on *assertive embodiment*, which has inspired the elaboration of my last method.

10.1.4 Framework: Assertive embodiment

In the discussion (chapter 9) I have presented the main findings emerging from my explorations of wearables and Focusing (chapter 7) and the different types of embodied responses from the interaction with the artwork Soul (chapter 8). It was discussed that the assertiveness of the Focusing process (Bundschuh-Müller, 2000) translates to the process of meaning making with technology artefacts.

Figure 43 shows the process of what I call *assertive embodiment*, which captures the Focusing attitude when the participant looks at the response that resonates with our emotions and self-identity. In terms of validation and origin, this descriptive process or framework has been traced from the common responses obtained in two different studies (W&F and Soul), where the body was stimulated while going through the somatic contemplative process, namely Focusing and, such as in the case of Soul, through a mixture between storytelling and Focusing. This framework is inspired by the cycle of self-awareness for present-at-body interactive experiences illustrated in Figure 44 (Núñez-Pacheco & Loke, 2014b), from which it shares a series of similarities.

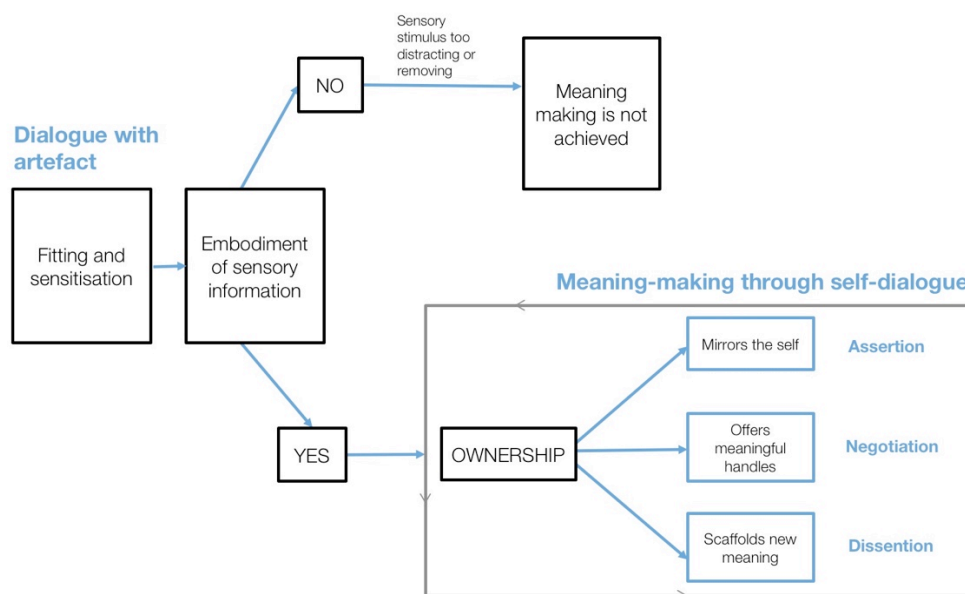


Figure 43 - Assertive embodiment

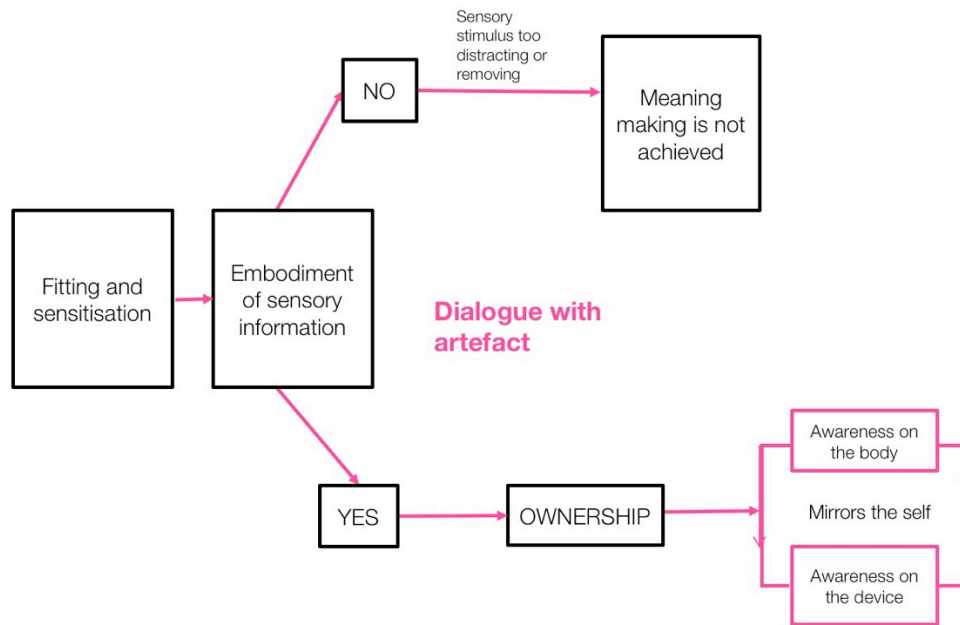


Figure 44 – The original cycle of self-awareness – Adapted from (Núñez-Pacheco & Loke, 2014b)

Although both frameworks are centred on the notion of *awareness through inner presence* (concept discussed in chapters 3 and 9), the main difference between the *cycle of self-awareness* for present-at-body technologies and the *assertive embodiment* frameworks resides in the type of cycle both describe. The *cycle of self-awareness* (ibid) deals with awareness shifts occurring during the interaction with wearable technology that use perceptible feedback to reveal bio-data (such as sound, images or haptic stimulation). In such a cycle, awareness drifts between device and body, in a dialogue where the body tries to influence changes in the wearable artefact. The changes in the artefact influence the human agent to continue the interaction. On the other hand, the framework on *assertive embodiment* introduced here is concerned with the process of meaning-making occurring during the application of perceptible stimuli on the body throughout the practice of Focusing. Yet this framework might be extended to other somatic practices of embodied self-contemplation, where perceptible stimuli are applied on the body during the exercises to facilitate awareness and meaning. The embodied relationship between the human body and the technology artefact becomes slightly more seamless than in the original cycle of self-awareness. This is because in the *assertive embodiment* framework the dialogue with the artefact occurs more noticeably at the beginning of the interaction, however as the interaction unfolds the body takes the directing role of the conversation, transforming the dialogical relationship of human-machine into a self-dialogical one. Although the artefact

stimulates the body to be self-aware the presence of stimuli is fused with self-dialogue. It means that instead of directing the attention towards the device the stimulus becomes a perceptual material embedded in the fabric of the experience.

The process of assertive embodiment develops in the following way:

- **Fitting and sensitisation:** The process commences when the device is fit onto the body. Sensory information (such as heat or vibration) is felt on the body before commencing with the guided exercises. Body scanning techniques in conjunction with the artefact can be performed, to facilitate focus. The idea of sensitising the body before starting the exercises increases the chances for meaning making, as it reduces possible feelings of unexpectedness that could have been associated to the interaction with prototypes.
- **Embodiment of sensory information:** Once the interaction starts, two things may occur: (1) The stimulus on the body could be perceived as too removing or distracting, therefore meaning making might not be achieved. In the original cycle of present-at-body awareness (Núñez-Pacheco & Loke, 2014b), this part of the process would be represented by biofeedback ‘not making sense’ to the wearer, for instance a display showing fast-appearing visualisations of heart rate contradicting the calm state of the wearer. In such a case, the feedback could be interpreted as fake or unreliable, causing the wearer to stop paying attention.

Back to the assertive embodiment framework, the second scenario is given when the feedback is attributed, or integrated to the ongoing process of self-observance. When this happens, three modes of embodied connection with artefacts may occur: (1) interaction mirrors the self, (2) offers meaningful handles, or (3) scaffolds new meaning. The emergence of these three kinds of embodied relation are also present in the practice of Focusing without artefacts as mediators (experiences described in chapters 4 and 8). Yet the attitude of assertiveness extends to the dialogue with interactive artefacts. The three modes are described below:

- **Mirrors the self:** This is a type of embodied assertion, where the participant feels that the sensory information applied on the body matches the current state, as described by one participant from the workshops described in chapter 8: “When I used the vibration on my body, it emphasised this melting “feeling”. I feel like I can stay in that situation forever. The pleasure comes from the satisfaction of “finishing something”, kind of a sense of accomplishment, other comes from finding all my stress goes away, no more deadlines, no more plans I need to worry about, I enjoy the “stress relieving” feeling. Is emphasised both physically and mentally.”

It is important to note that *mirroring the self* is not a synonym for not experiencing anything new. This concept of mirror is inspired by Rokeby (1995), who referred to interactive technologies as mirrors that not only reflect back to us, but also *refract* meaning, which connects us with our sense of self. The way my take on the mirror state facilitates meaning making is by gently guiding the participant within his or her own terms. In one of the mementos described previously (Table 71), the participant's selected memory around swimming and her associations with freedom was intensified and shaped through the use of vibration, which made her realise that happiness and fear are felt similarly in her personal case.

- *Offers meaningful handles*: This type of embodied *negotiation* between an individual's own stories and the content given appeared in the interactions with Soul, where meaning making was supported by the story and reinforced by the stimulus on the body. Participants get 'handles' to make connections between the meaning represented through design and their own life experiences or memories, which possibly differ in some points. For instance, when asked if she connected on a personal level with the story represented through the artwork, a participant said: "Yeah, more actually from my own experience of being in a concert though.... so I had this one with the flamenco concert, and they were stamping on the floor, it was really, really intense, because they made the whole room completely dark and you could just hear the stamping. Yeah... it felt very [focused] on that moment. So, I felt a little bit that I could connect mostly because I had a similar experience before. When she described... that was Kodo [drumming] right? I could remember something similar... but maybe it's just a coincidence. It would have been a different story; I don't know if I would have been such a recognition."
- *Scaffolds new meaning*: This type of embodied *dissentation* allows the user or wearer of the technology to generate new meaning, towards an assertive recognition of his or her sense of self. The scaffolding of new meaning is ideologically crucial for this framework, as it rescues and materialises the notion that not all aesthetic experiences need to be sustained in literal agreements with the user, but rather in the ability to trace connections and discover new meaning. A successful piece of design should spark conversation, even if somehow controversial. On the contrary to this committed position of dissentation, anaesthetic experiences generate evasive responses, whereas consummation comes with a sense of completion, something emphatic that becomes present (Dewey, 1934). This specific quality of the experience, which I have related with Gendlin's felt-sense, overcomes

stagnation through assertive responses that the participant might not have possibly thought of.

The following Table 73 shows an excerpt of one interview conducted as part of Soul. After experiencing the artwork, participants were invited to answer a questionnaire, which was used as a material for later discussion. The participant is an experienced Focusing practitioner, who described the structure of her felt-sense of the artwork, including how something in the artwork made her feel uncomfortable. She mentioned the difference between her personal blissful experience (being at home by herself, described as a sunny, spacious place) and the one described through the artwork as the main point of dissention. However, there was something else 'going on' at a personal level that impeded the participant to engage, an aspect that she kept to herself. The fact she did not mention what this was about, and the way she worded her answer suggests this was not something trivial for her.

Table 73 - Interview excerpt - Participants' dissention with the artwork

• "I was able to transfer some of the qualities emerging from my personal experience (stage 1) to the narration (stage 2)." Participant answered 'neutral'

P: I think it was because of the content. The content wasn't something I joy with. It was purely on the basis of the content, and it wasn't the story I would personally... yeah, that's not my happy place inside: small, dark place with loud drumming. That's not gonna make me happy.

C: Fair enough

P: But it's kind of the reverse thing, because my moment is open, and spacious and quiet, so it's almost the exact opposite. It's darker, it's small, it's loud.

C: That you mention is very interesting. So you sort of relate, but in the opposite way.

P: Yeah, it's like the contrast

[...]

• "Reflecting on my personal blissful experience (stage 1) made me more receptive to open my senses to the story (stage 2)." Participant answered 'neutral'

P: yeah, I think again, just similar to the first response, it's because this was so much not my happy place, I was very receptive to everything that was going on, so I was very much noticing the vibrations, but I think because I wasn't fully engaging with this as a happy place, I was very conscious that there

were other parts of me coming into the play [...] There is a part of me that was resistant to engage with this because... there is something going on there... something in me that doesn't wanna go there. Just noticing some resistance there [...]

Another example of this kind of awareness was articulated by the Soul memento's granter, when she described the vibration on the mat as not completely representing her original experience (see chapter 8). Another example is described in the workshop on explorations with wearable props and Focusing, when the participant perceived the heat prop as an alien creature removing him from his blissful moment (chapter 7).

The examples provided to exemplify the different awareness types are clear representations of the introduced three types of embodied engagement with technology artefacts through Focusing (mirror, handles, scaffolding). Although in some cases the presence of these kinds of embodied responses might appear as a mixture, more commonly responses bridged through felt-sensing tend to adopt a specific, committed position.

Next, I will go through the last method created during this research, which encapsulates the lessons learnt from design thinking explorations and insights from theory. Particularly, it shows how the *assertive embodiment* framework and the authenticity of people's responses can be used as an opportunity for the development of a subject-centric modality of prototyping and evaluation.

10.1.5 Method 4: Designing from the granter's experience

This particular method was crafted through the creation of the artwork *Soul*, described in chapter 8. This framework for the design of aesthetic experiences uses the specificity of first-person accounts as a material for the design for third-person experiencing. In chapter 6 it was discussed the importance of allowing subjective accounts to emerge uninterruptedly when these are used as material for design ideation. Designing for subjective experience allows a clear articulation of values, desires and issues, that otherwise tend to get diluted through collective methods.

Designing from the granter's experience uses felt-sensing mementos as main materials for idea prototyping and evaluation. It can work as an extension of the *Focusing-oriented ideation method*

towards materialising specific felt-sensing values and ideas. This method starts from the step when the felt-sensing memento and primary idea is selected by the design team.

Figure 45 shows the process of analysing the memento towards the construction of the prototype capturing felt-sensing and aesthetic values. This method shows a practical application of the *Assertive embodiment framework*, which enables the generation of new meaning by facilitating the emergence of mirrors, handles and scaffolds to inform a position for design.

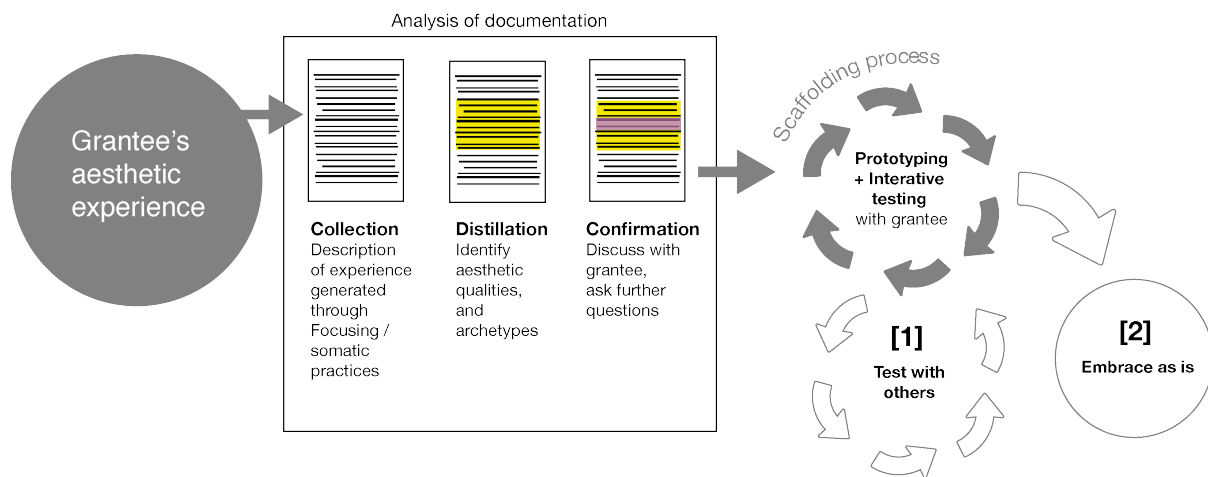


Figure 45 - Framework for designing from the granter's experiential standpoint

As a way to preserve aesthetic and somatic qualities through a model of subject-centric design, I introduce a method for the design of experiences from the granter's experiential standpoint, which is illustrated in Table 74.

Table 74 - Method 4: Designing from the granter's experience

Designing from the granter's experience
<p>Steps</p> <ol style="list-style-type: none"> <p>Collection: As part of the Focusing-oriented bodystorming session, the granter elaborates a narrative, account or report, articulating the pivotal aspects of her reflective experience.</p> <p>Mementos can be collected in the following ways:</p> <p>Run a Focusing-oriented bodystorming session around a specific theme. Themes should be open-ended and be framed by using neutral wording. For further instructions, see Table 68.</p>

Under certain circumstances, mementos can be elaborated by recruiting one person in particular. In such a case, the granter should have shown evidence of somatic sensibility and relevant experience in regard to a particular theme or topic from which design is inspired. Under mutual agreement, designer(s) can collect one or several mementos from their granter.

2. **Distillation:** This part of the process is done by the designer. The designer selects a memento as a material for creation. Selected narratives should have shown evidence of having experienced the felt-sense in some way. Mementos can be scrutinised through the lens of the *felt-sensing archetypical method*, to determine if the felt sense was achieved, and in which ways. The presence of certain archetypes might also work as a possible inspiration for later prototyping.

Additionally, the designer should analyse the narrative closely to find important qualities or aesthetic bits. For instance, by identifying metaphors, strongly incarnated terms (as described in chapter 8), insights, sensory aspects, feelings and thoughts.

3. **Confirmation:** Here the designer engages in a conversation with the granter to elucidate the relevance of each aesthetic bit. From this discussion, the main aesthetic qualities of the story are identified.
4. **Prototyping and testing:** the designer performs the prototyping process. Instead of involving the granter in order to get the prototype 'right', first prototypes are conceived as research clues to stimulate further provision of meaning. The testing process however, involves exclusively the granter, who might respond in two ways: (1) the prototype mirrors his/ her understanding of aesthetic experiencing or (2) the prototype contains some elements that generate some dissonance in her understanding, which in this case will serve to scaffold the articulation of more precise meaning.

Once the iterated version of the prototype is considered as satisfactory, there are two possible options:

1. **Embrace as is:** The artefact is released, for the general public to make sense of and complete with their own ways of seeing the world.
2. **To evaluate with others:** Using the experiences of others to evaluate the artefact can help us to further identify common patterns of meaning making. Archetypes emerging from the interaction with the prototype can be identified through the process of analysis. Further iterations can be designed to cater for the needs of specific groups of participants.

This chapter has compiled a series of contributions for design crafted and developed throughout this research. The inclusion of Focusing into the design process has contributed with a collection method to be utilised in the discovery phase (Focusing-oriented bodystorming), an ideation method (Focusing-oriented design ideation), a method of analysis and evaluation (Felt-sensing archetype evaluation method) and finally, a method of analysis and prototyping based on subject-centric design (Designing from the granter's experience). From the standpoint of theoretical contributions, I have also articulated a framework on *Assertive Embodiment* materialised through the public artwork *Soul*, consisting of a model that uses the notion of adopting a subjective position for the design of aesthetic experiences.

Chapter 11

CONCLUSION AND FUTURE WORK

Answering questions and opening a door

This final chapter starts with a critical examination of how Gendlian concepts have been integrated to design and HCI. After this, I revisit my research questions next to their corresponding gaps found in the literature. At the end of the chapter, I offer a reflection on the importance of acknowledging subjective experience as a source of richness for design. Finally, I close this thesis by opening a door for further research.

11.1 About importing Gendlian concepts into design and HCI

In line with Bardzell and Bardzell (2015) concerns, the introduction of new humanistic concepts into the field of HCI (and by extension, design) requires some critical analysis to avoid oversimplification. Before answering my research questions and in order to discuss the relevance of bringing Gendlian concepts into the field, I will start this chapter by answering some questions based on Bardzell and Bardzell's strategies on importing a humanistic concept into HCI (ibid). The questions are the following:

- **Why is it relevant to introduce Focusing into the field of Design and HCI?**

Some voices have emerged calling for a more adequate representation of the lived body in HCI (Fdili Alaoui et al., 2015; Höök et al., 2016; Höök et al., 2015; Lim et al., 2007; Loke & Robertson, 2013). As explored in the literature review, the dominant representation of bodily knowing is still mostly positioned in the domain of the tacit, as it is generally interpreted as emerging from reflection through action. The use of Focusing-oriented methods on the other hand, is grounded in bodily experience, yet from the standpoint of *reflection through inner presence*, bringing the notion that a focus on the lived body does not need to be only centred on external representations of somatic expression, such as movement or gesture. As our language is embodied in our subjectivity (Gendlin, 1993; Lakoff & Johnson, 2008; Merleau-Ponty, 1962), and implicit meaning needs a language to exist (Gendlin, 1993), language is one of the ways to describe the nuances of bodily experience. Yet the language we use in Focusing is not straightforward, as we have discussed throughout this thesis. Focusing facilitates access to the direct sense of experiential meaning, which is grounded in the body (Gendlin, 1993).

Focusing contributes to the fields of design and HCI with a body-based philosophy and practice that works with the systematic articulation of felt-senses, which are interpreted as aesthetic experiences. In conjunction with movement-based and experience-based approaches, Focusing can be helpful to access detailed descriptions, including insights associated to such experiences. Applied as a design method, Focusing brings an intimate dimension grounded in bodily experience in the shape of data, design ideas, as well as evaluation and prototyping.

What are the limitations of Focusing-oriented approaches? How is my interpretation of Focusing-oriented design methods different to the application in its original context?

Although Focusing is mostly associated with therapy, there are precedents of the technique applied in different fields, including creative writing (Perl, 2004), movement-based performance (Bacon, 2007) and other fields described in chapter 2. One of the limitations of the use of Focusing that differs to the application in its original setting is that whilst the original technique is practiced by a committed and somatically sensitive audience that actively search for workshops, the design audience (including designers and user participants) do not necessarily share this same interest. Because of this and the general disdain towards subjective knowledge existent in scientific culture (Nicolescu, 2014), which traverses HCI (Bardzell & Bardzell, 2015) and user-centred design by extension (Neustaedter & Sengers, 2012a), introducing Focusing-based methods can sometimes be quite challenging. Most participants from my studies have shown a real interest to engage with the Focusing exercises, in some cases incorporating some of the emerging lessons to their everyday lives. However, a minority group expressed some open resistance, directly questioning the usefulness of the technique through their mementos. These kinds of responses are something to expect, particularly when working with participants who are not accustomed to pausing and listening to their bodies.

To cater for different somatic sensibilities, I have decided to use Focusing as a technique to get people close to their wholistic sense of intricacy and meaning - a general felt-sense of the situation. One revelation, one new quality, one unity of experience is enough to grant a sense of meaningfulness and self-confirmation transferable to the design process. Although I envision a strong generative and creative potential in the first Focusing movement of *clearing a space*, it has been put on hold for the purposes of my current research exploration. *Clearing a space* implies performing an inventory of emerging situations through the body until our inner space is 'clear', to facilitate the emergence of more nuanced qualities of felt-senses. The details of how I have simplified this step are specified in the methodology chapter 4. The following are some of the reasons why I have introduced that change: (a) For beginners, staying in their bodies might be difficult without mind wandering. As an example of this, in chapter 8, I have described how brief guided exercises included as part of *Soul* were perceived as *achievable* by participants with no experience in contemplative practices. Even further, proprioceptive awareness is something that even Gendlin (1996) described as challenging for most people, requiring practice to get attuned with this kind of bodily connection. Rather than asking my

participants to endure a long session of generatively clearing a space, as a facilitator I considered it more important to get them in contact with their wholistic sense of bodily knowing. In order to do this whilst avoiding their fixation on familiar feelings I have developed a brief theoretical introduction explaining the difference between feelings and felt sense, indicating that we are after a different type of awareness. The metaphor of *filtering out concepts through the body* is also used as part of the explanation. Additionally, instructions around keeping an open attitude, or attempting to drop the story line for a moment as recommended by Rome (2014), are delivered (see chapter 10 for iterated instructions). (b) The act of inventorying emerges as part of the articulation process, particularly shaped by the rules of phenomenological writing. Instead of clearing the space at the beginning of the exercise participants are asked to inventory their emerging felt-sensing qualities on a piece of paper. The act of writing becomes a tool for enactive awareness, keeping things in place and speaking back to the participant, in the same way sketches speak back to the designer (Schön, 1984). Writing also helps participants to gently transition from awareness through *inner presence* back to *awareness through action*, which seamlessly integrates the writing process into the rest of the design instructions. (c) For practical reasons, trying to articulate several qualities and emerging themes through contemplative inventorying could potentially remove participants from the focus on the particular phenomenon of exploration.

The following are other limitations related to the practice of each method, as might occur in design practice.

- Focusing-oriented bodystorming (FOB): This method acts as a baseline of all the other focusing-oriented tools created throughout this research. Even though the use of FOB scaffolds rich accounts of everyday experiences in the shape of mementos, it might be difficult to keep the focus on specific characteristics of some design briefs. Earlier in the discussion chapter 9, I have drawn a parallel between FOB and cultural probes, as both aimed to access participants' authentic stories about their everyday lives. However, by putting the accent on keeping narratives real, we are granting our participants control on how to direct the conversation, making it difficult to set boundaries channelling creative thinking. In the case of FOB, channelling the responses towards more defined domains of answers gets complicated without the suggestive nature of props and their

materiality awaiting completion (Wallace et al., 2014). The blank piece of paper grants a space for safety, but also for unlimited freedom.

- FOB represents the first attempt to access experience through Focusing, under the premise that the outcomes emerging from the felt-sense can be used for design. The workshops explored generic topics we encounter in everyday living, mainly focusing on how participants access experience. Although the method generates rich accounts accessing inspirational instances of participants' experience, FOB does not explore the generation of design ideas in itself. Further explorations on how this tool can be useful to generate ideas is explored in study two (FOI).
- Focusing-oriented ideation (FOI): By using some extra design tools towards a more detailed articulation of aesthetic qualities, as well as by setting a specific design brief, FOI introduces some boundaries to the exploratory quality of FOB. In this design ideation method, ideas have shown a wide diversity and closeness to participants' past experiences, harvesting their emotional connection as projective artefacts to generate solution to these issues. Some of the questions arising from the FOI workshop are: *How do we express our feelings in a more assertive way to others? How do we keep those tiring meetings straight to the point? Is there any possible way to deal with a mean boss from the perspective of design?* This diversity can be problematic when trying to address more delimited, specific design problems. On the other hand, the relevance of the questions emerging from the workshop and the true nature of them also offer some opportunities for the method as a way to *elaborate critical questions* as starting points for design, an aspect that has not been explored yet.
- FOI is a helpful method to access lateral and critical ideas through somatic exploration, however the preservation of somatic qualities is also conditioned to the particular dynamics emerging from the design groups where the method is applied. For instance, it is advised that from a series of ideas framed through mementos, the 'most viable' is to be selected by a design team. Viability is generally related to external aspects, such as time, budget and approach to the original brief, potentially threatening the aesthetic specificity of mementos as sources of information. For that reason, the method of *designing from the granter's experience* aims to ensure the aesthetic and somatic qualities of mementos are preserved as much as possible. Without the integration of the granter

into the evaluation process, we still risk the dilution of somatic and aesthetic qualities obtained through the exercises.

- Additionally, although FOI scaffolded the generation of critical and lateral ideas for the design of unorthodox office environments, instructions given were still around recalling part of what was experienced in the office. As a result, participants who could not connect with their felt-sense focused mostly on conventional ideas around fixing functional aspects of the office, instead of generating new scenarios. In following iterations, Focusing reflection can be inspired by context outside the boundaries of each brief (including imaginary scenarios), in order to bring qualities of external, inspirational aesthetic elements from other environments.
- Wearables and Focusing (W&F): This study uses Focusing in its more evaluative dimension, by introducing gentle heat and vibration on the body as possible variables to shape participants' stories. As a result, it was observed that the introduction of somatic stimuli is effective to influence participants' personal narratives, yet the potential of material exploration remains relatively open at this point. SOUL has shown the first glimpses of material exploration by introducing vibration as a way to scaffold somatic responses and aesthetic connection.
- Designing from the Granter's experience: SOUL brings the control back to the designer in the making process, at least in the process of prototyping. It takes advantage of the granter's personal connection with the described memento or aesthetic experience, therefore using his or her perspective to evaluate and iterate the design once crafted. Some of the aspects to consider for the adoption of this method are overcoming the potential reluctance of designers to turn the testing process into a dialogue between the granter and the maker. As I have discussed earlier in the thesis (chapter 3), there is a general distrust on the relevance of subjective experience in HCI-oriented design research and practice.

- **Under which concepts can Gendlian philosophy and HCI be related?**

Gendlian concepts such as the felt-sense are quite unique and novel in our field, therefore a direct terminological connection might not be possible. Yet, as explored in chapter 2, the felt-sense is a way of meaning making or *sensemaking* as commonly acknowledged in HCI. Just to

name some few examples on the interest of defining sensemaking in interaction, Hummels and van Dijk (2015) contributed with seven principles for embodied sensemaking, and McCarthy and Wright (2004) described six sensemaking processes in their *Technology as Experience*. Sensemaking is also a relevant topic in design, as we engage in a variety of ways of thinking towards the solution of wicked problems (Kolko, 2010a, 2010b). In my Focusing-oriented design methods, the process of meaning making is facilitated through the *Focusing steps*, and extended later in the exercise of writing. Additionally, the process of meaning making promoted by Focusing brings the conviction of its meaningfulness, which relates to the concept of aesthetic experiences, widely discussed through Pragmatists views of HCI previously described in the literature review (chapter 3). In chapter 2 I have referred to how Gendlin's concept of felt-sense shares some similarities with the idea of having an *experience*, as discussed by Dewey (1934). The wholistic sense of meaningfulness and maturation (or *carrying forward* in Gendlian terms) that accompanies both felt-senses and aesthetic experiences are considered the main materials inspiring the development of my Focusing-oriented design system. Yet, what Gendlin brings to the discussion which differs from Dewey's proposition is the conviction that those meaningful, wholistic units can be articulated, and therefore analysed. For instance, my method of *designing through the granter's experience* (chapters 8 and 10) uses the granter's sense of meaningfulness and assertiveness as means to reflect and refine designed experiences. Without understanding the nuanced and essential aspects of what makes subjective experience meaningful it is difficult to transfer aesthetic qualities from personal accounts to the actual artefact, or designed experience.

Having briefly answered these questions, I proceed to revisit the gaps emerging from the review of the literature, which are discussed in regard to their corresponding research questions. As this thesis is highly exploratory, research questions are not only linked with the gaps themselves, but also contain some additional elements influenced by Gendlian rhetoric. For example, the concept of representational *bodily knowing* (in contrast with tacit manifestations such as movement) is connected with the concept of *filtering out through the body*, which is the way *bodily knowing* is accessed through Focusing. More details are discussed below.

11.2 Research gaps and questions revisited

11.2.1 Gap 1: Representational bodily knowing is not taken advantage as design material

The following Table 75 describes the summary of gaps found in the literature review, particularly related to how embodied knowledge is generally associated with tacit knowledge.

Table 75 – Representational bodily knowing as design knowledge

Gap	Emerging question
<p>Despite the claims situating the body as crucial, existing views mostly interpret the body exclusively in its <i>physical presence</i>, externalising the focus from the bodily awareness of itself to interaction. <u>When the body is acknowledged, the physicality of the body is seen as the only material for design contribution (namely movement, breathing) discarding the potential dialogue that could take place between body and mind.</u> As a result, bodily knowing is <u>assumed to remain in the tacit realm</u>, hopefully revealing part of its wisdom from time-to-time. In sum <u>the soma is acknowledged as the door to access meaning in theory, but this aspect has not been actively or adequately explored in practical terms</u> in our field.</p>	<p>1. Considering the body is fundamental in the process of meaning-generation, how can bodily knowing –beyond its tacit interpretation- assist in the generation of knowledge for design practice?</p> <p>2. Which qualities are engendered by ideas generated through the process of filtering out through the body? How are these ideas different to those generated through other existing methods?</p>

Focusing-oriented design methods offer a path to access our bodily knowing in such a way that the content generated is representational and therefore useful for design. The body is acknowledged as sentient and dialoguing, as having an important role in the construction of our subjective thinking and language formation (Lakoff & Johnson, 2008). Emerging questions are related with specific aspects of this bodily knowing, including how this knowledge is used as design material.

Question 1: Considering the body is fundamental in the process of meaning-generation, how can bodily knowing –beyond its tacit interpretation- assist in the generation of knowledge for design practice?

Bodily knowing is difficult to articulate, as it is generally externalised as direct action in the world. Although our bodily experience is fundamental for language formation (Lakoff & Johnson, 2008), bodily knowing is mostly associated with non-linguistic forms of expression (such as movement or gesture), as discussed in the literature review (chapter 3). Most embodied knowledge naturally remains in the tacit dimension (Polanyi, 1967), being identified in design through enactive and body-based techniques. In this respect, to assist in the generation of knowledge for design practice, a *systematic and clear articulation of the aspects concerning our bodily knowing should translate tacit knowledge into a language readable for design use*. The Focusing technique, and particularly the felt-sense, access this kind of representational knowledge, which can later inspire or inform the design of aesthetic experiences by means of the applications of methods previously described in chapter 10. Specific facets of aesthetic experiences are re-lived through the exercises, where the participant or designer is given space for the articulation of his or her subjective perspective.

Question 2: Which qualities are engendered by ideas generated through the process of filtering out through the body? How are these ideas different to those generated through other existing methods?

I have used the metaphor of filtering out through the body as a way to represent the way of ‘thinking-sensing’ accessed through Focusing. This wholistic *self-dialogue* is a form of reflection through inner presence. This self-dialogue makes space for the body to manage the conversation with the mind before jumping into any premature conclusion. As we tend to fixate upon the same thought patterns when searching for answers, the act of making space becomes crucial for the felt-sense to make an appearance (Rome, 2014). As a result, concepts generated through this inner process *emerge from the tacit*, to be articulated in representational, explicit forms. Consequently, the outcomes from this exercise are different to regular, everyday thinking.

Distilling concepts through the body can be considered as an act of *defamiliarisation*, and as such it facilitates the generation of ideas by momentarily bracketing outside social rules or normal inhibitions, being guided instead by our assertive selves. The material emerging from the filtering-out process contains some specific features. The felt-sense requires dropping the discursive mind for a moment, to make space for its appearance (Rome, 2014). As the felt-sense brings representational knowledge from the tacit (through the process of implying and

occurring), this articulation generally comes with a perceived sense of relief, or a perceptible shift. This sense also carries new information in the shape of discoveries, which comes with the conviction of its authenticity. This sense of meaningfulness granted by aesthetic experiences (Dewey, 1934) is accessed through Focusing-oriented design methods, and articulated through written material, which can be later analysed and used in different ways, as illustrated in the previous chapter 10.

Due to the process of defamiliarisation granted by filtering out through our bodies, resulting ideas show some qualities that make them different. For instance, ideas emerging from Focusing-oriented design ideation have two main distinct characteristics. Firstly, ideas tend to be directly *projective*, meaning that if the felt sense resonates positively, it is translated into metaphors mirroring the self. Conversely, if the felt-sense carries negative qualities, ideas become *transformative*, scaffolding the carrying forward process. Secondly, as ideas emerge from this space of intimate self-conversation they might be lateral and critical, defying social conventions as illustrated in chapter 6.

11.2.2 Gap 2: Lack of clarity in the transmission of qualities

Table 76 illustrates the gap concerning the lack of practical approaches acknowledging the role of representational bodily knowing in design, and the tendency to dilute subjective accounts in the process.

Table 76 - Lack of practical approaches to access meaning

Gap 2	Emerging question
<p>There is a current lack of practical techniques leveraging the role of the body as a door for accessing everyday stories and meaning, in spite of embodied theories acknowledging this importance. When the focus has been placed in the bodily dimension more explicitly, dynamics related to the practice of design might interfere with the proper articulation of rich experiences and somatic qualities. <u>As a result, potentially relevant content is diluted in the transference of information for design use.</u></p>	<p>3. How can we transfer aesthetic qualities from personal experiencing to the design of artefacts, whilst avoiding the dilution of such qualities?</p>

Question 3: How can we transfer aesthetic qualities from personal experiencing to the design of artefacts, whilst avoiding the dilution of such qualities?

Focusing-oriented design techniques with their subject-centric approach to design have proven effective to preserve the integrity of somatic and aesthetic qualities throughout the design process, from data collection, ideation, to evaluation and prototyping. As the body is an endless, ongoing source of meaning making, only facets of aesthetic qualities can be transferred through artefacts. As a matter of fact, it is impossible to access all the nuanced aspects of our permanently ongoing bodily knowing. Yet, the attempt to access the essence of bodily experience is worthwhile, as it reveals assertive and rich accounts, which are generally difficult to obtain through other means.

To avoid dilution of somatic qualities, it is important to trust the assertive process of subjective experience. As discussed in chapter 6, design strategies should aim for the full articulation of subjective somatic qualities before subjecting design ideas to any feasibility lens. As I also described in chapter 3 through my experience with Somaesthetic reflection, the lessons of my subjective insights were dismissed in the process of idea negotiation with my partner. Something was taken away, discarding the fact that projecting the self in artefacts and ideas is a powerful tool to unearth meaning and generate connections. As one approach to ensure a more meaningful articulation of aesthetic and felt-sensing qualities, in chapter 6 through my method of Focusing-oriented design ideation, I describe how the modality of traditional *teamwork* is replaced by *partnership*, until ideas and qualities are articulated in detail. This approach captures the Focusing notion of working as a *partnership*, where there is one person who is focusing, and a second who is listening and attentively facilitating the emergence of responses through reflective listening. Regarding the transference of aesthetic qualities to artefacts, I have described in my method *designing from the granter's experience* how by taking advantage of the inner process of assertive embodiment taking place in the granter, we ensure the preservation of essential and nuanced characteristics emerging from mementos.

11.2.3 Gap 3: Lack of integration between somatic practices and designerly means

Similar to the dilution of subjective discoveries through the dynamics of design practice, Table 77 illustrates the gap of how somatic lessons are not appropriately integrated into the design process, thus undermining the relevance of potentially insightful content emerging from self-reflection.

Table 77 - Lack of integration between somatic practices and designerly means

Gap 3	Emerging question
<p>Despite the fact it has been acknowledged that the objectives and rhythms granted by somatic practices differ with the mindset of design, <u>the disconnection mostly remains</u>. It is still quite difficult to integrate lessons learnt from somatic facilitation sessions into design practice. <u>As a result, somatic connection is used as a strategy to increase sensibility, but not necessarily as a designerly material to craft aesthetic everyday experiences.</u></p>	<p>4. How can the somatic technique Focusing contribute to access intimate stories and meaning in conjunction with designerly means?</p> <p>5. How can Focusing, in conjunction with wearable/portable stimuli shape the generation of personal narratives?</p>

In the same way as thinking, we can come up with a felt-sense of every situation we can imagine, which facilitates the adoption of Focusing in more traditional settings, such as offices and universities. Participants are seated during the guided exercise, which makes the practice of Focusing quite flexible. This logistic aspect that might initially seem to be tangential, has been quite relevant for the integration of felt-sensing qualities into the practice of design. One of the gaps found in the discussion of the literature is how design methods grounded in somatic practices sometimes struggle to integrate lessons emerging from somatic activities into design practice. One of the reasons might be related to the fact activities are seen as different. Using an example as a metaphor, going for a walk may be useful to refresh my ideas, which can inspire me to write a better novel. Still, both activities are mutually exclusive. If I go for a walk, I stop writing. Strolling on the park under the blue sky can be inspiring, but the connections with my productive process still remain inexplicit.

The Focusing-oriented methods described in this thesis connect design and somatic practices by keeping them as a whole system, instead of practicing them as separate ways of thinking, such as in the case of Somaesthetic reflection applied as ideation (Lee et al., 2014) or embodied sketching, which uses somatic practices as a sensitisation strategy (Márquez Segura, Turmo Vidal, Rostami, et al., 2016). This tendency might be influenced by the predominant thinking that bodily knowing is necessarily tacit as discussed, therefore separating physical action from design making. As discussed in this same chapter regarding the limitation of applying Focusing in the field, my take on articulation of somatic and aesthetic qualities

transitions from *reflection through inner presence* towards *reflection through action*. In practical terms, participants go through the guided exercises, to then enact thinking by writing about the experience, to then move on to more traditional ways of design thinking, such as sharing, sketching, et cetera. In order to take advantage of both somatic and design approaches somatic practices need to be somehow adapted into design language yet keep the integrity of what makes the somatic practice relevant. Generally, somatic practices not only connect us with non-representational knowledge in a practical sense, but also encapsulate rich philosophical principles influencing the rationale of their methodologies. In order to keep the integrity and richness of somatic lessons, a critical examination of how the somatic practice is integrated into design, including a discussion on limitations becomes necessary, in similar ways as Bardzell and Bardzell (2015) suggest in defining these aspects for the importation of humanistic theory. In this chapter, I have answered these questions myself.

The following questions further specify the contribution of Focusing to access meaning through designerly means. The first question refers to the integration regarding designerly means and tools in general. The second question deals with more specific aspects concerning wearable props as designerly tools for meaning making.

Question 4: How can the somatic technique Focusing contribute to access intimate stories and meaning in conjunction with designerly means and tools?

The integration of Focusing in the design field contributes with a reflective view on the body, complementing existing tacit-oriented and action-based methods for idea generation. It also contributes with a tool for the collection of personal stories containing rich narratives and insights that can inform design, as articulated through Focusing-oriented methods, described in chapter 10.

One of the advantages of using Focusing is, although the connection with our bodies requires time and practice, a balanced facilitation of the protocol can elicit immediate discoveries (which can be quite subtle or obvious), expediting the process of meaning making amongst beginners, as described in my studies (chapters 5, 6, 7 and 8). This process of realisation is captured through mementos, or immediately applied for design use (chapter 6). Additionally, meaning making can be shaped by artefacts (chapter 7), offering potential ways to facilitate physical engagement for contemplative practices.

As described in chapter 5, the application of Focusing for the reflection of everyday experiences surfaces aesthetic qualities of apparently unremarkable situations. In chapter 6, I have discussed how mementos can be used to elicit ideation, generating ideas not only concerning overlooked somatic qualities but also the materialisation of positive values and a transformative power, challenging the current state of affairs towards a more desirable state of things.

Question 5: How can Focusing, in conjunction with wearable/portable stimuli shape the generation of personal narratives?

Since the use of prototypes falls into the category of designerly tools described in the previous question 4, the interest of how stimuli on the body shapes meaning emerges as an exploratory sub-question. The importance of asking specifically about wearable or portable stimuli is linked to the notion of *crafting for everyday experiences through somatic inquiry*, mentioned as a gap. Wearable props emitting gentle stimuli were used as a tool of inquiry, because these can get in contact with the receptiveness of our bodies, acting as particular materials embedded in the fabric of experience.

The use of wearable props was theorised as a non-representational form of reflective listening. Instead of having the intimate experience reflected back through words (as done in one-to-one Focusing sessions), the props used in the studies were conceived as open-ended, single-stimulus generating a conversation with no discursive content. It was up to the participants to complete those 'dialogues' with their own meaning. Although there are several overlaps between the aesthetic content emerging through the interaction with heat and vibration in the context of the Focusing practice with artefacts, there are also some differences (see chapter 7). Two main embodied states were described through the use of props: (1) heat as *amplifying the sense of affection*, which is expressed as generative quality, or (2) vibration as a *mantra*, grounded, calming and potentially useful for meditative, immersive experiences requiring a loop of focus. These findings resonate with previous research linking heat with the affective (S. Lee & Schiphorst, 2016) and vibration with grounding (Duvall et al., 2016).

In terms of how wearable/portable stimuli on the body shapes meaning through Focusing, the most relevant finding is how the utilisation of non-representational tools still generates clearly articulated embodied responses. In chapter 7 I described how the use of props generated two main responses. First, stimuli as *mirroring the self* (the inner process matches with the stimulus on the body) or as *scaffolding new meaning* (the inner process and stimulus do not match, therefore

the body finds its way to generate meaning from the dissention). Through the experience with the artwork *Soul* (chapter 8), these embodied modes re-emerged during the interaction, with the addition of a third possibility, where the stimuli worked as a *handle*, meaning it triggered a memory or pre-existing content to reflect on.

11.3 Future directions and final words

Eugene Gendlin dedicated most of his life to craft a rich philosophical system, including practical methods to access the implicit dimension of our meaning-making process. His experiential methods have been widely used particularly in psychotherapy, opening up spaces for the client to take an active part in their process of carrying forward. Design and psychotherapy have something essential in common: both aim to improve people's lives, although in different ways.

Although Gendlinian thinking can contribute with a thorough philosophical system as well as methods for design use, there are still some pending challenges associated to my research. In the first place, this thesis aims to open the door for the adoption of Gendlin's principles for the first time in HCI-oriented design, therefore the methodology employed is heavily relying on exploration and trial and error. As discussed in the methodology chapter 4, the exploratory quality of the research is based on the employment of phenomenological inquiry, therefore paying attention to how participants engage in the exercises from the perspective of the lived experience, particularly testing the possibilities of Focusing at different levels. As a result, these accounts can be used as tools for the generation of design inspiration, information (chapter 5), ideas (chapters 6 and 8), and evaluation (chapters 7 and 8). The validation of the research's outcomes finds its consolidation in *Soul*, when one of the mementos generated by participants is used to shape a design method, a theoretical framework and an art installation subjected to public scrutiny. All the steps of the methods created have been carefully crafted to ensure the effectiveness of Gendlin's method, an aspect that has become evident through the richness of the narratives, and the discoveries described throughout the different chapters of this thesis. Yet, this is the first step towards a consolidation of a Focusing-oriented design methodology. Other researchers should try the methods proposed in order to further validate, test and adapt its usefulness from an additional perspective of what has already been done.

To recapitulate on some of the limitations discussed previously, it was observed that whilst Focusing opened the door for the description of rich and authentic accounts, it also offered few boundaries to focus on the potential particularities of design briefs. However, it also opened the door for the generation of questions that otherwise might have been difficult to identify. As part of some pending explorations, Focusing will be explored as a method to generate *critical questions for design*. In the FOI method these emerged, however these were not explicitly framed as queries. In terms of establishing boundaries in the articulation of more specific design briefs, the inclusion of enactive steps putting participants in contact with the particular scenario of inquiry will be introduced before the Focusing sessions. Other future inclusions such as exploration with materials and Focusing, as well as the integration of imaginary scenarios into the process can show different ways of how to use personal stories towards more future-oriented design solutions.

Apart from contributing with methods grounded in subject-oriented design, one unexpected outcome emerging from this project is the impact Focusing has generated in the small community I worked with. As illustrated in the felt-sensing mementos collected throughout my studies, descriptions are mostly insightful, touching and deep. I was privileged to witness the emergence of discoveries during the sessions, and to listen to people's world values and wishes. The meaningfulness of their experiences re-lived through Focusing, and all the emotions carried made me value the importance of the subject as the world in itself. Like the concept of responsive combodying (Ikemi, 2014), we are connected by something essential in this generative chain of meaning and existence.

As part of the future directions of this research, *clearing a space* will be explored as a generative technique for idea generation, particularly for design teams with some experience and interest in Focusing. I have started exploring this possibility with a group of master students interested in learning more outside the classroom. Nevertheless, these explorations are still at early stages of development. Additionally, I devise opportunities for Focusing to bridge knowledge from other somatic approaches and design. As I have explained previously, in some cases (due to a conscious decision, or influenced by logistic aspects) somatic practices are kept separated from designerly activities, which might affect the way lessons learnt from the body are incorporated. Focusing facilitates the representational articulation of insights, the use of words to define

what is important about the situation, at the same time bringing an assertive conviction of meaningfulness that can be inherited by the designs we create.

Philosophical and practical concepts emerging from Gendlin's teachings can offer valuable lessons in the field of design education. For instance, the concept of *empathy* is pivotal in user centred design, yet it is a difficult skill to teach. There are some existing frameworks and methods to access empathic understanding of our users, such as the ones described in the following literature (Gaver et al., 2004; Kouprie & Visser, 2009; Mattelmäki & Battarbee, 2002; McDonagh & Thomas, 2010), yet none of them consider self-understanding as a legitimate starting point to start connecting with other people's needs and struggles in more authentic ways. The suggested integration of subjective knowing in design should not be interpreted as a self-absorbed attempt to discard other people's needs to push personal agendas. Rather, Focusing can help to promote the attitude of "know yourself well to know your user better". Considering the designer's personal opinion is quite influential in the decision-making process (Zhang & Wakkary, 2014), the adoption of Gendlin's philosophy can help to normalise and acknowledge this view. Additionally, it can give designers practical tools to empathise with others.

In terms of the potential of Gendlian thinking for the design process, this thesis represents just the beginning of a much larger project. Gendlin's philosophy and methods are too rich and complex to be fully represented by any thesis, yet this is the first attempt to integrate Focusing and design as far as I know. My methods are still open for further adoption by a design community willing to shift their expectations, from a user-centred to a subject-centric approach to design. Additionally, my first attempt to materialise aesthetic experiences through an interactive artefact (*Soul*) is still within the domains of storytelling, yet it might be extended to other experiences and artefacts. Through *designing from the granter's experience method* I envision possible applications in the generation of educational experiences (urban interventions, schools, universities), as a way to empathically connect with the stories of others. Perhaps it is possible to generate everyday artefacts by acknowledging the user as the expert of their own lives, which could potentially connect personal experiences with other different realities. In our current state of affairs empathy and assertiveness become precious values to hold closely. As we are interactional beings, the inner dimension of the self is not only *inner*, but also works as a system that influences other systems (Gendlin, 1987). Knowing the self, as a strategy of

self-democracy can connect us with the essential side of others. In design, this implies trusting the subjective process and adopting a position for design, sparking conversation whilst valuing divergent responses as necessary in the process of meaning making. In this respect, I hope this thesis will open a door for the adoption of Gendlian thinking, including the recognition that our bodily knowing can put us a step closer to connect with our deepest needs, as well as the needs of others.

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Glossary of terms

This glossary offers a summary definition of how key terms are interpreted throughout this thesis.

Representation

In this thesis, I adhere to Hall's (1997) high-level definition of representation, which refers to the generation of meaning through language, images or symbols that allow the description of things.

Bodily knowing

The ways and resources the body has to access knowledge. This thesis identifies two types: tacit and representational.

Representational bodily knowing

A knowledge becomes representational in the sense it can be *described* through language. Representations are frequently elusive to articulate the nuances of bodily knowing. Yet, the Focusing technique is helpful to make explicit what remains in the tacit.

Tacit bodily knowing

This kind of knowledge is what Merleau-Ponty recognises as emerging from our unthematized consciousness (1962). It refers to a kind of knowledge that emerges in non-linguistic forms. For example, bodily movement falls into this category.

Focusing

Focusing is a somatic technique and protocol created by Eugene Gendlin. Through self-dialogue directed by embodied awareness, we can access symbolic ways to describe what we feel, in symbolic, yet unfamiliar ways.

Felt-sense

Felt-sense is bodily sense of knowing, which resides in the verge between the conscious and the unconscious dimensions. It can be articulated and described through the practice of Focusing.

Insights

When the felt-sense moves towards the conscious dimension, it manifest itself as new information or discovery.

Reflection through action

It can also be understood as enactive reflection. It is making sense of the world by paying attention to the situated body.

Reflection through inner presence

In this kind of reflection, we stop external action and focus on what we are feeling.

Aesthetic Instances

A unity of experience, acknowledged and/or represented in some way.

Memento

Similar to an aesthetic instance, a memento is a capture of a meaningful unity of experience. In this thesis, the specific material collected throughout the studies are called 'mementos'.

Assertive embodiment

A framework that uses the potential of assertiveness emerging from the practice of Focusing. For example, this framework explains how meaning is shaped by gentle stimuli on the body. Embodied responses can be extended to the Focusing practice without technology.

Mirrors of the self

An embodied state of agreement *mirrors the self*. It occurs when gentle stimulus on the body matches the meaning-making process.

Scaffolding

An embodied state of dissention *scaffolds* new meaning. It occurs when gentle stimulus on the body does not match the meaning-making process, generating a counter-response.

Handles

An embodied state of negotiation interprets the content as *handles to access existing memories*. It occurs when gentle stimulus on the body triggers the emergence of a memory.

Subject-centric design

A design process grounded in the experience of a particular person that has something important to tell.

Appendix

- Guided exercises (FOB and FOI)
- Felt-sensing answer kit
- Full list of publications

Guided exercises

FOCUSING-ORIENTED BODYSTORMING WORKSHOP

GUIDED EXERCISE N1- THE FELT SENSE AND THE EVERYDAY ISSUE

INSTRUCTIONS:

Select one of the everyday situations and describe it in your answer sheet. You can reflect on situations such as those from the table below. You also can select your own situation. If that is the case, please describe briefly.

1. Let's start this guided exercise by closing your eyes. Let's stay in the present moment. The aim of this exercise is connecting yourself with the aspects of experiencing that cannot be described or labelled that easily. The premise of this exercise is "experience is comprised by more than we can tell or nominate".
2. This exercise is everything about "noticing". Noticing comes before judging. We will try to bracket our reasoning for a while. Instead, we will leave our senses to communicate something that perhaps hasn't been perceived before. If you think you are getting judgemental about the situation, stop for a moment and gently remind yourself to focus on your breath.
3. Now, we will start by noticing and connecting with our essential perception. First, notice how your body is making contact with the chair beneath you. Notice how your feet are making contact with the ground. And now, start feeling how gravity is affecting the way your body is resting. Feel your body sitting on the chair, and notice how and where your arms and legs are resting.
4. Now, notice how the outside temperature is stimulating your skin. Is that a subtle sensation perhaps? You might start perceiving the fibre of your clothing making contact with some parts of your body. Rest your awareness in that subtle feeling.
5. Let your awareness drop inside your body. Now notice your breath going in and going out. Stay there for a moment. Feel the fresh air coming in and out of your nostrils and how your lungs are filled with air. Notice your breath going in and out. In and out.
6. Become aware of your body from the inside. Start by paying attention to your throat, your neck and your spine. How does it feel, your heart beating through your chest? Can you feel your belly?

7. As you stay aware of your body, bring to your awareness the everyday issue you chose previously. Now, get the sense of the issue as a whole thing, the cloudy discomfort of the unclear bodily sense of it. Notice how your body reacts to that bodily memory. Where do you perceive that feeling? Stay with it for a moment.
8. Could you come up with a word, or a phrase or a metaphor to describe the quality of that felt sense? Stay with the feeling of the situation for a moment. Don't answer directly; wait for the feeling to stir and give you an answer. Do not judge your answer, just immerse in the feeling of the situation.
9. Verify how this word, metaphor, or quality feels in your body. Does it make sense?
10. Repeat that word, metaphor or quality to yourself. Why do you think it is relevant? Before jumping to any conclusion, filter out the answer to your body. How does it feel?
11. Take some time to welcome that. Or perhaps you might want to leave it there.
12. Now, notice that we will start bringing your awareness back to the body again. Notice your breath, going in and out. Notice your body making contact with the chair beneath you. Feel gravity affecting the way your body is resting on the chair. And very slowly, as soon as you are prepared, start opening your eyes...

GUIDED EXERCISE N2- THE FELT SENSE AND YOUR SIGNIFICANT OBJECT OR ACTIVITY

INSTRUCTIONS: Think of one object or activity of special significance for you. It can be a gift, or maybe you can think of yourself performing an activity you really enjoy doing. Write down a short description of what this object or activity is. Take a moment to get immersed in that feeling of specialness, without questioning or trying to find a logical explanation for such sensation. Then, please follow the instructions from the guided exercise below.

1. Start by closing your eyes and focus your attention towards your body. Notice your body making contact with the chair beneath you. Notice the pattern your body would leave on the chair and feel how gravity is working on your structure. Notice how and where your arms are resting.
2. Notice your feet making contact with the ground. Now, start sensing how the fibre of your clothing is making contact with some parts of your body. Feel how the temperature from outside is stimulating your skin in a very subtle manner.

3. Let your awareness drop inside your body. Now notice your breath going in and going out. Stay there for a moment. Feel the fresh air filling your lungs. Notice your breath going in and out. In and out.
4. Now, we will start perceiving the body from the inside. Allow your attention to rest inside your body, in the area between your throat, chest, and abdomen.
5. Now, visualise that artefact or activity with special significance for you. Don't focus on the details of it, but rather on the feeling of specialness the artefact inspires to you. Now, you can ask yourself freely, why do I think this artefact or activity is particularly special to me?
6. Now, focus on how your body feels that answer. Verify. Does it feel right? Try to get immersed in the wholeness of that answer. I will give you a couple of minutes of silence to allow this answer to emerge. *Feel* what your mind tells you.
7. At this point, do you think you could come up with a word, a phrase or a metaphor that represents the feeling of specialness? Let's find out.
8. As soon as you find a word, verify with your body if this makes sense. How does this word feel? Stay with that feeling for a moment. I will give you one minute.
9. Ask yourself what about this particular quality [word, quality, metaphor] makes it so relevant for you? Remember to sense the answer before coming up to any conclusion. I will give you a minute.
10. Just to let you know, this exercise will come to its end in approximately one to two minutes. Notice that we will start bringing your awareness back to the body again. Notice your breath, going in and out. Notice your body making contact with the chair beneath you. Feel gravity affecting the way your body is resting on the chair. And very slowly, as soon as you are prepared, start opening your eyes...

GUIDED EXERCISE N3- THE FELT SENSE AND THE EVERYDAY OBJECT / THE TEAPOT

Figure 46. Random teapot with flowered patterns



INSTRUCTIONS: Observe the object displayed in front of you (Figure 1). Feel free to handle it and sense how it behaves and feels in contact with your hands. Look at its details and open your senses to its different qualities. Aim to get immersed in the subtle sensation generated by the object, without questioning or trying to find a logical explanation for such sensation. Importantly, don't try to push yourself to actually feel something. Then, please follow the instructions from the guided exercise below.

1. Start by closing your eyes and focus your attention towards your body. Notice your body making contact with the chair beneath you. Notice the pattern your body would leave on the chair and feel how gravity is working on your structure. Notice how and where your arms are resting.
2. Notice your feet making contact with the ground. Now, start sensing how the fibre of your clothing is making contact with some parts of your body. Feel how the temperature from outside is stimulating your skin in a very subtle manner.

3. Let your awareness drop inside your body. Now notice your breath going in and going out. Stay there for a moment. Feel the fresh air coming in and out of your nostrils and how your lungs are filled with air. Notice your breath going in and out. In and out.
4. Allow your attention to rest inside your body, in the area between your throat, chest, and abdomen. While you are still paying attention towards your inner body, I want you to recall the image of the teapot.
5. Recall how the object felt making contact with your fingers. Try to focus on the sensory qualities of the object touching your hands: texture, temperature and any other perceptible pattern...
6. Now, return your awareness inside your body. See if you can perceive how the wholeness of the artefact actually feels. Does it feel subtle? Strange? Locate where this sensation is coming from, where it is located and stay with that feeling for a moment. I will give you one minute to sense the wholeness of the artefact inside your body, starting from now.
7. Now, after trying to sense the object, could you come up with a word, metaphor or gesture to define how you relate to this artefact? Allow your body to speak first before coming up with a word, phrase or metaphor. I will give you one minute.
8. Do you have a word? How does this word feel when you repeat it to yourself? Stay with that feeling for a moment.
11. Just to let you know, this exercise will come to its end in approximately one to two minutes. Notice that we will start bringing your awareness back to the body again. Notice your breath, going in and out. Notice your body making contact with the chair beneath you. Feel gravity affecting the way your body is resting on the chair. And very slowly, as soon as you are prepared, start opening your eyes...

Focusing-oriented Design Ideation [Study FOI]

Healthy Workplaces

Guided experience N1 - Felt-sensing your workplace

INSTRUCTIONS: Follow the facilitator's instructions. Close your eyes and have a sit on a comfortable position.

1. This exercise is everything about “noticing”. Noticing comes before judging. We will try to bracket our reasoning for a while. Instead, we will leave our senses to communicate something that perhaps hasn't been perceived before. If you think you are getting judgemental about the situation, stop for a moment and gently remind yourself to focus on your breath.
2. Start by closing your eyes and focus your attention towards your body. Notice your body making contact with the chair beneath you. Notice the pattern your body would leave on the chair, and feel how gravity is working on your structure. Notice how and where your arms and legs are resting.
3. Notice your feet making contact with the ground. You are here, grounded, and embodied in the present moment. Now, start sensing how the fibre of your clothing is making contact with some parts of your body. Feel how the temperature from outside is stimulating your skin in a very subtle way.
4. Allow your awareness drop inside your body. Feel the fresh air filling your lungs, and notice your breath going in and going out. Stay there for a moment. Your breath is travelling through your body, starting from your lungs, moving down into the abdomen and lower abdomen. Then it moves up again and it's released to the environment. Notice your breath going in and out. In and out.
5. Now, we will start perceiving our felt-sensing core. Allow your attention to rest inside your body. Start by sensing your throat. Is it relaxed, or perhaps tight? Go down to your chest and stay there for a moment. Can you feel your heart beating? Does it beat softly, slowly, or perhaps it feels intense? Now go down to your abdomen and lower abdomen and rest your awareness there.

6. Now that we are aware of ourselves, imagine the situation of being in the office, in your workplace, in your office spot. Imagine one of the situations you were describing during the conversation you just had with your colleague. Or maybe you might want to concentrate on an image, of a bodily feeling related to the context of being working in the office. Try to sense your body temperature, bring to mind the act of being doing some work in front of the computer, or maybe interacting with your colleagues, or the feeling of intense concentration needed to write a document, design, or create something. Maybe you are focusing on being busy, or not necessarily. Stay for a moment with whatever it comes. I will give you a moment of silence.
7. Now, don't focus on the details behind that sensation, but rather on the general sensation of the situation inspires to you. Now, you can ask yourself, why do I think this situation is particularly relevant for me? or why is my awareness focusing on that particular episode? Keep the answer to yourself.
8. Now, focus on how your body feels that answer. Repeat that answer and verify with your body if it makes sense. Does it feel right? Try to get immersed in the wholeness of that answer. I will give you a couple of minutes of silence to allow this answer to emerge. Whatever it comes, establish a dialogue between your thoughts and your body. How does it feel through the body?
9. At this point, do you think you could come up with a word, a phrase, a metaphor or a memory that represents this general sensation of being in your workplace? Let's find out. As soon as you find a word, verify with your body if this makes sense. How does this word feel?
10. Stay with that feeling for a moment. I will give you one minute.
11. Just to let you know, this exercise will come to its end in approximately one to two minutes. Notice that we will start bringing your awareness back to the body again. Notice your breath, going in and out. Notice your body making contact with the chair beneath you. Feel gravity affecting the way your body is resting on the chair. And very slowly, as soon as you are prepared, start opening your eyes...

Guided Focusing + scripts for wearables (Heat and vibration)

(For participants with little previous experience)

Imagining a nice situation and using a device.

[BODY SCANNING + FELT SENSING]

NOTE: This protocol varies during one-to-one sessions, to cater the personal process of the Focuser. It might also vary during workshop facilitation, to instruct the use of vibration or heat on the body.

INSTRUCTIONS: Use the pouch during the body scanning, applying the pouch on the different body areas, as described.

1. Start by closing your eyes and focus your attention towards your body. We will try to bracket our reasoning for a while. Instead, we will leave our senses to communicate something that perhaps hasn't been perceived before. If you think you are getting judgemental about the situation, stop for a moment and gently remind yourself to focus on your breath.
2. Now, you will notice your body making contact with the chair beneath you. Notice the pattern your body would leave on the chair and feel how gravity is working on your structure. Notice how and where your arms are resting.
3. Notice your feet making contact with the ground. Now, start sensing how the fibre of your clothing is making contact with some parts of your body. Feel how the temperature from outside is stimulating your skin in a very subtle manner.
4. Let your awareness drop inside your body. Place the wearable element on your chest. Feel the fresh air filling your lungs, and the sensation generated by the element on your chest. Now notice your breath going in and going out. Stay there for a moment. Notice your breath going in and out. In and out.
5. Allow your attention to rest inside your body. Use the wearable element to sense your body as I mention each body part. Start with sensing the neck area, throat, and how the stimulus influences how you sense each part of the body. Go down to your chest again and stay there. Now go to your abdomen and lower abdomen.

6. Now, imagine and sense the situation or object you have selected because it makes you feel happy. You can use your device in those places you start feeling something as you imagine.
7. So, imagine the situation that makes you feel good [describe the situation in one-to-one sessions]. Don't focus on the details of it, but rather on the feeling of specialness the situation inspires to you. Now, I will ask you a question. Don't answer directly, but rather try to feel the answer first. Ask yourself: why do I think this situation is particularly or object special for me? [Use the device in those areas of your body the sensation is felt]
8. Focus on how your body feels that answer. Verify. Does it feel right? Try to get immersed in the wholeness of that answer. [Use the device in those areas the sensation is felt] I will give you a couple of minutes of silence to allow this answer to emerge. Feel what your mind tells you.
9. At this point, do you think you could come up with a word, a phrase or a metaphor that represents the feeling of specialness? Let's find out. As soon as you find a word, verify with your body if this makes sense. Use the artefact after you have felt something. How does this word feel?
Stay with that feeling for a moment. I will give you one minute. [Use the device in those areas the sensation is felt]
10. Just to let you know, this exercise will come to its end in approximately one or two minutes. Notice that we will start bringing your awareness back to the body again. Notice your breath, going in and out. Notice your body making contact with the chair beneath you. Feel gravity affecting the way your body is resting on the chair. And very slowly, as soon as you are prepared, start opening your eyes...

Guided Focusing – The love exercise: Artwork [Recorded voice]

(For participants with little previous experience)

[BODY SCANNING + FELT SENSING]

INSTRUCTIONS: Follow the guided exercise, and embrace the feelings emerging from it.

- In this guided experience will try to bracket our reasoning for a while. Instead, we will leave our senses to communicate something that perhaps hasn't been perceived before. If you think you are getting judgemental about the situation, stop for a moment and gently remind yourself to focus on your breath.
So, start by closing your eyes and focus your attention towards your body. Notice your feet making contact with the ground. Now, start sensing how the fibre of your clothing is touching some parts of your body. Feel how the temperature from outside is stimulating your skin in a very subtle way.
- Feel the fresh air filling your lungs, as the air enters and leaves your body. Stay there for a moment. Notice your breath going in and out. In and out.
- Now that your awareness is resting inside, I will invite you to pay attention to the neck and throat area. Start noticing whether it feels relaxed... or perhaps slightly tight. Now, go down to your chest and stay there. For instance, can you feel your heart beating? How does it feel? Now rest your awareness in your abdomen and lower abdomen. How does your abdomen feel?
- Now, imagine and sense the situation or object you have selected because it makes you feel happy. So imagine you are looking at it, or maybe interacting with that thing, or possibly performing an activity. Don't focus on the details, but rather on the feeling of specialness the situation inspires to you. Focus on how your body feels when you bring this object or activity to mind.
Now, I will ask you a question. Don't answer directly, but rather try to feel the answer first. We are filtering out our ideas through our bodies, so the following isn't necessarily a very rational question. Ask yourself: what about the thing or situation I selected is inspiring this particular feeling?

- Try to get bodily and intellectually immersed in the wholeness of that answer. I will give you a brief moment of silence to allow this answer to emerge. Feel what your mind tells you.
- Another question: *Why do I think situation or object is particularly special for me?*
- At this point, do you think you could come up with a word, a phrase or a metaphor that represents the feeling of specialness? How does this word feel when you say it to yourself? I will give you a moment of silence for you to engage in this inner dialogue.
- Just to let you know, this exercise will come to its end in approximately one to two minutes. Notice that we will start bringing your awareness back to the room again. Notice your breath, going in and out. Notice your body making contact with the chair beneath you. Feel gravity affecting the way your body is resting on the chair. And very slowly, as soon as you are prepared, start opening your eyes...

Sample: Felt-sensing answer kit

WORKSHOP: FOCUSING-ORIENTED BODYSTORMING FOR DESIGNERS

Gender _____

Situation (Number or description) _____

Please describe your Focusing experience by following the instructions detailed below:

- Use descriptive language rather than evaluative.
- Feel free to describe your feelings metaphorically.
- Apart from describing your session, you might want to express something else as it emerges through recalling the bodily experience (stream of consciousness)

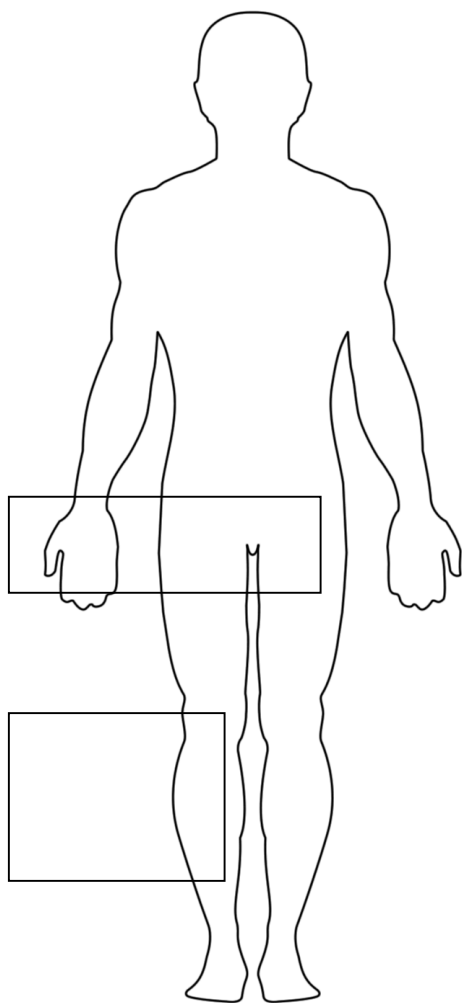
SAMPLE: Felt-sensing answer kit

(s)

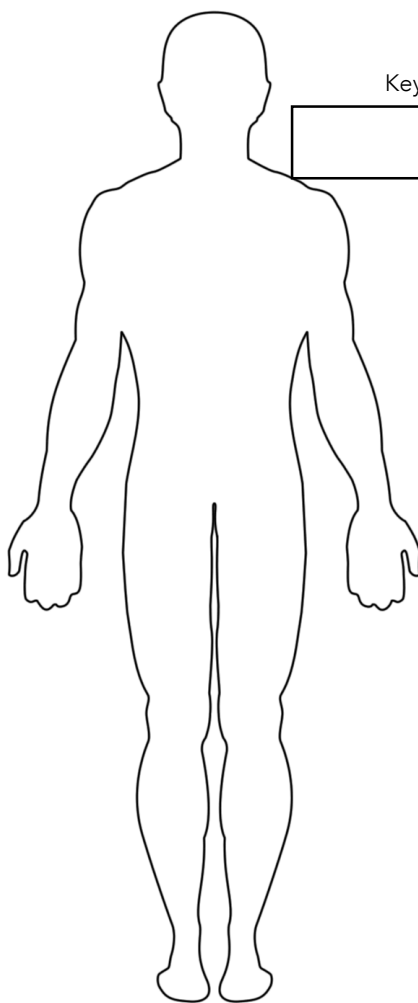
Keyword(s)

(s)

Keyword(s)



Front



Back

**Brief Questionnaire: Focusing-oriented
Bodystorming for designers**

--

Gender _____ Date _____

1. The guided exercise was useful for sensing the situation in a more intense way compared with only thinking (please mark with an x)

Totally disagree		Disagree		Neutral		Agree		Totally agree	

Please, explain briefly

2. This guided exercise was helpful to help me to discover a new dimension of my experience

Totally disagree		Disagree		Neutral		Agree		Totally agree	

Please, explain briefly

SOUL QUESTIONNAIRE

Name _____

Object or situation inspiring happiness:

FIRST INTERACTIVE STAGE (Audio 1)

(Please mark with an x)

1. "The guided exercise was useful to sense the situation in a more intense way compared to only thinking about it"

Totally disagree		Disagree		Neutral		Agree		Totally agree	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. "This guided exercise was helpful to discover something new from my experience"

Totally disagree		Disagree		Neutral		Agree		Totally agree	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECOND INTERACTIVE STAGE (Audio 2- Installation)

(Please mark with an x)

- *"I was able to transfer some of the qualities emerging from my personal experience (stage 1) to the narration (stage 2)"*

Totally disagree		Disagree		Neutral		Agree		Totally agree	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- *"Reflecting on my personal blissful experience (stage 1) made me more receptive to open my senses to the story (stage 2)"*

Totally disagree		Disagree		Neutral		Agree		Totally agree	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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- ***“I felt I connected to a personal level with the story”***

Totally disagree		Disagree		Neutral		Agree		Totally agree	

- ***“The vibration on the body enhanced my feeling of ‘being there’ during the experience”***

Totally disagree		Disagree		Neutral		Agree		Totally agree	

- ***“The audio experiences were useful to guide me through my senses and imagination”***

Totally disagree		Disagree		Neutral		Agree		Totally agree	

- ***“Integrating my bodily sensations into the experience allowed a deeper immersion into the story”***

Totally disagree		Disagree		Neutral		Agree		Totally agree	

- ***“Although I was listening to someone else’s story, I could identify myself with her feelings”***

Totally disagree		Disagree		Neutral		Agree		Totally agree	

- ***“I could vividly visualise the story in my mind.”***

Totally disagree		Disagree		Neutral		Agree		Totally agree	

Full publication list

Journal articles

- Loke, L. and Núñez-Pacheco, C. (2018) Developing somatic sensibilities for practices of discernment in interaction design. In press. *The Senses and Society Journal*. Routledge Taylor and Francis Group.

Conference Papers

- Núñez-Pacheco, C. and Loke, L. (2017) Tacit Narratives: Surfacing Aesthetic Meaning by Using Wearable Props and Focusing. In Proc. TEI17. Yokohama, Japan.
- Núñez-Pacheco, C. and Loke, L. (2017) The Body as a Source of Aesthetic Qualities for Design: Explorations and Techniques. Studio TEI17 Yokohama, Japan.
- Loke, L., de Berigny, C., Kim, Y., Núñez-Pacheco, C., Cochrane, K. (2017) Visualising the Meditating Mind: The Aesthetics of Brainwave Data. ISEA 2017.
- Núñez-Pacheco, C. and Loke, L. (2016) Felt-sensing Archetypes: Analysing Patterns of Accessing Tacit Meaning in Design. In Proc. OzCHI 2016.
- Núñez-Pacheco, C. (2015) Expanding our Perceptual World Through Technology: A Subjective Bodily Perspective. Adjunct Proceedings, UBICOMP 2015.
- Núñez-Pacheco, C. and Loke, L. (2015) The Felt Sense Project: Towards A Methodological Framework For Body-Centric Artifact Design. ISEA 2015
- Núñez-Pacheco, C. and Loke, L. (2014) Aesthetic Resources for Technology-mediated Bodily Self-reflection: The Case of Eloquent Robes. OzCHI 2014
- Núñez-Pacheco, C. and Loke, L. (2014) Crafting the Body-Tool: A Body-centred Perspective on Wearable Technology. In DIS '14: Proceedings of the 2014 Designing Interactive Systems Conference, ACM.

Workshops

- Núñez-Pacheco, C. and Loke, L. (2017) The Body as a Source of Aesthetic Qualities for Design: Explorations and Techniques. Studio TEI17 Yokohama, Japan.