

Hesitating between Threads *and* Needles: An Inquiry into *the* Dimension of Touch in Design Experimentation

How to cite this article: Copetti Maccagnan, A. M. & Meyer, G. E. C. (2022). Hesitating between Threads and Needles: An Inquiry into the Dimension of Touch in Design Experimentation. *Diseña*, (20), Article.5. <https://doi.org/10.7764/disena.20.Article.5>

DISEÑA | 20 |
JANUARY 2022
ISSN 0718-8447 (print)
2452-4298 (electronic)
COPYRIGHT: CC BY-SA 4.0 CL

Ana Maria Copetti Maccagnan

Universidade do Vale do Rio dos Sinos

Guilherme Englert Corrêa Meyer

Universidade do Vale do Rio dos Sinos


Original Research Article

Reception

MAY 16 2021

Acceptance

OCT 13 2021

 Traducción al español aquí



Even though experimentation and its material aspect are linked to the practice of design, few texts approach the concept intertwined with a dimension of touch. Considering the uncertain and critical times in which we perceive ourselves as a society, we need practices different from those prevalent in interaction design fields, yet capable of touching other possible worlds. We trust that the act of slowing down enables us to cultivate a distinct sensitivity, hesitating in the construction of a 'good common world'. This article investigates spaces of hesitation through touch-oriented experimentation and reports on one case of an experimental practice developed from the formation of an embroidery collective. The practice proposes a design performance more engaged with uncertainties, care, and subjectivities.

Keywords

Touch
 Design experimentation
 Experimental practice
 Hesitation
 Care

Ana Maria Copetti Maccagnan—BA and MA in Strategic Design, Universidade do Vale do Rio dos Sinos. Strategic designer and researcher. Her research addresses experimental practices and their material aspects regarding touch and care. She is co-author of 'Relatos de práticas e a formação de um coletivo de experimentação em design estratégico' (with G. E. C. Meyer, B. A. Lorenz, D. B. Gloeden, M. V. Batista, M. M. Lesnovski, and N. D. Figueiredo; in *Proceedings of the 111 Design Culture Symposium: Scenarios, Speculation & Strategies*). She has been acknowledged as Academic of the year (2018) by the Bornancini Award.

Guilherme Englert Corrêa Meyer—BA in Graphic and Product Design, Santa Catarina State University, MA in Regional Development, Regional University of Blumenau. Ph.D. in Design, Pontifical Catholic University of Rio de Janeiro. Designer, educator, and researcher, he is associated with the Post Graduate Program in Design at Universidade do Vale do Rio dos Sinos. He is also visiting professor at the Product Design MA program at the Pontifical Catholic University of Ecuador. Former visiting scholar at Georgia Tech. He has a background in Design, Anthropology, and Science and Technology Studies. His research includes thinking design in the Anthropocene and experimental practices of prototyping. Some of his latest publications include: 'Vivendo no Antropoceno: o Design e a Arte lidando com os modos de uma Época Impossível' (*Estudos em Design*, Vol. 28, Issue 2), and 'Aprendizaje como prototipado: experimentación en la educación infantil' (with C. Navarro; *Inmaterial. Diseño, Arte y Sociedad*, Vol. 5).

Hesitating between Threads and Needles: An Inquiry into the Dimension of Touch in Design Experimentation

Ana Maria Copetti Maccagnan

Universidade do Vale do Rio dos Sinos
Department of Design
Porto Alegre, Brasil
anamaria@edu.unisinos.br

Guilherme Englert Corrêa Meyer

Universidade do Vale do Rio dos Sinos
Department of Design
Porto Alegre, Brasil
gcmeyer@unisinos.br

THE URGE FOR SPACES OF HESITATION IN DESIGN PROCESSES

In the face of a present permeated by worries about the unraveling of all possible crisis fronts and care standing as a commonplace topic in everyday moralizations (Puig de la Bellacasa, 2017), we need to design alternative ontologies and relational modes, which interrupt models of thought driven by continuous progress perspectives. This shift is meant to be experiential, felt, and aesthetic, engaging with the realities of our subjectivities, sensations, feelings, emotions, and values (Höök, 2018). This research couples to investigate how spaces of hesitation in design processes can be favored by the dimension of touch in experimentation as a way of acting in these circumstances. Anchored in Stengers' proposition, experimentation attempts to destabilize what is known as certain (2018). Experimentation refers to a strangeness, a disruption of the habitual (Höök, 2018), that suggests possibilities for creation and divergence instead of convergence into a single answer. When built along with a dimension of touch (Puig de la Bellacasa, 2017), experimentation proposes a *positionality* that unleashes other ways of being, thinking, doing, and feeling.

Touch establishes a commitment to knowledge practices engaged with the situation by problematizing epistemological representations. It proposes a way of experiencing that builds knowledge *in contact* (Puig de la Bellacasa, 2017) and invites attention to detail, slowness, and care. According to Stengers, *hesitating*, to resist or not respond to the presented situation, is an action triggered by a slowdown, which challenges the situation and creates an opportunity to explore new repertoires and listen to others' urgencies (2018).

This article proposes discussing such issues through an experimental touch-oriented practice arising from an embroidery group. We adopted the Action Research method structured in cycles of experimentation where partici-

pants put their world perspectives into play through craft making. As a result, we identified four discussion topics that generate relevant lessons for HCI on considering touch and hesitation when conducting an experimental design process.

EXPERIMENTATION AND THE EXPERIMENTAL POSITIONALITY

We adopt an *experimental positionality* engaged with destabilizing what is taken for granted, capable of proposing creation possibilities while attending experiences. It is the idea of allowing the individual to affect, and be affected, present amid the situation. Diergarten (2015) comments that the word's root, *experimentum*, refers to an unfinished series of experiences and denotes knowledge based on a sensory perception that can precede theoretical knowledge.

According to Brandt *et al.* (2015), experimentation must presuppose exploratory experiments and material making. Meyer (2018) describes it as an open and collective process, in which expectations emerge from the engagement between those involved and the experimentation of new socio-technical configurations. Experimentation instigates the designer to get involved in social construction operations, aiming to mediate, shape, incorporate, and modify collective expectations (Meyer, 2018). Thus, collective processes of making take shape in practices where "the designer is the active actor who operates among several hybrid actors whom he must give a voice through materialization activities" (Meyer, 2018, p. 41).

To adhere to such experimentation, we adopt an *experimental positionality*. Analogous with the musical attitude (de Assis, 2015; Goehr, 2015), it is a particular design conduct that lasts throughout the design process, qualifying it with a curious, speculative, and critical perspective. The construction of an *experimental positionality* has five pillars:

1. *Openness*: The willingness to be surprised, challenge, and change something that occurs for the experience (Goehr, 2015). It recognizes a variety of forms of expression, taking an interest in improvisation and producing multiplicity.
2. *Incompleteness*: The finding of a connection with a scheme of relationships that, for Meyer (2018), escapes the logic of temporal progression or sequence of steps. An unplanned route.
3. *Revisability*: The constant feed on lived processes to prepare the field for new cycles of experimentation (Brandt *et al.*, 2015; Goehr, 2015).
4. *Particularness*: Experimentation as a subjective, singular, and situated practice. Haraway (1995) proposes rescinding a unique, powerful vision, favoring a network of partial, embodied, and responsible capacity.
5. *Correspondence*: An art of investigation that advances in real-time. It deals with the perception of how lives, in their perpetual developments and transformations, respond to each other (Ingold, 2021).

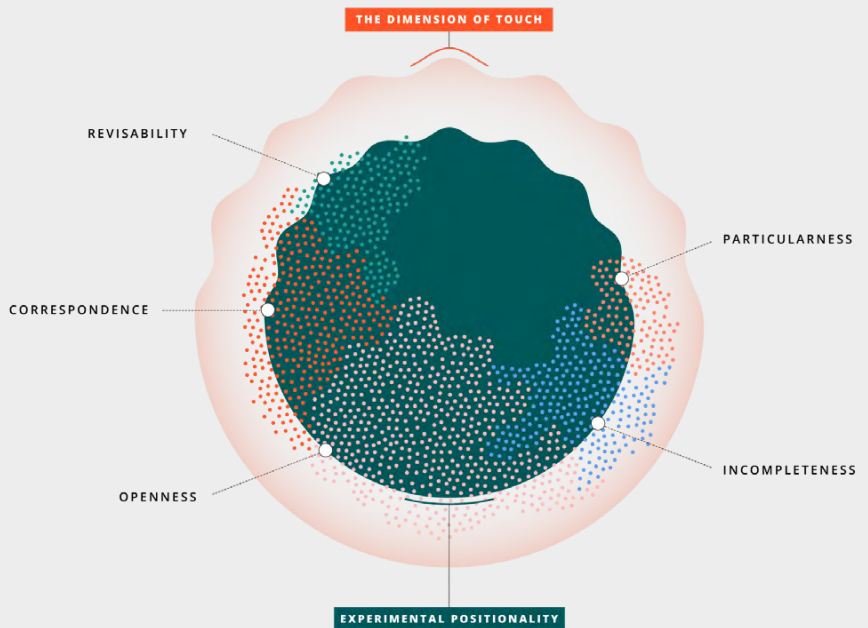
Through this lens, experimentation allows us to enter a range of design practices capable of touching other possible worlds.

THE DIMENSION OF TOUCH IN EXPERIMENTATION

Given the circumstances where the material aspect of a positionality is concerned with idiosyncrasies and emphasizes the sensory experience, there is an opportunity to address an issue hitherto unaddressed within experimentation: *touch*. As a matter of epistemological background, touch prioritizes the body and feeling in practices that are not detached but embodied. For Höök *et al.*, despite all the work we have seen on designing for embodiment within the field of interaction, “the actual corporeal, pulsating, live, felt body has been notably absent from both theory and practical design work” (2015, p. 27). Puig de la Bellacasa (2017) discusses the concept of touch when proposing that the processes of creating knowledge are inseparable from those of dealing with materials and world-making.

For the experimentation that this research proposes, paying attention to touch means elevating the fundamental pillars of the experimental positionality based on a particular sensitivity. Figure 1 represents this experimental condition attentive to touch. It can be read as: touch qualifies an experimental opening.

Figure 4: Relationship between the dimension of touch and the experimentation. The visualization aims to represent the dimension of touch regarding the concept of experimentation as an enclosure that includes the five pillars that form the experimental positionality. Each pillar is independent, with its definition, but blends in with the others, describing an attitude. Furthermore, the dimension of touch comprises these definitions through a new lens (as described below). Source: The authors.



Regarding HCI studies, touch refers to the haptic sense, which qualifies by its tactile perceptions the qualities and properties (Pye, 1968) of material surfaces perceived by touch. Chen *et al.* (2009) define tactile perception as composed of psychophysical and affective layers. However, Höök (2018) warns

us not to fall into the trap of reinforcing the separation of mind from body. For Ingold, materials “are neither objectively determined nor subjectively imagined but practically experienced. (...) To describe the properties of materials is to tell the stories of what happens to them as they flow, mix and mutate” (2012, p. 30). In that sense, they cannot be crystallized into the existence of the materiality but are something that *occurs* (processual and relational) (Ingold, 2012).

Therefore, to think about design processes based on touch becomes interesting because “touch is the sensorial way that integrates our experience of the world with our individuality” (Pallasmaa, 2009, p. 10). This means a design stance that “would not distract us from our own experiences but instead deepen our understanding and engagement with ourselves” (Höök et al., 2015, p. 27), allowing access to subjectivities.

“We can see without being seen, but can we touch without being touched?” (Puig de la Bellacasa, 2017, p. 97). Such a question guides some peculiarities of touch: first, the impossibility of exemption from an affectation. Haraway (1995) criticizes the incoherence of a *view from nowhere*, attesting to the hegemony of sight that, irresponsibly and distantly, simulates observing everything everywhere. Thus, if the vision refers to believing and representing, touch will refer to feeling and reality. Second, touch allows the perception of the sensible to become the definitive substance of experimentation and the experience *par excellence*. When it takes place, touch makes it possible to access the living character of the relationships involved, blurring boundaries between ‘self’ and ‘other’ (Puig de la Bellacasa, 2017).

What guides this proposition is that touch exacerbates a feeling of *concern*, recognizing *matters of care* (Puig de la Bellacasa, 2017). For this, we must perceive issues involving ‘to touch’ and ‘being touched’ beyond something physical, deepening the awareness of the embodied character of perception, affection, and thought. Feminist studies suggest the integration of the hand, brain, and heart (Rose, 1983). However, touch does not care by nature: “learning (to) touch is a process” (Puig de la Bellacasa, 2017, p. 113). Its generative character is not given beforehand but emerges from contact with the world. Skills need to be developed to touch carefully.

Turning to an ecology of care entails critically engaging with ethical-political meanings, therefore seeking a relationship with that or those unnoticed. For Meyer (2019), this implies considering *others* according to the notion of the ‘idiot’¹ proposed by Stengers (2018). For Stengers, it is understood that a transformation of practices into a universal neutral key as a policy for the existence of a *good common world* is opposed to a cosmopolitical vision. Sensitivity is needed regarding the issues that mobilize society. Stengers (2018) suggests slowing down in the face of the danger of reproducing practices without problematization,

1 For Stengers (2018), the ‘idiot’ is the one who challenges the situation by questioning methods that should deal with people’s involvement. She describes the figure based on the works of Deleuze and Dostoevski, and which originates from Ancient Greece: the person who does not speak the language and who, therefore, finds himself excluded from the civilized community. Through a slowdown, the ‘idiot’ sets his own time and resists the consensual mode of neutrality with which situations present themselves, problematizing normative practices and creating opportunities to hesitate.

creating the opportunity to hesitate and understand what goes beyond the point of view of the authorities. This slowdown contributes to create *spaces of hesitation* that address those who designate urgency and who, at the same time, incorporate multiple and divergent worlds. Hence, it is possible to think of experimentation and tact in the sense we addressed in this article.

METHOD

In 2020, we performed an experimental practice in Porto Alegre, Brazil, in an online format to investigate spaces of hesitation through touch-oriented experimentation. Such practice used the Action Research method in four experimentation cycles. Participants engaged in an activity mediated by manual embroidery were involved in a dynamic to *think together* and *together with* what was being made.

The choice of embroidery² enabled the access to empirical material so as to think about experimentation and touch. It establishes different relationships of time and sensitivity by providing descriptive and performative forms of creation. For Shercliff and Twigger Holroyd (2016), the particular way hands are occupied proposes slowing down the conversation, allowing participants to reflect before contributing. Thus, embodied knowledge is acquired through material practices of thinking through doing, which means that making offers reflection on what it means to create things, materials, and personal knowledge (Ingold, 2013a), or internal proprioception. For Pérez-Bustos *et al.* (2016), this knowledge results from the contacts around the embroidery, the objects, and the touch that passes on and through the bodies of those who research and are researched. Therefore, these contacts refer to the act of literally touching and a way of transmitting emotions and messages through the skin.

After an open call for craft collectives, we summoned a group of six people with ages ranging from 30 to 70 who were already familiar with embroidery. The group consisted of five women and one man who previously did not know each other. Their embroidery knowledge varied in different levels of skill. Due to the COVID-19 pandemic, we chose to structure the activity through online meetings held at Zoom and a process of mediation based on exchanging a box of embroidery materials between the participants (Figure 2). The embroidery kit consisted of materials such as needles, hoops, scissors, and a piece of cotton fabric (60x70cm). Its raw aspect conveys the idea of something unfinished, showing the intertwining of the materials. Furthermore, beads, ropes, fabric scraps, wools, and threads of different weight were chosen. The materials could be described by their sensorial experiences: the hard and rigid beads in contrast to the softness and flexibility of wool. However, our purpose with the variety was mainly to disturb movements and rhythms that would be experienced.

2 Shercliff and Twigger Holroyd (2016) comment that there is evidence of people joining groups to practice textile handicrafts since at least the 18th century. Stitching Together network (<https://stitchingtogether.net/>) stands out today, seeking to promote understanding and critical dialogues around making textiles with others as an emerging methodological approach used in interdisciplinary research. However, there are still few documented examples of this kind of research in the design context. Patarroyo *et al.* (2019) propose that this contradiction is somehow supported by the trivial and invisible status that textile craft activities—and women's activities—represent. The embroidery technique is highlighted especially in Latin America for being inserted in everyday research contexts, as is the case of the sewing laboratory Coletivo Artesanal Tecnológica (<http://artesanatecnologica.org/inicio/>).



Figure 2: The box to embroider care, designed by the authors. Photographs: The authors.

The practice was composed of four experimentation cycles of fifteen days each. The beginning of each cycle started when receiving the box of embroidery materials and the instructions. The participants were then encouraged to embroider freely. Afterward, we had online meetings to talk about what they had created. Each meeting lasted about an hour and a half and functioned as a focus group. At the end of each cycle, we randomly exchanged the boxes between the participants, and encouraged them to start the process again.

We moderated a focus group to create a collective open conversation and to observe the interactions. The task that guided the practice was for the participants to *imagine and create something that would express their life experiences and feelings in isolation or in the circumstances they were in*. Starting from a common theme but open to interpretations, as suggested by Lindström and Ståhl (2017) regarding inviting from areas of curiosity. In this way, experimentation could reveal issues to be discussed during the research, just as embroidery provides a dialogical process.

We started the meetings by asking what they had created, what reflections emerged, what they touched and what had touched them. The process of analyzing the information in the different cycles of experimentation demanded an exercise of what goes beyond the textual mediums: spoken, seen, touched—all acquired from video and audio recordings from the online sessions and the appreciation of the embroidered creations. The data analysis began freely with mental maps and later clusterization in the online collaborative platform Miro.

The following section contains the categorization of the practice episodes. We omit the names of the participants, giving them fictitious names. After signing a consent form, participants agreed that their data, such as images and speech, would be used.

RESULTS

Based on the units of analysis that emerged in the reports of the focus groups, we identified characteristics of the practice and classified the collected data into five categories that represent the research results. For example, when Elisa said, “I like this proposition of working with the suggestion of another beginning from what is not right”, we understood that this demonstrated an experimental aspect of the practice. Below we present the categories with excerpts from the experience.

1. Practice as an expansion of the possibilities and modes of creation

The first category refers to the manifestation of the experimental positionality throughout the activity. The group started by checking the box and touching the materials, which could disturb them because of their variety of shapes, textures, and colors. Unlike the idea of representing, the hand in contact with the materials brought out memories and sensations that suggested what to make while experiencing them. Roger commented: “I have been taking elements from what I see through the window, but it is not a landscape that I see. It is a reference very much guided by the desire to explore the material.” Elisa, in turn, changed her pace because of the comfort of the wool in contact with her skin: “I started doing sensory work. This little ball of wool called me. (...) Here between the fingers there is this delicious thing that brought me the memory of my mother” (Figure 3).



Figure 3: A figure of the wool that reminded the participant about her mother. Photograph: The authors.

To favor uncertainty, we did not give definitive answers on how to proceed. Thus, participants considered an imperfect way of making, breaking the traditional way in which things should be used, such as the creations on the reverse side of the fabric (Figure 4).



Figure 4: Participants used the back of the fabric as a mode of expression, as they used the materials in different ways. Photographs: The authors.

Although some participants had difficulties getting rid of preconceived parameters on this experimental practice, it was still a playful activity because embroidery proposes an escape from the idea of the hand as a ‘functional’ tool.

2. Practice as a possibility to establish a particular relationship with time

Since we set aside moments for individual production, the participants had time to pay attention to the work at hand. In an atmosphere of introspection, the hand on the fabric could feel the stitches carefully, favoring a slower pace and exercising body and mind awareness. Secondly, in the joint meetings, by inviting participants to embroider while talking (Figure 5), they exercised tacit knowledge, that is, crafting with fluid movements and paying another type of attention to what the group says. It was a way to practice touch-interaction beyond tangible interfaces. Monica commented: “if I am not looking at you, I am listening to you. I will not disperse because I am embroidering, I will do this listening in another way, respectfully, but it is in another way.”



Figure 5: Participants embroidering during an online meeting. Photograph: The authors.

3. Practice as the ability to establish relationships through touch

Participants exposed living aspects of the materials by an appreciation of their relationship with their bodies. Elisa said: “Things act while I embroider because they have a life of their own, (...) they interfere in my attitudes, in my stitches.” For example, the needle is a powerful weapon that can hurt (sharp) and craft an argument (flexible): “It pierces the fabric that was once intact with its kindness, and with all the gentleness of the threads, to become what I want to do, what I am.”

Thus, when exchanging the creations, touch meant embodying care. Materiality is a substitute for the body, as participants send each other’s feelings, hugs, and worldviews through the threads and their tangled compositions. The hand is not just a device to grasp and manipulate the fabric but it is capable of corresponding to the care given by the other. Sara commented: “Since we cannot hug each other, at least we are touching each other’s work. That way, we are touching the heart too” (Figure 6).

Figure 6: Participants expressing the touch properties of the material and feelings. Photographs: The authors.



Moreover, touch suggested getting involved with the situation. An embodied practice refers to the circumstances to which the discussions go and manifest in the creations. Whether it is due to the portrait of loneliness in the pandemic or the fires in the Brazilian Pantanal. Among the ways to represent this situation, there was a desire to take responsibility, as Isabel said: “Either I set fire, or I put out the fire. My embroidery is taking rain, water, and hope, this is my position” (Figure 7).



Figure 7: The transformation of an embroidery that passed through two participants and shows something about the situation of the Pantanal fire. Photographs: The authors.

4. Practice as continuity

The fourth category refers to the different natures of continuity in collective works. Some participants explained the continuity in the material itself with traces or spaces left visible, suggesting what they would like to create. Other participants sought to establish negotiations and temporary agreements during the moments of conversation, showing intentions and expectations regarding their work and suggesting continuities. Roger said: “I felt comfortable to print another vision of mine as a response to the listening I got from you at the meetings.”

When receiving the box from someone else, the participants correspond to an imaginative narrative, adding new elements. Sometimes, they changed their perspective from an appreciation of the other’s work because the contrast of the techniques was decisive for how they would engage in the sequence. If the other’s technique was perfect or imperfect, this influences the construction of the narrative argument. Elisa received this embroidery with ‘perfect’ houses and decided to intervene by making a counterpoint, a *favela* (Figure 8).

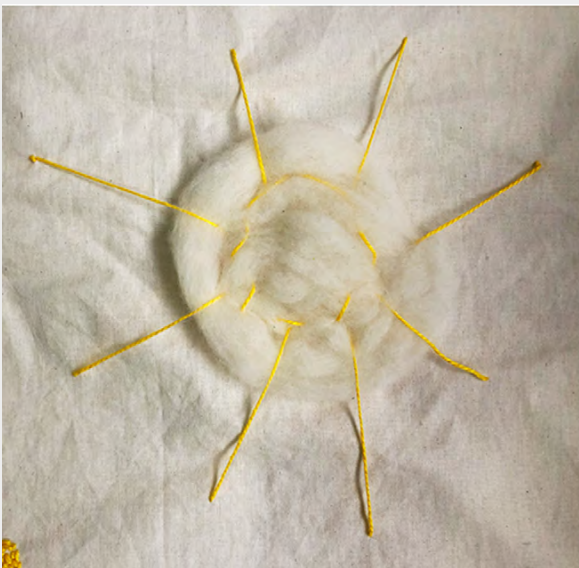


Figure 8: Two embroideries showing how continuity occurred after a participant was affected by the appreciation of the other's work. Photographs: The authors.

Figure 9: Embroidery illustrating how supporting other's work happened with embroidery threads. Photographs: The authors.

5. Practice as a group formation

Being together among strangers was not a problem to the practice, as it created conditions for companionship in a safe space. Also, participants alone felt accompanied when touching their collective embroidery. As we encouraged collaboration, we debated authorship and the fear of intervening in others' work because of the difficulty of overcoming an idea of invasion or injury. Also, craft skills to repair had to be acquired when participants felt the need to create on top of the other's creation in order to prevent something from falling apart (Figure 9). Isabel said: "I am either going to let this fall apart, or I am going to get involved in the other person's life. I think I saved it."



DISCUSSION

We identified four topics that refer to the main findings of the analysis. Although each topic has its description, they must be seen as intertwined with each other.

The oscillation between an experimental positionality and the idea of a program

The experimentation sought constant destabilization, but since embroidery may suggest a skillful performance of hands to get 'great results', planning the embroidery was also significant for the participants. Because of the spontaneity of the practice, destabilization should not be an impetus. The oscillation exposed the respect for the participants' autonomous movements to be vital, where hesitation meant allowing them to decide what was good.

The hesitation came mainly from the disturbance of what was touched. As much as the participants started from a plan, a material flow modified their processes (Ingold, 2012). It demonstrates the potency of the *Things*³ within the oscillation. The needle and the threads come to life when in hands, showing that correspondence is stronger than interaction.

Openness meant accepting experimental and planned closure movements, alerting design to have a more sensitive process and attentiveness to the oscillations and emerging strategies.

Experimental prototyping as provocative of narratives

There are many approaches to prototyping. The one this practice fosters comes close to the idea of *critical making* (DiSalvo, 2014; Ratto, 2011), where activity is the shared act of making. It acts as a mediator of a dialogical process, in which people put their perspectives in contact, exposing and modifying them. In addition to the conversation, our proposal also provokes tactile narratives.

Narratives are structures that are willing to tell stories in the process of signification. The collection of components that form the narratives correspond to the correlation between senses and communication, in which senses, in circulation, are collectivized (Bentz, 2014). Because they are tactile, these narratives propose a dimension of making people feel and get affected. Therefore, the material aspects influence the haptic senses, making it possible to engage with the bodily understanding of what is told. According to Ingold (2013b), the hand can *tell* stories through practice and experience when thoughts come into a conversation with materials through our hand and shape our material world.

Since its construction comes from a craft site, the narratives materialized social practices and incited conversations and material practices about trivial aspects of a domestic environment. These narratives emphasized what

3 A highlight for the concept of socio-material assembly: Binder *et al.* (2015) comment on a transition from design's obsession with objects (things), to a process understanding that adopts *Things*, or intertwined socio-material things, focusing on experimentation, prototyping, or infrastructuring.

is essential, referring to stories other than the hero's, but the untold stories, the story of life (Le Guin, 2019) (Figure 10).

While prototyping, the narratives emphasize what is urgent in the view of their authors and constitute spaces to hesitate, where they question values and seek new collective meanings. The process of experimental prototyping stimulates a dialogue that allows for discernment, participation, and the expression of subjectivity.

Figure 10: A narrative created by three hands about the timeline of an Uruguayan immigrant in Brazil during the pandemic. Photograph: The authors.



Figure 11: The variation of rhythms expressed in the embroidery. Photograph: The authors.



Accelerated

Slow

Respect for a variety of rhythms

Concerned about creating the occasion for the emergence of other ways of being and making, the practice showed respect for various rhythms. When running the finger over the works, we identify shapes and textures that range from filled-slow to impatient-fast (Figure 11), indicating the use of different skilled operations of the hands to perform the task.

Despite understanding the importance of efficiency, accuracy, or quantity for some participants, we invited them to gain distance from the speed and rhythm of their daily workload. The practice did not aim to encompass them all in a single way of doing things but to allow them to make sense of tacit knowledge. When practicing at their own pace, people distance themselves from the generalizing pretensions of those who would only apply or replicate what is proposed (Stengers, 2018). The fact that embroidery has proposed slowing down creates the occasion for a slightly different sensitivity, as a way to develop tools for noticing polyphony and temporal trajectories (Tsing, 2015).

Far from the idea of establishing a standardized slow pace, slowing down allows people to experience another rhythm as a possibility to hesitate and decide for themselves whether that track was good for them. In this case, variety translates as restlessness. It never stops the indeterminacy of how to act in each event, allowing us to invent different practices.

The *ethos* of care in design

A transformative *ethos* of care establishes a new way of perceiving the world. It advances the predetermined question of *how can we care more?* by guiding design processes to hesitate about *how to care?* and *what is caring?* (Puig de la Bellacasa, 2017). Care transforms the act of touching into an act of becoming with (Haraway, 2008), a situated practice of partnering with others by an ethical obligation to look after another.

We notice it when accessing a particular sensibility of a temporary group that constitutes a collective. The hands that embroider embodied care when taking over a combination of movements not to hurt, undo or damage the other's work, but to repair, hold and feel. The delicacy of touch overcomes a tactile experience to establish a democratic environment, allowing participants to share affections, uncertainties, weaknesses, and emotions.

Care implies other relationalities because the way the practice suggested the engagement of the participants nurtured a space where there was a passionate involvement (Puig de la Bellacasa, 2017). Relationalities also include materials, as it was required to decentralize human agencies, exercising a broad view of those involved in the interwoven histories (Haraway, 2008).

Touch overlaps the idea of care. As opposed to a detached process, touch assumes that we will be dealing with and affected by other sensitivities. Adopting an *ethos* of care in design research means looking beyond affordance to establish ontological commitments in which strategies pass through the filters of affection, ethics, and practical and material consequences.

CONCLUSIONS

There has been a growing dissatisfaction within design and HCI studies with a lack of attention on experiential subjectivities, considering bodies only focused on ergonomics. Regarding a dimension of touch from an experimental perspective, we crave to propose a different experience, extending the idea of touch as 'use' to touch as affect, feel, and correspond.

As understanding the qualities of experimental design is still at an early stage, the results and discussions lead us to consider hesitation within a design process. The concept of practice as an 'idiotic' situation enables us to slow down and generate restlessness of rhythms favoring spaces of hesitation so that, with care, we can problematize conventions and recover the ability to dialogue and notice.

The intertwining of touch with experimentation instigates design to access a more sensible mode of attention that adopts a distinct ontology open to affect and be affected by everything that contributes to the idea of *being together*. □

Acknowledgments

We want to thank the participants who kindly engaged with our research, making their time and affection available. Moreover, we want to thank the collaboration with reviewers for their constructive suggestions and attention during the submission process.

Sources of Funding

The research has been financed by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – Brasil (CAPES).

REFERENCES

- BENTZ, I. (2014). Processo de projeto: Do ponto de vista aos efeitos de sentidos. *11 Congresso Brasileiro de Pesquisa e Desenvolvimento Em Design, Blucher Design Proceedings*, 1(4), 570–579. <http://dx.doi.org/10.5151/designpro-ped-01254>
- BINDER, T., BRANDT, E., EHN, P., & HALSE, J. (2015). Democratic Design Experiments: Between Parliament and Laboratory. *CoDesign*, 11(3–4), 152–165. <https://doi.org/10.1080/15710882.2015.1081248>
- BRANDT, E., ERIKSEN, M. A., BINDER, T., & REDSTRÖM, J. (2015). The Perform Codesign Experiment – On What People Actually Do and the Relation Between Program and Experiment in Research Through Design. *IASDR 2015 Interplay: Proceedings Publication*, 234–249. http://iasdr2015.com/wp-content/uploads/2015/11/IASDR_Proceedings_Final.pdf
- CHEN, X., SHAO, F., BARNES, C., CHILDS, T., & HENSON, B. (2009). Exploring Relationships between Touch Perception and Surface Physical Properties. *International Journal of Design*, 3(2), 67–76.
- DE ASSIS, P. (2015). Introduction. In P. de Assis (Ed.), *Experimental Affinities in Music* (pp. 7–14). Leuven University Press.
- DIERGARTEN, F. (2015). Omnis ars ex experimentis dependeat: “Experiments” in Fourteenth-Century Musical Thought. In P. de Assis (Ed.), *Experimental Affinities in Music* (pp. 42–63). Leuven University Press.
- DISALVO, C. (2014). Critical Making as Materializing the Politics of Design. *The Information Society*, 30(2), 96–105. <https://doi.org/10.1080/01972243.2014.875770>
- GOEHR, L. (2015). Explosive Experiments and the Fragility of the Experimental. In P. de Assis (Ed.), *Experimental Affinities in Music* (pp. 15–41). Leuven University Press.
- HARAWAY, D. J. (1995). Saberes localizados: A questão da ciência para o feminismo e o privilégio da perspectiva parcial. *Cadernos Pagu*, 5, 7–41.
- HARAWAY, D. J. (2008). *When Species Meet*. University of Minnesota Press.
- HÖÖK, K. (2018). *Designing with the Body: Somaesthetic Interaction Design*. MIT Press.
- HÖÖK, K., STÅHL, A., JONSSON, M., MERCURIO, J., KARLSSON, A., & JOHNSON, E.-C. B. (2015). Somaesthetic Design. *Interactions*, 22(4), 26–33. <https://doi.org/10.1145/2770888>
- INGOLD, T. (2012). Trazendo as coisas de volta à vida: Emaranhados criativos num mundo de materiais. *Horizontes Antropológicos*, 18(37), 25–44. <https://doi.org/10.1590/S0104-71832012000100002>
- INGOLD, T. (2013a). *Being Alive: Essays on Movement, Knowledge and Description*. Routledge.
- INGOLD, T. (2013b). *Making: Anthropology, Archaeology, Art and Architecture*. Routledge.
- INGOLD, T. (2021). *Correspondences*. Polity.
- LE GUIN, U. K. (2019). *The Carrier Bag Theory of Fiction*. Ignota Books.
- LINDSTRÖM, K., & STÅHL, Å. (2017). Politics of Inviting: Co-Articulations of Issues in Designerly Public Engagement. *Diseña*, (11), 110–121. <https://doi.org/10.7764/disena.11.110-121>
- MEYER, G. E. C. (2018). A experimentação como espaço ambivalente de antecipação e proposição de controvérsias. *Estudos em Design*, 26(1), 29–47.
- MEYER, G. E. C. (2019). Strategic Design, Cosmopolitics and Obscure Situations. *Strategic Design Research Journal*, 12(3), 417–432.
- PALLASMAA, J. (2009). *Os olhos da pele: A arquitetura e os sentidos*. Artmed.

- PATARROYO, J., CORTÉS-RICO, L., SÁNCHEZ-ALDANA, E., PÉREZ-BUSTOS, T., & RINCÓN, N. (2019). Testimonial Digital Textiles: Material metaphors to think with care about reconciliation with four memory sewing circles in Colombia. *Proceedings of the 8th Bi-Annual Nordic Design Research Society Conference - Who Cares?*, Article 8.
- PÉREZ-BUSTOS, T., TOBAR-ROA, V., & MÁRQUEZ-GUTIÉRREZ, S. (2016). Etnografías de los contactos. Reflexiones feministas sobre el bordado como conocimiento. *Antípoda. Revista de Antropología y Arqueología*, 26. <https://doi.org/10.7440/antipoda26.2016.02>
- PUIG DE LA BELLACASA, M. (2017). *Matters of Care: Speculative Ethics in More than Human Worlds*. University of Minnesota Press.
- PYE, D. (1968). *The Nature and Art of Workmanship*. Cambridge University Press.
- RATTO, M. (2011). Critical Making: Conceptual and Material Studies in Technology and Social Life. *The Information Society*, 27(4), 252–260. <https://doi.org/10.1080/01972243.2011.583819>
- ROSE, H. (1983). Hand, Brain, and Heart: A Feminist Epistemology for the Natural Sciences. *Signs: Journal of Women in Culture and Society*, 9(1), 73–90. <https://doi.org/10.1086/494025>
- SHERCLIFF, E., & TWIGGER HOLROYD, A. (2016). Making With Others: Working with textile craft groups as a means of research. *Studies in Material Thinking*, 14, Article 07.
- STENGERS, I. (2018). A proposição cosmopolítica. *Revista do Instituto de Estudos Brasileiros*, 69, 442–464. <https://doi.org/10.11606/issn.2316-901X.v0i69p442-464>
- TSING, A. L. (2015). *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. Princeton University Press.