First Person HCI Research: Tapping into Designers' Tacit Experiences

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KEYWORDS

First person perspective; phenomenology; felt-life; emotions; designers' experience; tacit.

ABSTRACT

The emphasis on user experience, and bodily-driven approaches in HCI has paved the way towards a richer understanding of felt-life experience. Unlike users however, designers need specific methods to access such experiences and to work with them in their design. This paper presents three cases studies where we employed first person research method to design or evaluate interactive systems, or where we directly explored professional designers' first person accounts of felt-life experiences in their practice. We conclude with a reflection on opportunities and challenges of this methodological approach in HCI, and three suggestions for first person HCI research.

INTRODUCTION

The third wave HCI has increasingly acknowledged the importance of user's felt-life experience of interacting with technology [9]. Given its sensorial and emotional engagement, felt-life experience is best captured through user's first person perspective [4]. However designing for it, also benefits from designer's first person perspective of related felt-life experiences situated in their rich contexts of technology use. This in turn supports not only designer's empathic understanding of users, but also fresh design insights, difficult to reach otherwise. This paper outlines theoretical perspectives underpinning first person HCI research, and three case studies unpacking our previous work employing such perspective. The paper concludes with a reflection on the similarities of these case studies as well as the opportunities and challenges of this methodological approach in HCI.

CASE STUDY 1: Emotional Designer

Building on previous work showing the importance of emotions in creative processes and of reflection on practice, we explored first-person accounts of designers' emotions in the design process [23][24]. By interviewing nine expert designers, we found that they leverage predominantly high arousal emotions in the design process, and are particularly competent in regulating these emotions. This work emphasizes the importance of designers' emotional awareness and emotion regulation skills, and how novice designers may benefit from tools for training such skills.

CASE STUDY 2: Material Exploration through Pragmatic Research

We also employed pragmatic research or research-through-design approach by engaging with different materials to design interactive prototypes and design kits [19]. Such work included exploration of smart materials to develop novel affective displays [26][27], or exploration of materials to develop a novel kit to design for blockchain infrastructure [5]. Such work leveraged phenomenological approach emphasizing materials and meaning [16], as well as embodied cognition theories [6].

CASE STUDY 3: Auto-ethnography for System Design or Evaluation

Drawing on its value to allow for bodily experiences, we employed auto-ethnography to both design new systems [18], and evaluate systems developed by others [13][14]. Is important to note that these systems pertain to emotional wellbeing, and hence were likely to engender emotional experiences.

BACKGROUND

First person perspective in research falls under the remit of subjective research which tends to be captured by the *phenomenological* research approach. Such perspective and approach emphasize the value of subjective accounts for interpreting the world. These are predominantly accounts of emotional, sensorial, and meaningful experiences, underpinned also by the post-Cartesian philosophy [8]. Here we also talk about the explicit value of human body, as reflected in soma concept [3] and embodied cognition theories [6] articulating the role of the body in making sense of the world. Such experiences however, when elicited during the design process, are particularly rich, multimodal, often ambiguous, and not trivial to be captured through words. Articulating such tacit felt-like experiences requires a shift in our perception of design as a cognitive endeavor towards framing design as a holistic mind-body practice, where designers' bodies and not just their minds are key. Therefore, designers' bodies need to be considered as additional material for design [4]. Efforts to articulate such tacit, embodied experiences came from somaesthetics [3], and Gendlin's [1][2] experiential phenomenology and his focusing method already explored in HCI [7][10].

REFLECTION

We now reflect on the similarities of the three case studies outlined in the left column, with the view of identifying the opportunities and challenges of this methodological approach in HCI. With respect to the application domain, while case study 1 is neutral, both case study 2 and 3 address technologies pertaining to emotional wellbeing and affective health, where the role of the body is particularly relevant. Arguably, in such domains [12][15], the role of designers' bodies becomes even more critical.

Qualities of designers' felt-like experiences

Our previous work indicates that although the felt-sense experienced by different designers is *personal* and therefore *idiosyncratic*, *patterns of similarities* also emerged like in case study 1. This is an important finding, suggesting the value of a group of designers engaged in first person research, which in turn could increase the validity of the findings. This can also address the previously identified challenge of blindness associated with first person research [4]. Another important finding pertaining to case studies 2 and 3 is the importance of researchers' or designers' *values*. This has been previously suggested [4][17], alongside the importance of self-identity audit [25] for making transparent one's values and their impact on one's research. Findings from case study 1 also indicates that *design expertise* matters for the quality of felt-sense, and how it is experienced. Alongside expertise, the ability to introspect and to be aware of one's bodily responses is also important. Hence the level of expertise needs to be accounted for when engaging with this method. Felt-sense is also *tacit* and therefore, often *difficult to articulate* or put in words. Hence, we could benefit for ways to capture it both verbally and non-verbally.

Suggestions for first person HCI research

In this section, several sensitizing concepts and design suggestions [22] are provided to address the opportunities and challenges of first person research method in HCI.

Addressing the challenge of validity

To increase the validity of first person HCI research we could employ a group of researchers who are experienced designers, with ability to recognize their bodily responses and emotions, and willing to engage in value audit.

Supporting the articulation of felt-sense

We could also benefit from novel methods and tools to support the felt-sense and its articulation, building for instance on Gendlin's focusing method [1]. Such methods would explicitly leverage designers' bodies as resource for design. We could also develop an initial vocabulary to talk about the tacit and implicit in design, which may differ for specific application domains.

Supporting the experience of design materials

Other resource is the design material itself: digital data, bits and bytes, and hardware, or the high level concepts to be captured through design such as blockchain [5], energy [11], memories [20], grief [21], or emotions [27]. For the former, we need new tools to support designers to feel their materials of software and hardware, and for the latter we need innovative ways to materialize, intangible concepts, so these can also be experienced and felt.

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REFERENCES

[1] Eugen Gendlin, 1978. Focusing. New York, NY: Bantam Books.
[2] Eugen Gendlin. 2004. The New Phenomenology of Carrying Forward. *Continental Philosophy Review* 37(1): 127–51.
[3] Kristina Höök. 2018. *Designing with the Body: Somaesthetic Interaction Design*. MIT Press.
[4] Kristina Höök, Baptiste Caramiaux et al. 2018. Embracing first-person perspectives in soma-based design. *Informatics*, 5, 1.
[5] Irni Khairuddin, Corina Sas and Chris Speed. 2019. BlocKit: A physical kit for materializing and designing for Blockchain infrastructure. In *Proc. DIS'19.*
[6] George Lakoff, Mark Johnson. 1980. Metaphors We Live By. Chicago Press, Chicago.
[7] Lian Loke and Claudia Núñez-Pacheco. 2018. Developing somatic sensibilities for practices of discernment in interaction design. *The Senses and Society* 13.2: 219-231.
[8] Maurice Merleau-Ponty. 2013. Phenomenology of *perception*. Routledge
[9] John McCarthy and Peter Wright. 2005. Putting 'felt-life' at the centre of human–computer interaction (HCI). *Cognition, technology & work* 7.4: 262-271.
[10] Claudia Núñez-Pacheco, and Lian Loke. 2017. Tacit narratives: Surfacing aesthetic meaning by using wearable props and focusing. In *Proc. TEI'17*, 233–242.
[11] James Pierce and Eric Paulos. 2010. Materializing energy. In Proc. DIS '10, 113-122..
[12] Chengcheng Qu, Corina Sas, and Gavin Doherty. 2019. Exploring and designing for memory impairments in depression. In *Proc. CHI '19*.
[13] Claudia Daudén Roquet and Corina Sas. 2018. Evaluating mindfulness meditation apps. In *Ext. Abs. CHI'*18
[14] Claudia Daudén Roque, and Corina Sas. 2019. Digital wellbeing: Evaluating mandala coloring apps. *CHI'19 Workshop: Designing for Digital Wellbeing*
[15] Pedro Sanches, Axel Janson, Pavel Karpashevich et al.. 2019. HCI and affective health: Taking stock of a decade of studies and charting future research directions. In *Proc. CHI'19.*
[16] Elizabeth Shove. 2007. *The design of everyday life*. Berg.
[17] Corina Sas. 2017. Personal values in HCI research. *CHI'17 Values in Computing Workshop.*
[18] Corina Sas and Rohit Chopra. 2015. MeditAid: A Wearable Adaptive neurofeedback-based system for training mindfulness state. *Personal and Ubiquitous Computing*, 19(7), 1169-1182.
[19] Corina Sas and Carman Neustaedter. 2017. Exploring DIY practices of complex home technologies. *TOCHI* 24(2).
[20] Corina Sas, Shuang Ren, Alina Coman, Sarah Clinch, and Nigel Davies. 2016. Life review in end of life care: A practitioner's perspective. In *CHI EA '16,* 2947-2953
[21] Corina Sas, Steve Whittaker, and John Zimmerman. 2016. Design for Rituals of Letting Go: An Embodiment Perspective on Disposal Practices Informed by Grief Therapy. *TOCHI* 23, 4,
[22] Corina Sas, Steve Whittaker, Steven Dow, Jodi Forlizzi, and John Zimmerman. 2014. Generating implications for design through design research. In *CHI'14*, 1971-1980.
[23] Corina Sas and Chenyan Zhang. 2010. Do emotions matter in creative design? *Proc. DIS'10,* 372-375.
[24] Corina Sas and Chenyan Zhang. 2010. Investigating emotions in creative design. In *Proc. DESIRE '10*, 138-149.
[25] Sarah Tracy. 2012. *Qualitative research methods: Collecting evidence, crafting analysis, communicating impact*. John Wiley & Sons.
[26] Muhammad Umair, Muhammad Hamza Latif, and Corina Sas. 2018. Dynamic displays at wrist for real time visualization of affective data. In *DIS'18*, 201-205.
[27] Muhammad Umair, Corina Sas, Muhammad Hamza Latif. 2019. Towards affective chronometry: Exploring smart materials and actuators for real-time representations of changes in arousal. In *Proc. DIS'19.*