

Designer-researcher's positionality: materialities matter

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With the rise of cross-cultural, participatory research projects, there is a growing need for reflexivity in the design research community. One way to address this need is by using positionality, which acknowledges the researcher's personal, social, cultural, political position in relation to the subject, participants, context, and process of a study. However, this paper argues that in design research, additional reflections should be made on the research materialities, seeing as these may also reflect the designer-researcher's biases and assumptions, which have implications for the research process and outcomes. Drawing on the example of a participatory design research project researching the personhood of non-verbal participants, this paper highlights the potential of materialities as an additional component to reflect upon starting from a positionality statement. The paper concludes with examples of how these reflections on materialities can influence a research process and suggests ways of recording them in writing about design research.

Keywords: *positionality; materialities; participatory design*

1 Privilege, power in participation

It is believed that research is situated in a shared space that both the researcher and the participant shape (England, 1994). In traditional research approaches, the decision-making power rests primarily with the researcher, who controls the boundaries of this shared space (Bratteteig & Wagner, 2012). These boundaries can range from the research focus to the participant's selection, the chosen research methods, and tools, and all other visible or invisible decisions that shape the research process.

One of the most common ways design-researchers aim to open these processes is through a participatory design (PD) approach. PD believes that the designer-researcher should share the decision-making to control and influence these boundaries with the participants within this space (Bratteteig & Wagner, 2012; Harrington et al., 2019). Next to its valuing shared decision-making, PD also considers ways to democratize the research process (Harrington et al., 2019) by including those often marginalized in society through race, age, disability, and other forms of oppression in the research process (Wallace et al., 2013; Winschiers, 2006).



Nevertheless, many PD research methods still rely on certain cognitive and verbal abilities not all participants may possess (Mietola et al., 2017; Wilson & Morrissey, 2022), and concerns are raised considering how participatory a shared decision-making process is in practice (Bratteteig & Wagner, 2016). There has also been more attention within the community towards issues related to exploitation and the absence of reciprocity in ethnographic research (Huisman, 2008; Stacey, 1988), and a general call for more critical reflection on how the design research community communicates and documents these PD processes (Light, 2018; Sabiescu et al., 2014).

In response, there has been an increase in research focused on understanding participation that goes beyond the verbal to facilitate the inclusion of these persons within PD (Bircanin et al., 2021; Craig & Killick, 2012; Hendriks et al., 2018; Hendriks et al., 2014; Wilson et al., 2019; Wilson & Morrissey, 2022). Additionally, considering the relationality of PD, self-awareness, intentionality, and self-reflexivity have become pillars of PD (Öz & Timur, 2022; Walji et al., 2020).

2 Positionality in participatory design

“Positionality is the notion that one's worldview, consisting of personal values, views, location, time, and space influences how one understands the world” (Coghlan & Brydon-Miller, 2014). Originating in the social sciences, when applying this concept to design research, the position the designer-researcher adopts towards the research and its social, political, and cultural context determines how the research is defined, conducted, and presented (Savin-Baden & Major, 2013; Schiffer, 2020). Positionality is fluid in nature, it is susceptible to change depending on time, who and what we engage with, and to what end (Ateljevic et al., 2005).

Including positionality within writing about PD can also provide the necessary information on the circumstances under which the decision-making process took place (Holmes, 2020), which in turn helps identify the concepts that influenced this decision-making process (Bratteteig & Wagner, 2012), framing the final research interpretations and results. It informs readers and other researchers on how and why the designer-research documented these PD processes in writing (Light, 2018).

Especially when doing PD with non-verbal participants, meaning-making, interpretations, and assumptions of the designer-research and its overall influence are undeniably part of the research process (Wilson & Morrissey, 2022) and should be reflected upon accordingly. These reflections should serve as a first step in ensuring that the focus lies on dissecting the needs and wants of the (non-verbal) participants and that the influence of the design-researcher is not underestimated or assumed as neutral. It is the undoing of what Vázquez (2023) calls a fictional, pure, objective self from the researcher's standpoint that holds the illusion of scientific objectivity and gives nuanced context to PD practices. This starting point of honesty towards one's design research practice and all the implications that this may hold transforms the research process into a reflective practice (Vázquez, 2023).

The most common way to include positionality within research is by using a positionality statement. This is a written explanation of the researcher's background, experiences, and perspective, and how they have shaped the researcher's approach to conducting a study (Holmes, 2020). Including a positionality statement in academic writing is only a small part of a greater reflective practice, but it is one that hopefully moves us towards more socially just research (Martin et al., 2022). There are

multiple ways to construct a positionality statement (e.g., Martin et al., 2022; Sybing, 2022), but this paper will follow the most popular method according to Savin-Baden & Major (2013), who identified three components a researcher could position themselves towards; (1) the subject, (2) the participants, and (3) the research context and process. Translating this practice to PD research, this paper proposes a fourth component, (4) the research materialities.

3 Positionality shapes materialities

In this paper, materialities refer to the material dimension of all physical and digital research materials that are designed and used during the research process, such as technology, tools, and other artifacts (Wiberg, 2014). The traditional research process involves the use of research artifacts such as questionnaires, recordings, and field notes. However, this paper argues that (participatory) design research is also influenced by the materialities of these artifacts, how the designer-researcher positions themselves towards these, and how these materialities intersect with other aspects of positionality. Drawing on the belief that materiality is not a pre-formed substance (Orlikowski, 2007) and that "there is no social that is not also material, and no material that is not also social" (Van Dijk & Rietveld, 2017; Orlikowski, 2007; Von Maur, 2021), this paper examines three aspects of materiality in relation to positionality, how they intersect with other parts of positionality, and how additional reflection on these aspects can influence a design research practice through fictional examples.

The first aspect is accessibility, encompassing physical, digital, and economic accessibility between the participants and research materialities, as well as accessibility between the designer-researcher and these materialities. All materialities should keep the abilities and resources of the participants in mind, failing to reflect on this can lead to an unrecognized position of privilege, resulting in assumptions surrounding the accessibility and availability of these materialities within certain research contexts. This may influence when, why, how, and who interacts with these materialities. For instance, if the designer-researcher solely relies on technology accessible to participants with a specific socio-economic status due to personal preference and easy personal access, it may limit the study's reach and bias the research data.

The second aspect to consider is situatedness. According to Hicks & Beaudry (2010), all artifacts and objects carry their interpretations of the world and our place in it. This seems to imply that the meanings we attribute to these materialities are informed by the researcher's positionality. Similar to the concept of "Locus of enunciation" defined by Grosfoguel (2011) as "the geo-political and body-political location of the subject that speaks," these interpretations of materiality are influenced by one's social and cultural positioning in time and space, sometimes resulting in blind spots. For example, consider the commonly used symbol in design for "Home", which typically depicts a square house with a triangular roof. Understanding the abstractions of this image and its symbolic meaning is closely linked to a specific time, place, and culture. This context-specific meaning may not be easily translatable to different cultural backgrounds, times, or contexts.

The third aspect is intentionality. Originating from the works of Brentano, intentionality is described as the characteristic of thoughts, where a psychological state is directed towards or refers to an intended object (Jacquette, 2004). Applying this to design research, intentionality infuses the materialities with the personal intentions of the designer-researcher. Within the context of PD, we expect materialities to perform and facilitate participation with intention. These intentions may

sometimes even exceed their initial function. In the practice of Performative Objects, as described by Niedderer (2007) as “creating mindful interaction through the use of objects in social contexts,” she looks at the mediation of social/cultural meaning and interaction as the center of a potential relationship between artifacts and persons (Niedderer, 2007). Here, performative objects become a means for the designer-researcher to translate their intentions into tangible, interactive artifacts that not only serve a functional purpose but also evoke emotional responses and meaningful interactions for the users. Imagine a designer-researcher working with children with autism who wants to research their reaction to an online learning environment. Keeping the participants in mind the designer-researcher may believe that the environment should do more than just teach, so they decide to add sensory elements and opportunities for play within the designed materialities that function as an online learning environment. Here, reflecting on the intentionality of the materialities from the position of the designer-researcher transformed these materialities from mere learning tools to tools that also intend to make the experience more pleasant for the participants.

A designer-researcher not reflecting on their positionality towards these aspects of materialities would assume objectivity of the relationship to, and the value of, the material dimension of technology, tools, and artifacts used as a carrier to conduct a research process, between the subject and participants within a research context. Active reflection however can transform a practice into a more nuanced, inclusive, and emphatic space.

4 Project background

The project, funded by KU Leuven University, is a collaboration between three research units. It focuses on improving person-centered care (PCC) for non-verbal participants, specifically those with dementia and profound intellectual and multiple disabilities. PCC is an approach that focuses on the person and their unique needs, preferences, and values, ensuring that these values are at the forefront of all care-related decision-making (Baker, 2001). The research aims to provide tools for carers to access and record the personhood of these individuals through design. The research defines personhood using Wallace's (2013) analysis, which describes it as “the dialogical aspect of self, where the immediate circle acts as guardians and active participants in maintaining the sense of self.”

The project outline and goals were predetermined, including the research subject, participants, process, and context. These were chosen based on previously successful applications in similar contexts. However, the content, materiality, and application of these methods have been adjusted according to the identity of the designer-research, their expertise in combination with all other research aspects, and the needs of the participants.

The project has identified three research phases in relation to personhood: define, access & record, and integrate. During the first phase, immersion sessions were conducted as ethnographic research by volunteering at care facilities. The goal of these sessions was to be immersed in the work field of the participants. Data collected from these immersions formed the basis for two research methods used in the second phase of the project, aimed at accessing and recording personhood.

First, it aided the creation of a cultural probe aimed at carers and their relation to their personhood and the personhood of the persons they care for. Cultural probes are tools that gather tactile knowledge through assignments like diary entries, fieldnotes, visualizations (Gaver et al., 1999).

The second method consisted of experienced-centered design (ECD) sessions conducted by the designer-researcher with non-verbal participants. Various sensory tools were used to collect observable data on their personhood. ECD aims to enrich lives, include marginalized individuals, and give everyone a voice, especially those who often feel voiceless (Wright et al., 2008).

5 Positionality statement

The following section, constructed using the method of Savin-Baden & Major (2013), presents a positionality statement written from the perspective of the first author of this paper, including the suggested fourth aspect of reflection: materialities.

As a designer-researcher with a background in graphic and service design, I am part of an interdisciplinary project that investigates the personhood of non-verbal participants to improve their person-centered care. However, I acknowledge that my social identities as a white, cisgender, neurodivergent, and able-bodied female could limit my understanding of the complex concept of personhood. My upbringing has influenced my understanding of design and its ability to shape the world around us and facilitate communication and understanding.

Regarding the non-verbal participants in this research, I recognize their unique backgrounds, experiences, and perspectives. My understanding of their experiences, needs, and perspectives will be limited by our moments of interaction scheduled for the research project. Nonetheless, I intend to approach this research with an open and flexible perspective. However, I must also acknowledge that my experiences are from the perspective of a designer-researcher. Even volunteering at these facilities was with the project's development in mind to better understand the research context and its participants. As an outsider to their lived experiences, there is a risk of exploitation, miscommunication, and misinterpretations. Additionally, ethnographic research methods can create a dependence on trust and/or loyalty, leading to unintentional exploitation and additional emotional labour.

Regarding the predetermined aspects of the research plan, while it relieves me of some responsibility in deciding the research topic, it can create the illusion of less need to reflect upon these aspects of the research. Power imbalances may also arise within the project between the researchers who wrote the project and their expectations. The research methods and goals were predetermined, but the design of these research materials was influenced by my understanding of personhood and personal experiences and intentions for the project.

Considering the participants, the chosen research materialities prioritize physical accessibility, resulting in rudimentary and intuitive aesthetics. The overall communication design uses primary colors and shapes with the intention to convey non-verbal communication. Due to personal preference and participant interactions, most of the materialities used are physical. Additionally, there is an intention for the project to be alive within the care community, so there is a lot of focus on the aesthetics of communication material to promote the project further.

6 Reflections on materialities

The following section discusses two examples of how reflective practice on positionality in relation to materialities influenced the research process and its potential outcomes. These may seem

insignificant reflections in isolation, but acknowledging these moments is part of making the implicit explicit and visible.

6.1 Immersion notes

The initial plan for the immersion sessions was to document experiences in real time using notes in a physical notebook. But at the care facilities, it became clear that this would not be the right medium to document these experiences. The carers were under a lot of pressure and assumed I would support them when possible. My notebook was not perceived by them in the same way as I saw it as work. This made me feel uncomfortable following my initial plan, so I stopped writing at the facility and documented my experiences after the visits in my own time.

In this instance, the initially chosen research materialities of notetaking in a physical notebook in real time changed once the designer-researcher interacted with the research context and participants. The designer-researcher's situatedness in academia caused different meanings to be placed on these materialities compared to the participants. These reflections resulted in notetaking after the visits instead of at the facility. This improved the risks of forgetting certain elements, but changing these materialities also influenced the relationship between the participants and the designer-researcher, as this seemed to have lowered certain barriers.

6.2 ECD-sessions

During the ECD sessions, a suitcase was designed to contain sensory tools and to give the sessions a performative aspect. This concept was based on a story one of the carers shared during the immersion sessions, who explained how a similar suitcase had been used to store watercolor drawings. Seeing as this was a loved activity by the residents, the sight of the suitcase created a feeling of joy. By copying these materialities, I intended to emulate the same feeling that the artifact created in the story of the carer. In practice, I realized that this suitcase was just a carrier that I had assigned meaning to, the participants were not interested in the suitcase, only in the content of the suitcase.

The original design of these materialities was influenced by the intentionality of the designer-researcher based on a personal experience and a desire to emulate a specific emotion within the participants. Due to the participants not having the same experience, the intentions remained undisclosed, and the suitcase did not perform as intended by the designer-researcher. The participants didn't assign the same meaning to these materialities and were not interested in the suitcase. In practice, this reflection on intentionality changed the ECD- sessions, which became less performative not only to the non-verbal participants but also to other carers and the focus shifted to the sole content of the sensory tools inside the suitcase.



Figure 1. ECD-sessions suitcase.

7 Conclusion

Looking at an ongoing PD project, this paper aims to shed light on the missing stories and choices made during a research process by failing to reflect on its research materialities, from a designer-researcher position.

To put these insights into action, we encourage designer-researchers to continually reflect on all aspects of their positionality and how they intersect and shape the research process. A good starting point could involve integrating the three discussed aspects of materialities into their own practices, both during the process and in their written work. Additionally, considering the aspect of situatedness opens up opportunities for change within PD by comparing the dominant materialities' origin with the context in which they're expected to perform.

Lastly, this paper acknowledges that the format it presents still has several limitations. Ideally, these reflections should be seamlessly integrated into the entire research process and continuously reassessed. Including positionality in PD is also no way out of the complex and sometimes fragile places where it operates. Rather, through the examples discussed within this paper, we aim to demonstrate what acknowledging positionality in PD can entail and how including these reflections can transform the research process. The power of design research lies partially in its ability to create and perceive objects and artifacts not just for what they are physically, but for everything that they can be, through our own positions, intentions, and worldviews assigning meaning to them.

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