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Use of Bodystorming in Pre - Ideation, Research and Ideation Phase

A reflection on how bodystorming was incorporated through the design process, focusing on its continuous application

I. Introduction

Qualitative research methods utilise non-numeric data and employ a social inquiry approach to understand individuals' perceptions and interpretations of their living and working environment. By exploring the complexities of the research topic, qualitative methods offer a comprehensive and nuanced understanding (Atkinson et al., 2001; Pathak *et al.*, 2013). In their book *Universal Methods of Design*, Hanington and Martin (2019) classify bodystorming as a qualitative research method, highlighting its dynamic, experiential, and generative nature as a physical brainstorming technique.

Burns et al. (1995) defined bodystorming as "re-enacting everyday people." While it is a design ideation method categorised within the realm of "embodied sketching", — the term encompasses embodied interactions that emphasise the somaesthetic experience for exploring and designing physical activities (Schleicher *et al.*, 2010, p. 47; Höök *et al.*, 2018, p.19). It is a design technique where designers immerse themselves physically in the context of the interaction they are designing, allowing them to gain valuable insights into the user experience (Schleicher *et al.*, 2010; Burns *et al.*, 1994).

In the MA:UX Micro Unit, our collaboration with R/GA, a design agency, involved creating a way for individuals to pass as a generative AI in an everyday setting. During the project's research, pre-ideation and ideation phase, our goal was to gain insights into human perceptions of AI and the associated emotions. To achieve this, we employed *bodystorming*, a method that allowed us to simulate AI characteristics by leveraging the knowledge acquired through interactions with people.

Through the continuous application of bodystorming, we could fully immerse ourselves within the context. This method proved invaluable for sensitising the design process,

infusing it with experiential elements and incorporating social artefacts. Throughout this essay, we will critically reflect on bodystorming as a design ideation method across the three phases - research, pre-ideation and ideation phase.

II. Use of Bodystorming in Research, Pre-Ideation and Ideation Phase

Schleicher et al. (2010) propose that bodystorming should be prioritised as one of the initial steps during the problem-definition stage. By engaging in bodystorming early on, designers can tap into the embodied nature of knowledge and leverage the collective's ability to generate rich ideas and insights through tangible, physical activities. It fosters a sense of experiential awareness as designers envision physical and social activities facilitated by technological and social artefacts. (Höök *et al.*, 2018).

While I agree with the importance of employing bodystorming during the pre-ideation phase to identify gaps and opportunities, it is worth noting that the ideation step in the design process offers the most significant potential for designers to unleash their creativity (Jensen *et al.*, 2020). I would note two examples that identify the continuous application of bodystorming in their design process.

Example 1: Jensen et al.'s (2020) study on determining a robot's behaviour in an 8-inch tunnel during the ideation generation phase. The team created a simulated tunnel environment and carefully observed the robot's motions, decisions, constraints, and other factors influencing its behaviour. They iteratively adjusted the simulated environment based on their observations of what worked and what did not. By rigorously utilising

bodystorming, each team member generated 5-10 concepts for the subsequent ideation phase.

Example 2: In their study on embodied experiences of walking, Jacob, Damen, and Lallemand (2023) conducted 16 bodystorming explorations. Through these explorations, they identified gaps and opportunities, generating valuable insights and findings concerning walking experiences.

Through the two specific examples discussed above, bodystorming is a method that can be applied throughout the design process. Example 1 demonstrates its application during the ideation phase, while example 2 showcases its utilisation during the research and pre-ideation phase, involving multiple explorations, exhibiting its iterative quality.

Discussion

In this section, I will explore the application of bodystorming and the observations we made throughout our design process, focusing on three distinct scenarios. Scenario one involved the pre-ideation phase without prior research insights, while the other two scenarios were guided by recurring themes identified during the research phase. These themes helped us develop a checklist of characteristics to embody an AI. The continuous application of bodystorming played a crucial role in sensitising ourselves as designers to the context and the overall user experience, contributing to an iterative and gradual development process.

To initiate the application of bodystorming in our design process, we devised themes and narratives based on our observations of the external world. These observations

brought attention to the tacit nature of our bodily experiences (Schleicher et al., 2010), which proved challenging to articulate verbally (Polanyi M, 1962). Consequently, during the bodystorming sessions, we intentionally placed ourselves within the same grounded context and environment, facilitating a shared experience among the design team. This shared experience fostered easier and more enriched sharing of observations and findings among the designers (Höök et al., 2018).

Now, I will delve into the three scenarios created during the design process, highlighting the continuous application and iterative nature of bodystorming, which informed the final design decisions and contributed to the overall design experience.

Scenario 1

In scenario one, which occurred during the pre-ideation phase, no prior research insights influenced our contextual setting or the embodiment of AI by a human assisting another human (Image 1). The process relied solely on our foundational understanding of AI and its functions. However, engaging in bodystorming at this early stage allowed us to tap into the embodied nature of knowledge, revealing gaps (Schleicher *et al.*, 2010) between humans and AI and shedding light on the emotional aspects involved.

As depicted in Image 2, scenario one lacked significant interaction with social artefacts that could have facilitated a more vivid envisioning of the physical and social interactions. I concur with Höök et al. (2018) regarding the insightful nature of bodystorming when supported by technological and social artefacts. Evaluating the applicability of this technique to a design problem requires the design team to employ traditional evaluation methods, draw upon previous design experiences, or conduct trial demonstrations (Jensen et al., 2020).

Scenario 2



Image 1: Annotated scene from the scenario 1
bodystorming



Image 2: The image highlights the lack of props and bodily
enactment of AI during scenario 1

In Scenario 2, we explored the characteristics of AI (table 1) by embodying them through social artefacts. Incorporating items such as paper gloves, scotch tape, a fur-lined pipe, and a box with an iPad created a tangible interaction during the bodystorming session, enabling us to situate ourselves within the context and enhance engagement for all participants. The use of tangible artefacts within this scenario approach made the process experiential and contributed to a deeper understanding of the design problem (Höök *et al.*, 2018).

Scenario 3

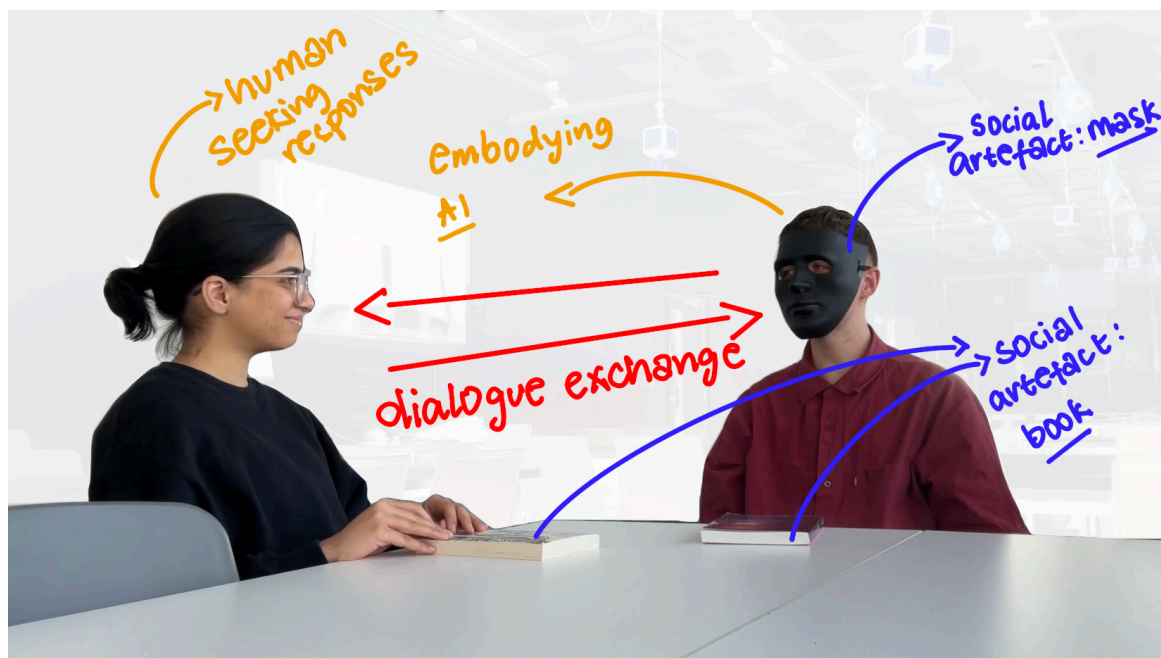


Image 4: The third scenario explored through bodystorming, involved proper use of social artefacts and presence of AI learnt through scenario two



Image 3: Physical exploration of the characteristics of AI

For scenario three, we situated ourselves in a classroom setting to further investigate the boundaries of AI conversations through bodystorming. This time, we focused on sound-based scenarios to embody the AI and observe the outcomes. Human "AI" interaction was explored and facilitated using social artefacts such as masks and books. One of our team members, Jakob, assumed the role of the AI and gradually transitioned from a standard AI persona to a more human-like personality. The embodiment of ideas through an enactive approach, as proposed by Schleicher et al. (2010), enhances the efficiency and effectiveness of the ideation process.

The progressive iteration of the bodystorming method by applying it throughout the three phases, as we can see from scenarios one to three, allowed us to fully immerse ourselves in the design process as we gradually introduced social artefacts (Höök et al.,

2018) to gain a comprehensive understanding of the experience we aimed to create—an avenue for individuals to pass as a generative AI.

During the three scenarios, I also observed overlaps between role-playing and bodystorming, which can be categorised as 'embodied sketching' forms due to their shared enactive qualities. Although our exploration in the three scenarios shares similarities with bodystorming in terms of its exploratory and interactive nature, it is crucial to acknowledge that bodystorming is distinctively defined as a situated ideation method wherein designers create prototypes within the contextual environment through enactment (Segura et al., 2016). On the other hand, although it has a long history in design research, role-play has predominantly drawn inspiration from theatre and focused on user and technology interactions while enacting the experience with it (Waern et al., 2020).

Conclusion

In conclusion, this essay has explored the application of bodystorming throughout the various phases of the design process, namely the pre-ideation, research, and ideation (concept generation) phases. The discussion has highlighted the iterative nature of bodystorming and its continuous use in shaping design outcomes. Furthermore, the essay has emphasised the potential of bodystorming to facilitate the enactment of lived experiences, fostering shared understanding and enabling richer conversations within the design team. As discussed in this essay, the application of bodystorming offers valuable insights and opens avenues for further research and exploration.

It would be beneficial to explore the limitations of bodystorming in design and investigate the potential synergy between bodystorming and role-playing as forms of expression.

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