A Discussion about Positionality, Research Stances, and Amplification of the "Right" Forces in Technology Design

- Shaan Chopra

In recent years, I have contributed to multiple works in women's health and Human-Computer Interaction (HCI), particularly around menstruation, menstrual health issues (e.g., polycystic ovary syndrome (PCOS)), and menopause. In this writing, I engage with concepts from Critical Race Theory and the Law of Amplification to reflect on my past research experiences and to question ethical and cultural considerations of research practices. My goal is to harness the energy of this workshop to think about how we can take a more intersectional and ecological approach to questioning practices and considerations that bias the design, analysis, and writing processes.

Why justify research stances and recruited populations?

In Critical Race Theory, the authors talk about how choosing a "race blind" approach in research is often seen as an easy way out to avoid acknowledging the "additional burden of representation" [1]. While I agree that a race blind approach is not the right way to go, there is less discussion about how researchers are often expected to over-justify the demographics of their populations if they work with "different" or marginalized groups (eg., people from the global south, racial minorities). Christina Harrington talked about how she was frequently asked to justify and provide more explanation about the Black communities [2] she works with. This often becomes taxing for researchers working with people at the margins, having to constantly fight for and justify their stances. *Why don't those working with non-marginalized populations also have to be so rigorous in explaining their populations and recruitment criteria?* Moreover, not everyone should be expected to be aware of the practices and cultures of non-marginalized groups. For example, I, an Indian woman brought up in India, may not be aware of the cultural and social references used in the US but may need to understand those to contextualize research done with US-based populations. *How can we ensure that there is a uniform rigorous practice that researchers follow while explaining participant backgrounds and recruitment methods?* Building much of our field's knowledge on the implicit assumption that different populations are sufficiently representative does more harm than good. *How can the research community push for this accountability in recruitment, without having researchers respond with clumsy attempts to engage with marginalized populations? Is there a more ecological approach for participant recruitment that can ensure that researchers do not bias against marginalized groups across different cultures, while also acknowledging their intersectional identities? How do we get resources and expertise in place to support good, representative work?*

Acknowledging positionality, self-disclosure & cultural references

Researchers' views may be heavily shaped or even biased by their positionality. While working in the field of Information Communication Technologies for Development (ICTD) or with people on the margins, a positionality and/or self-disclosure statement is seen as essential for explaining how researcher backgrounds informed or biased their research methods and interpretations. However, I worked primarily with Asian women living in the US in a study on understanding the lived experiences of people living with PCOS [3], but I was discouraged from including a positionality or self-disclosure statement as my findings did not focus on designing "culturally-relevant" technology for diagnosing and managing PCOS. While that was true, my findings were definitely sprinkled with cultural references such as taking ayurvedic (commonly used in India), homeopathic (commonly used in India), and traditional Chinese medicines to manage PCOS symptoms and receiving information about PCOS in culturally-appropriate ways. Thus, I felt there was a need to contextualize some of these cultural practices throughout the paper but I struggled to position them in my writing, ultimately adding them under a separate discussion section. I feel there is a need for a more ecological approach to write about the experiences of participants who grew up in a different cultural context but now live in a country with a different health system and set of social norms. A counterargument for positionality statements is that though they can help readers understand the strengths, limitations, and nuances of a work by clarifying the researcher's position, they also leave researchers more open to discrimination or harm [4]. I wonder *how positionality or self-disclosure statements can be altered to include some of these ethical and cultural considerations, especially when we know that they shape not just our participants' data but also the lens we use for analyzing it?*

I further believe that positionality and self-disclosure statements can have a wider impact. Researcher backgrounds always influence their perspectives while doing any form of research. But then *why only in some forms of HCI and ICTD research are such statements deemed necessary/essential for grounding results?* For example, as a woman of color, I may view reproductive health tracking applications differently as compared to people coming from different cultures where reproductive health might not be that big a taboo. I feel there might be value in extending this practice of including positionality and self-disclosure statements to research in fields beyond HCI, such as Natural Language Processing (NLP). For example, those training NLP models as well as compiling large NLP datasets could provide a self-disclosure statement, explicitly acknowledging how their backgrounds shaped their practices, perspectives, and biases during data collection and analysis. Though not entirely sure how this would work for other computer science or design research, I would be happy to get diverse perspectives from this workshop on possible implications of positionality and self-disclosure statements.

How to identify the "right" forces to amplify?

In his book "Geek Heresy", Kentaro Toyoma talks about the Law of Amplification, stating that technology itself is not the answer, but technology amplifies existing forces, that is, what we

already have [5]. However, the way it is defined in the book, I wonder if the law can only be used after-the-fact to understand how certain technology is adopted and why it was successful or unsuccessful in its environment of use. *How can one estimate (even after extensively engaging with target populations) what existing forces will be or need to be amplified? How can changes to technology design or adoption change what it amplifies? Is it even possible to get it right in the first go?*

Moreover, while Kentaro Toyama's argument is more about technologies as concepts (e.g., social media; laptops; remote learning), I wonder *if the law can be applied to narrow/tactical design choices in technology as well?* For example, I am unclear how we can practically use the Law of Amplification to make decisions about designing technology for different populations, within their own cultural settings. While the ideal practice is for designers to engage with users, study their contexts, and then articulate research questions that take into account existing forces (e.g., cultural background the users come from, economic situation of their households, etc), finding the "right" existing forces to amplify and then creating technology that does exactly that is a huge challenge in itself. Further, defining the "right" existing forces to amplify raises ethical questions (e.g., are we looking at what is right from a particular culture's perspective or from the designer's perspective?). Here, is an example from my own research where I struggled with this conundrum:

> In our study on menstrual health education (MHE) in the urban Indian context, we analyzed a digital platform that was designed specifically for imparting MHE to young females (9+ years of age) [6]. However, we saw that a lot of men used the Q&A section of the platform to ask questions related to masturbation, sex, and pregnancy, often sharing intimate details. A tension we struggled with while proposing re-design considerations for this platform was whether to "amplify" the existing way the platform was used (i.e. further supporting users in getting answers to whatever questions they may have, even if they are not directly tied to MHE) or to make the platform more conducive to use for the target audience - majorly young girls who started (or are of age to start) menstruating and have questions about the same (since they don't have proper access to MHE in their schools)?

From the view that this MHE platform was already deployed and appropriated by different populations to fulfill their needs, it is challenging to resolve this tension after-the-fact but possible to justify it using the Law of Amplification. Now, if I was a designer for the MHE platform and had to estimate how different groups of people would use it once I designed and deployed it for the first time, I imagine that would be even harder.

I look forward to using this workshop as an opportunity to think about identifying the "right" forces to amplify (or those to de-amplify) so that the well-being of people with historically disenfranchised and socio-politically marginalized identities, who are often disproportionately impacted by ecological crises, can be preserved and prioritized. It would also be interesting to think about what "right" looks like, who gets to define what "right" means, and how ecological is the approach for identifying & defining "right".

Acknowledgments

Bio

Shaan (she/her) is a first-year Ph.D. student in Computer Science & Engineering at the University of Washington. She self-identifies as an Asian woman of color. She studies how to create inclusive technologies that help people better understand, experiment, and make decisions based on their personal health data. She takes user-centered and participatory approaches to examine sensitive problems within healthcare contexts, primarily focusing on stigmatized topics in women's health and chronic health. Her broad areas of interest are HCI, health informatics & healthcare, inclusive design, and culturally-responsive design.

References

[1] Ogbonnaya-Ogburu, I. F., Smith, A. D., To, A., & Toyama, K. (2020, April). Critical race theory for HCI. In Proceedings of the 2020 CHI conference on human factors in computing systems (pp. 1-16).

[2] Harrington, C. N., Johnson, B., Ford, D., & Smith, A. D. (2021). Designing for the black experience. Interactions, 28(5), 22-27.

[3] Chopra, S., Zehrung, R., Shanmugam, T. A., & Choe, E. K. (2021, May). Living with uncertainty and stigma: self-experimentation and support-seeking around polycystic ovary syndrome. In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (pp. 1-18).

[4] Liang, C. A., Munson, S. A., & Kientz, J. A. (2021). Embracing four tensions in human-computer interaction research with marginalized people. ACM Transactions on Computer-Human Interaction (TOCHI), 28(2), 1-47.

[5] Toyama, K. (2015). Geek heresy: Rescuing social change from the cult of technology. PublicAffairs.

[6] Tuli, A., Chopra, S., Kumar, N., & Singh, P. (2018). Learning from and with menstrupedia: Towards menstrual health education in India. Proceedings of the ACM on Human-Computer Interaction, 2(CSCW), 1-20.