Reflections from a New Scholar on Engaging in Research with Marginalized Communities

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Abstract

This positionality paper includes my reflections, as woman of color in engineering, on my experiences while engaging in research and practice with marginalized communities. As an active participant in this workshop, I hope to share my experiences engaging in equity and inclusion research, learn from the stories of other researchers, and collaboratively develop ways in which we can demarginalize research with marginalized communities.

Author Keywords

Equity; women; social justice; Latinos; families;

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous;

Introduction

In order to build from the momentum of scholars within CSCW that work on equity and inclusion research, honor the communities we work with, and support each other, it is critical for us to explore collaboratively how we can demarginalize those researched, this research, and these researchers and include as many voices in the process. In this positionality paper, I reflect on my

experiences engaging in research with marginalized communities as a relatively new scholar to the field of CSCW.

My areas of research within CSCW are designing for inclusion and equity, makerspaces, technology for social good, and computing applications in the areas of education and diversity. My research builds on prior work in engineering education on makerspaces [6], in the learning sciences on equity in education [1,10,16], and in the field of human-computer interaction on family learning [11,13,15], to answer the question: *How might we broaden the participation of women in makerspaces, where students work collaboratively with people and tools to engage in the act of making, by leveraging the funds of knowledge students bring, to support the retention and success of minority women in engineering?*

As an active participant in this workshop, I hope to share my experiences engaging in equity and inclusion research, learn from the stories of other researchers, and collaboratively develop concrete ways in which we can demarginalize research with marginalized communities.

Formative Work & Reflection
I have studied the lived experiences of women in engineering to design inclusive makerspaces in higher education and how Latino families search and broker for information online together. In this section, I summarize our research with these two projects and then reflect on the process to highlight the role of solidarity in research with marginalized communities.

University Makerspaces: Opportunities to Support Equitable Participation for Women in Engineering
This research was a critical examination into how women in engineering experience community within makerspaces to identify what interventions are needed to facilitate successful participation of marginalized communities [12]. Undergraduate women are more likely than their male peers to leave engineering majors because they do not feel that they belong in the engineering classroom [2,3]. University makerspaces provide one opportunity to support the retention and success of minority women in engineering because of the potential to establish new patterns of interactions in these spaces that provide students with a greater sense of community. We contribute an emergent framework for understanding what mechanisms undergraduate women take into account when evaluating their sense of community in makerspaces.

This research started as an independent research project at Northwestern University where I was supported and mentored by Dr. Elizabeth Gerber and Dr. Julie Hui. Our work included participant observation of makerspaces and 27 interviews with makerspace leaders and students who self-identified as undergraduate women in engineering.

REFLECTION
I came about doing this work because of my personal experiences as a Latina, first-generation, woman in engineering. My lived experiences and engagement in engineering makerspaces informed the development of this project from the research questions to our methodology to intentionality in how our research results could be disseminated widely among researchers, practitioners, and students. As we

interviewed participants from across the United States to learn about how the design of their university makerspaces supported or limited their sense of community, we collected vulnerable and insightful stories about the ways students from marginalized communities navigated barriers to belonging like help-seeking, membership, and fulfillment of needs.

Throughout our interviews with participants, this work surfaced details and examples of the ways in which their intersecting identities influenced their sense of belonging in the makerspaces. Grounded on the lived experiences of students, we saw how being a woman in engineering, a woman of color in engineering, and/or a first-year engineering woman in engineering can compound to influence how they perceived themselves in relation to other community members in the makerspace [4].

With this project, I find myself in solidarity with the work of Dr. Sengers towards using reflective design to guide designers in rethinking dominant metaphors and values [14]. Particularly in the case of makerspaces, as their popularity grows on university campuses, I ask how we can employ reflective design strategies to envision alternative possibilities both in the design of makerspaces and in the ways we design artifacts to welcome and include marginalized students.

How Latino children in the U.S. engage in collaborative online information problem solving with their families
In this research, we investigated how children from Latino families with lower-SES and English Language Learning parents search and broker for information online to problem-solve family needs [11]. Our work focused on Latino families as they are the fastest

growing U.S. minority group and a severely understudied community in HCI and CSCW. We demonstrate how online search and brokering (OSB) is impacted by socio-ecological factors and through search vignettes illustrate how parent-child dyads solve for family needs through OSB.

We conducted in home visits because they allowed participants to feel comfortable, be in their known environment, and use their own technology and infrastructures to show us how they search for information. By examining how this community searches the information for information, we offer a new understanding of co-searching that is intergenerational, bilingual, and between searchers that offer their individual skills and knowledge.

REFLECTION
I came about doing this work because of my passion for doing research that can directly be translated into practice for communities I am a part of. Prior to having the academic language and research literature on OSB, I resonated with this work because I had done searches for my parents. Growing up in a bilingual, tight-knit, Mexican-American, family in Chicago, my three younger sisters and I often helped our parents search the internet and solve our information problems.

After reading the call for participation and reflecting on this project, the concept of self-care in solidarity comes to mind. Doing this work at the margins was challenging for myself because I often saw the same barriers that the families in our research articulated faced by my family members. It was an honor to be a part of this research team because of the solidarity I felt with the other researchers. Sharing with my team

members how I was seeing our emergent findings while I was at the pharmacy in my Chicago neighborhood or when I wondered how we could honor their workarounds as the families navigated challenges was a form of solidarity.

This project gave me first-hand experience doing research at the margins and made me critically think about the vulnerable work our participants to do to share their stories and experiences with us. Coming together in solidarity to demarginalize those researched and supporting each other's self-care practices, aligns with the work of Dr. Mohanty, to share individual and collective experiences of struggle and resistance through an "attentiveness to the interweaving of the histories of these communities [9]."

Solidarity with CSCW Communities Doing Equity and Inclusion Research

Three years ago I was not sure about what exactly the field of human computer interaction researched but I felt that I did not belong in the field based on my research interests. This is something that warrants further reflection as to why I felt that my research on equity, inclusion, education, and makerspaces did not fit in. Now as a growing number of scholars engage in research around equity, inclusion, solidarity, and intersectionality, I look forward to becoming a part of this community that works to advance these conversations through our research for the communities we seek to serve including populations from socioeconomically disadvantaged backgrounds.

Through opportunities like CHIMe 2018 and the Cornell Designing for Social Impact Summer School I met scholars in this field doing work I resonated with.

Engaging in conversations with Dr. Sengers about speculative design [8], with Dr. Jones about designing with families [7], and with Dr. Erete about designing with marginalized communities in Chicago [5], helped me feel this was a community that valued my research interests and was actively working toward demarginalizing our work.

Workshop Goals

I have many open questions around research on the margins that I hope to explore with workshop participations and organizers. What role do the concepts of acknowledging our positionality and fostering solidarity play in our research endeavors? What self-care strategies can researchers doing work on intersectionality, equity, and inclusion employ given our commitment to this work? How can we challenge ourselves and others to foster solidarity beyond this workshop and conference? I look forward to meeting researchers within the growing community in CSCW that not only examines issues of equity and inclusion but strives to engage in solidarity and explore these questions.

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