Surfacing Structural Barriers to Community-Collaborative Approaches in Human-Computer Interaction

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Community-collaborative approaches to technology research promise a more just, equitable, and societally impactful future for computer-supported collaborative work (CSCW). But how can we ensure that CSCW builds knowledge *with* communities as meaningful partners, rather than conducting research activities *on* them? And what would it take for our research activities to go a step further, with the aim of helping communities work towards alternative social structures and counter harmful structural oppression? With growing interest in community-collaborative approaches (CCA) in CSCW among both academic and industry institutions, it is time to reflect upon the field's history of these forms of engagement to develop pathways for the future. This interactive workshop draws from an expert roundtable featuring CSCW and human-computer interaction (HCI) researchers with a collectively rich wealth of knowledge on enacting, critiquing, and navigating community-based research. Together, we explore the structural challenges of CCA for communities, research institutions,

and individual researchers, with an explicit focus on how the values of computing research do and do not align with what is needed for truly community-collaborative work.

CCS CONCEPTS • Human-centered computing; • Empirical studies in collaborative and social computing; Social content sharing; Computer supported cooperative work

Additional Keywords and Phrases: Community-collaborative approaches in computing

1 INTRODUCTION

Researchers in CSCW have become increasingly interested in how technology design and development can work towards positive social impact. Much of this work uses what Cooper et al. call the "community-collaborative approach" (CCA) to research: a lens on computing research that emphasizes involving stakeholders from affected communities in the research, design, and development of new technologies. Drawing from scholarship on design partnerships, CCA aims to produce knowledge *with* and *by* affected communities, rather than by conducting research *on* or *for* them (Israel et al., 2005; Björgvinsson et al., 2010; Wallerstein & Duran, 2006; Unertl, 2016).

How to do this work well has been a longstanding subject of debate in CSCW, and in the broader space of human-computer interaction (HCI). What is the right way to involve people in technology design, looking beyond the construction of users and non-users of technology to broader communities of people affected by the decisions of technologists? In a political economy of technology that emphasizes corporate centralization, what even constitutes meaningful participation? (Tandon et al., 2022; Costanza-Chock, 2020) How can the mere act of doing research with communities alone bring about harm—and how can we ensure research activities can meaningfully support communities countering structural oppression and building alternative futures?

The stakes of the collective reflection we seek to facilitate through this workshop are high. Irresponsible research practices can reinforce existing inequities, and negatively impact the people researchers wish to support the most: communities themselves. These negative impacts can then further deteriorate relationships between academic institutions and local communities, which CCA depends on to succeed (Veinot et al., 2019). In CSCW and HCI, a growing body of recent literature has identified how CCA for technology design does not always guarantee justice. For instance, Harrington et al. point out the harm that can result when research institutions fail to acknowledge their histories of exploitation, and when research activities inadvertently compromise participants' privacy (Harrington et al., 2019). As an example, the authors point out that documenting community members' complaints about living conditions may jeopardize their abilities to renew their leases. Many of these challenges are resonant with those faced in fields with similar aspirations towards positive social change. In public health, for example, Lett et al. have warned against "health equity tourism," a phenomenon in which researchers with insufficient grounding in justice-oriented research and practice purport to do health equity work, but risk actually inhibiting equity movements by producing redundant knowledge, distracting from usable solutions, and demanding more of community resources.

This workshop sets an explicit focus on how the values of computing research do and do not align with what is needed for truly community-collaborative work. From this perspective, we explore the effects these values have on communities, research institutions, and individual researchers. Led by five researchers in CSCW and HCI with rich experience in doing research with communities, we will explore the following questions as we look to outline paths forward:

1. **Mapping histories of harm:** Meaningful partnerships with communities require us to contend with the histories of exploitation, power hierarchies, and harm in technology research. How can researchers establish field-level

systems that map histories of harm to protect not only communities but also researchers with marginalized identities? Further, how can we deconstruct existing concepts and practices through an intersectional analysis of power (Erete et al., 2022)?

2. **Sites of community-collaborative research:** The state, the public, and the market each have their own relationship with society, and accordingly can conflict as sites of research. How can researchers pick partnerships and move between them with these conflicts in mind?
3. **Scaling community-based research:** Scalability and universality are core values of computing; but these impulses often run counter to core tenets of community-collaborative work, for example building trust between researchers and communities and emphasizing appropriate interventions. Are scale and CCA necessarily incommensurate? And if they are, how should researchers frame the value of their community-collaborative contributions alongside mainstream pursuits of universalism? Furthermore, what adjustments to CCA approaches are necessary to suit the needs of different geopolitical contexts?
4. **Committing to community-collaborative approaches:** Community-collaborative research requires commitment to balancing both the expectations of research fields and the community's needs at present. In research partnerships, misalignment in expectations for project timelines, end dates, and terms can arise. How can researchers negotiate research partnerships that respect community needs and accomplish researchers' goals? What strategies can researchers use to manage discomfort with assuming 'liaison' responsibilities between community and research expectations?
5. **The role of CCA in CSCW:** Taking a step back, does shifting the focus of CSCW towards CCA truly help us achieve equity for our communities? And more broadly, what role would community-collaborative technology research have in shaping the values of computing towards justice-oriented futures?
6. **Connections across computing disciplines:** This panel also provides an opportunity to draw into CSCW the perspectives of researchers from related disciplines (e.g., responsible computing, ethical AI/ML), industry practitioners, and non-profit workers—including community partners who either already work with or are interested in working with computing researchers. Prior to this workshop, the panelist and organizing team will have led a CRAFT session at the FAccT 2023 conference. Audience members from FAccT who are interested in deeper discussions will be invited to apply to our workshop.

Through guided explorations of these questions, this workshop will document the perspectives and experiences of CCA researchers and identify potential pathways for CSCW researchers to respond to structural barriers. Workshop attendees will benefit from both exposure to experiential knowledge from experts in CCA work and collaborations of their own alignment or misalignment with the values, issues and tactics surfaced through discussion. To ensure the broader research community also benefits from the work, this workshop will also work towards various artifacts summarizing the workshop discussion, which will serve as resources for CSCW scholars interested in CCA going forward.

2 ORGANIZER TEAM

This workshop proposal includes a team of researchers all experienced in community collaborative approaches in computing research (e.g., Liang et al., 2020; Tseng et al., 2021; Kotturi et al., 2022; Ghoshal & Bruckman, 2019; Wong-Villacres et al., 2020; Erete et al., 2022).

Calvin A. Liang is a Ph.D. Candidate in Human Centered Design and Engineering at the University of Washington. Their work focuses on building health equity systems through community-based participatory research, with a dissertation

focused on developing sex education resources for and with transgender and queer youth. Towards process-oriented lessons of co-designing novel systems with marginalized communities, Calvin engages with a community advisory board of trans and queer young people from across the United States, known as the Queer and Trans Advisory Board.

Emily Tseng is a Ph.D. candidate in Information Science at Cornell University, based in New York City at Cornell Tech. Her research examines privacy, participation and power in our increasingly data-driven systems for care. In her primary PhD project, Emily works as a researcher-practitioner with the Clinic to End Tech Abuse, which provides 1:1 computer security and privacy consultations to survivors of intimate partner violence. Her work directly engages communities of survivors and advocates towards addressing technology's role in gender-based violence. Emily publishes at top-tier venues in HCI and design (CHI, CSCW), computer security and privacy (USENIX Security), and medicine (JAMA). Her work has received several best paper distinctions, and she is currently supported by a Microsoft Research PhD Fellowship.

Akeiylah DeWitt (she/her/hers) is a Ph.D. candidate in Human-Centered Design and Engineering at the University of Washington. Her research engages parents, community navigators in child development, community organizations, and clinicians in the design of upstream health interventions to improve child health outcomes. She has experience engaging with communities as co-designers of technology-based interventions, including identifying research areas, understanding current family experiences, and documenting the structural barriers that parents face as they seek culturally safe care and parenting support.

Yasmine Kotturi is a Postdoctoral Fellow in the Human-Computer Interaction Institute at Carnegie Mellon University. Her work focuses on community-based approaches to building peer support systems among independent workers such as online freelancers and micro-entrepreneurs. The outcomes of this approach included not just software systems but also educational materials, in-person workshops, and on-demand technical support for system on-boarding and maintenance. Yasmine's work has been published in premier venues in human-computer interaction and artificial intelligence including CHI, CSCW, and AAAI.

Sucheta Ghoshal is an Assistant Professor at the Department of Human Centered Design & Engineering (HCDE) at the University of Washington, where she is a director of the research group Inquilab. She has been involved in community organizing in the United States and beyond — both as a researcher and as an activist — for the last 10 years. Her work strives to critically question ICTs for the role they continue to play in systemic racism, class, caste, and gendered oppressions in order to form public means of consciousness, resistance, and accountability. For Ghoshal, a community-centered praxis is at once a practicality and a desire. That is to say, she recognizes that the work of designing for the margins cannot sustainably happen without the marginalized involved in the design process, but beyond that practicality, as a practitioner in this space, she longs for the day community-owned technologies become the norm.

Angela D. R. Smith (she/her) is an Assistant Professor at the School of Information at the University of Texas at Austin. Angela focuses on understanding and conceptualizing technology experiences that support ethically and socially responsible engagements among historically marginalized individuals, such as individuals of color and individuals experiencing houselessness. She explores concepts of engagement and the systemic and structural barriers to successful engagement through community-based participatory design and co-creation, considering technology engagement as a sociotechnical experience. Through participatory research methods and critical and intersectional theoretical lenses, Angela explores constructs of empowerment, access, and conscientization among communities marginalized along multiple dimensions of identity (e.g., race, ethnicity, income, sexual identity).

Marisol Wong-Villacres is an Associate Professor at Escuela Superior Politécnica del Litoral in Ecuador. She explores how cultural and learning science theories can inform an assets-based participatory design of technologies that support

historically marginalized groups, such as immigrant families from developing regions, in pursuing sustainable, emancipatory transformations. She has experience facilitating co-design processes in the United States and Ecuador, where various stakeholders —including computer science students, institutional staff, and members of vulnerable communities— work together to unpack and leverage existing strengths rather than trying to fix deficits or lacks.

Lauren Wilcox (she/her) is Senior Staff Research Scientist and Manager in Responsible AI and Human-Centered Technology, which is actively incorporating community-based approaches into industry AI research. Wilcox led initiatives at Google Health to align AI advancements in healthcare with the needs of communities including clinicians, patients, and their family members, and she was an associate professor in Georgia Tech's School of Interactive Computing where she directed the Health Experience & Applications Lab. Wilcox has authored several distinguished papers (e.g., editor's choice, best paper, and best paper honorable mention). She was named a Senior Member of the ACM and an inaugural member of the ACM Future of Computing Academy. She frequently serves on the organizing and technical program committees for premier conferences in the field (e.g., ACM CHI).

Sheena Erete (she/her) is a researcher, educator, designer, and community advocate, whose research focuses on co-designing socio-cultural technologies, practices, and policies with community residents to amplify their local efforts in addressing issues such as violence, education, civic engagement and health. Her work focuses on addressing structural oppression using a community-centered, equity-driven lens. She is an associate professor in the School of Information Studies at the University of Maryland College Park.

3 WORKSHOP LOGISTICS

This will be a hybrid one-day workshop held during the CSCW 2023 conference. The exact make-up of online and in-person activities will be determined by the travel preferences of the final participant group. If a majority of participants will be online, we will provide an online-leaning hybrid experience where all workshop activities will be held virtually on Zoom while offering workshop and reserved mealtimes for participants attending in-person. If most participants will be in-person, we will offer hybrid activities with heightened attention to facilitating online and in-person collaborations. Workshop organizers will prioritize ensuring that online participants are able to engage in discussions and fully experience the workshop. To achieve this, we will also embed adequate breaks to avoid screen fatigue, stream any remote presentations, and work collaboratively through online platforms like FigJam.

3.1 Pre-Workshop Activities

Prior to our synchronous workshop session, we will generate discussion topics, encourage participants to familiarize themselves with each other, and share favorite readings and resources through an established Discord server. This will give participants an opportunity to learn about each other's backgrounds and find commonalities in their interests. Here, we will encourage participants to share what they are hoping to get out of their workshop experience. We will encourage all participants, including those who attend the workshop online and in-person, to utilize the Discord as the hub for our workshop activities.

3.2 Workshop Activities

Our workshop will involve two components: an expert roundtable and small group working sessions towards artifact development.

Activity 1: Knowledge sharing and expert roundtable. In recognizing that not all participants will have the same levels of experience or knowledge, part of this time will be spent on covering fundamental concepts and tensions with CCA

approaches. To do so, we will utilize an expert roundtable with five expert CCA researchers (Ghoshal, Smith, Wong-Villacres, Wilcox, Erete). Drawing upon the experts' multifaceted expertise on CCA work, we will dedicate 30 minutes in total to panelist statements. Each expert will present for 3-5 minutes a) an overview of their research and b) a position statement related to structural barriers to CCA in CSCW, intended to catalyze audience reflection.

We will follow up this expert roundtable with audience participation through a question-and-answer format. We will draw from crowdsourced questions accumulated prior to the workshop via Discord and audience questions related to the panelists' position statements. Throughout these discussions, we will encourage workshop participants to identify potential artifacts that the CSCW research community needs to make progress towards addressing the identified structural barriers—e.g., compilations of best practices, guidance for researchers and funders, shared datasets, etc. We will track these ideas on FigJam, an online workspace where all participants and organizers will be able to collaboratively document their thoughts and interact with others' ideas.

Activity 2: Artifact development. Workshop participants then will split into small groups to work towards the artifacts sourced in Activity 1. These formats might include papers, articles for Interactions Magazine or similar equivalents, crowdsourced resources like Awesome Lists, further panels focused on specific barriers, programming for early-career researchers, and more. Workshop organizers will provide support and connect participants with existing resources where needed.

Participants will sign up to develop specific artifacts through Google Docs. We will provide template documents structuring each activity to emphasize community-collaborative scholarship, e.g., specific fields in the plan for "Audiences", "Community Partners", "Intended Impact", "Potential Community Harms and Mitigation Plans". This will be structured as a cross between a collaborative hackathon (e.g., D'Ignazio et al., 2016) and a writing group, with specific emphasis on starting to execute the artifacts. Participants will take away from this experience both a starting point for working towards these artifacts and the opportunity to network and connect with other researchers in this space. After the workshop, we will share out the documents and encourage each small group towards post-workshop collaboration.

The workshop will conclude with a group share out and wrap-up discussion. In their groups, participants will introduce their in-progress concepts, provide reflections on their takeaways from the workshop, and solicit feedback for moving forward from the rest of the workshop participants. Workshop organizers will keep track of these tensions and lessons to document the process of engaging in CCA research for future resource development.

4 EQUIPMENT AND SUPPLIES

This workshop will require minimal equipment and supplies. We will need adequate internet connection at the venue so that all participants can engage in online platforms (Zoom, FigJam, Discord). We will also use a projector to display online participants.

5 PROPOSED SCHEDULE

10:00am-10:30am: Introductions
10:30am-12:00pm: Activity 1: Expert Panel + Q&A
12:00pm-1:30pm: Lunch
1:30pm-3:00pm: Activity 2: Artifact development
3:00pm-3:30pm: Break
3:30pm-5:00pm: Group share out and wrap up

6 RECRUITING AND SELECTING PARTICIPANTS

We aim to have a maximum of 30 participants to balance facilitator ratios and opportunities to participate in rich discussions. We will advertise our workshop through social media channels (e.g., CSCW Meta, personal and institutional twitter accounts, and the #cscw2023 hashtag) and target academic, non-profit, and industry circles.

We will select participants who will provide a diverse range of perspectives, backgrounds, and experiences with CCA research, including people with direct experience and those who are new to this space. We will also seek out to involve a range of academic disciplines. Interested participants will fill out an online survey with short answer questions exploring their previous experiences around CCA issues, themes they find important to discuss, and their own goals for what they hope to get out of their workshop experience. The organizing team will review submissions to ensure diversity of background and experience levels.

7 EXPECTED OUTCOMES

Through this workshop attendees will have the opportunity to engage with and learn from the collective expertise of the panelists. By creating space for discussion across different perspectives on CCA research, we anticipate the following outcomes:

1. Attendees will have exposure to the breadth of CCA research at CSCW and across allied computing research communities (e.g., HCI, FAccT)
2. We will collaboratively develop a digital artifact cultivated from live notes taken during the panel discussion. This artifact will serve as a living resource document for people interested in CCA in CSCW and allied communities.
3. Through collective entanglements with tensions surfaced through our discussion, we will outline concrete steps we as a research community must take to address structural barriers that constrain CCA research from happening in CSCW.
4. Participants will begin to work towards these concrete steps through structured small-group activities organized around making progress on shared artifacts (Activity 2). Small groups will be encouraged to continue their work on these artifacts after the workshop, to continue momentum.
5. We will also form connections among a broad range of CCA-focused communities into CSCW. This will include researchers and practitioners in computing fields and community members looking for partnerships.

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