Critical Computing, Sustainability and Social Justice

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CHI Subcommittee Overview

Core Research Questions & Topics

Critical theory is a way of thinking about the world that analyzes power dynamics in society and aims to bring about social change.

RQ: How computing and computing research contributes to fair and just relations between individuals, social groups, and whole societies, locally and globally—all in the pursuit of fulfillment.

Welcomes HCI Research connected to :

- Social justice
- Global sustainability
- Critical-reflective research practice
- Artful and aesthetic experiences
- Critical computing

Actively supports diverse forms of scholarly expression:

- Critical essays
- Research through design
- Practice-based research
- Design fictions
- Commentaries

All in pursuit of meaningful alternatives to the status quo

CHI 2024
Surfing the World

Relevant Disciplines (from CHI subcommittee description)

Ethnic Studies

- **Critical Race Theory**

Antiracist, Racialized

- **Postcolonial Theory**

- Decolonial, colonial/postcolonial,

- Decolonial practices and theories,

- Commitments to survivance,

- indigenous knowledges

Philosophy, Sociology & Political Science In general

- Commitments to equity, […] , and social justice,

- Critical and progressive accounts of alternative epistemologies,

- Prominent use of philosophy and other theory,

- A robust and open politics,

- Communication of perspectives from marginalized and unheard persons, groups, nations

Environmental Studies

- Commitments to sustainability

- Environmental justice,

- inter-generational justice,

- More than human worlds,

- technology and its implications in the climate crisis

- Low-energy or zero carbon technologies and ways of life

Gender & Sexuality Studies

- Feminist, gendered, sexist,
- Queer critique,
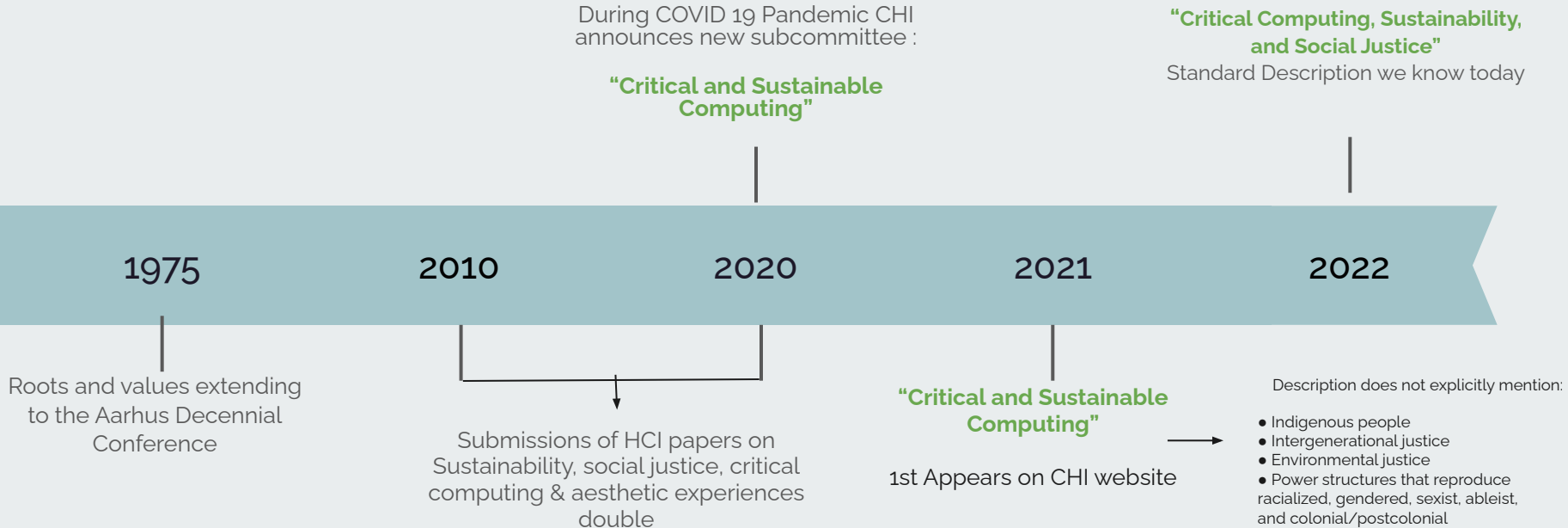- hetero/mononormative

Disability Studies

Ableist critique

Art
artful and aesthetic experiences

And More!
Economics, Public Policy, etc.

History Of Subcommittee

During COVID 19 Pandemic CHI announces new subcommittee :

"Critical and Sustainable Computing"

"Critical Computing, Sustainability, and Social Justice"
Standard Description we know today

1975

Roots and values extending to the Aarhus Decennial Conference

2010

Submissions of HCI papers on Sustainability, social justice, critical computing & aesthetic experiences double

2020

2021

"Critical and Sustainable Computing"

1st Appears on CHI website

2022

Description does not explicitly mention:

● Indigenous people
● Intergenerational justice
● Environmental justice
● Power structures that reproduce racialized, gendered, sexist, ableist, and colonial/postcolonial

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Relevant Disciplines & Differences (from NordiCHI Critique track description)

- **CHI**
  - **Accepted formats:**
    - **Critical essays**
    - **Research through design**
    - **practice-based research**
    - **design fictions**
   - **commentaries**

- **NordiCHI**
  - **Literary Studies: Visionary and speculative, rather than evidence-based**
  - **Accepted formats:**
    - **Critical writings outside the scope of regular papers**
    - **Critical visualizations and manifestations outside the scope of regular presentation formats**
      - **Artwork e.g., software, video games, audio-visual art**
      - **Dialogues and round-table discussion formats**
      - **Live performances**

Deconstructing Community-Based Collaborative Design

"True participation means centering communities, not just inviting them in."

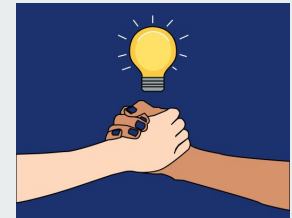**Author:** Christina N. Harriton et. al   Published CSCW 2019
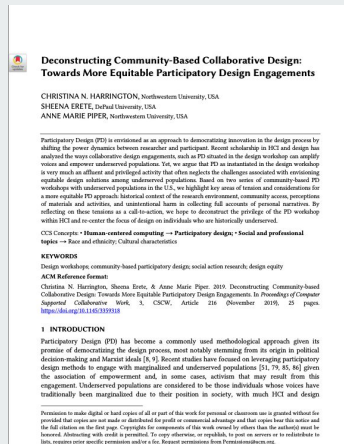
Contribution : Critically examines traditional Participatory Design (PD) Workshops in underserved communities & proposes a new approach to PD as a tool for social justice.

Methodology:

- Overview of the history of injustice and oppression in the US, to position its critique within postcolonial computing, critical race theory, design justice frameworks.

- Two case studies to highlight "key areas of tension and consideration" when taking a PD approach.

- Reflexive Analysis: Pushes forward postcolonial analysis of design

- Propose Practical recommendations to make PD more equitable

Participatory Design (PD) is a method that aims to democratize the design process and empower marginalized communities, stemming from Marxist ideals and political decision-making

Deconstructing Community-Based Collaborative Design: Towards More Equitable Participatory Design Engagements

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Participatory Design (PD) is envisioned as an approach to democratizing innovation in the design process by shifting the power dynamics between researcher and participant. Recent scholarship in HCI and design has analyzed the ways collaborative design engagements, such as PD situated in the design workshop can amplify voices and empower underserved populations. Yet, we argue that PD as instantiated in the design workshop is very much an affluent and privileged activity that often neglects the challenges associated with envisioning equitable design solutions among underserved populations. Based on two series of community-based PD workshops with underserved populations in the U.S., we highlight key areas of tension and considerations for a more equitable PD approach: historical context of the research environment, community access, perceptions of materials and activities, and unintentional harm in collecting full accounts of personal narratives. By reflecting on these tensions as a call-to-action, we hope to deconstruct the privilege of the PD workshop within HCI and re-center the focus of design on individuals who are historically underserved.

CCS Concepts: • **Human-centered computing** → **Participatory design**; • **Social and professional topics** → Race and ethnicity; Cultural characteristics

KEYWORDS

Design workshops; community-based participatory design; social action research; design equity

1 INTRODUCTION

Participatory Design (PD) has become a commonly used methodological approach given its promise of democratizing the design process, most notably stemming from its origin in political decision-making and Marxist ideals [8, 9]. Recent studies have focused on leveraging participatory design methods to engage with marginalized and underserved populations [51, 79, 85, 86] given the association of empowerment and, in some cases, activism that may result from this engagement. Underserved populations are considered to be those individuals whose voices have traditionally been marginalized due to their position in society, with much HCI and design

Challenges in Traditional PD Case studies :

- Traditional **Participatory Design (PD) methods** often reinforce **privilege and exclusion** rather than fostering true equity.
  - Histories of research injustice in underserved communities (past harms create skepticism).
  - Researchers hold control over process & outcomes
- **Design workshops**, a common PD method, are often **misaligned with the lived realities** of marginalized communities.
  - (e.g., brainstorming, workshops feel infantilizing or unrealistic).
- There's a need to deconstruct **the privilege of PD** and re-center design on historically marginalized individuals
- **Barriers to Obtaining Full Narratives:** Hesitation to share personal stories due to fear of judgment, repercussions, or lack of control over the narrative

Community-based collaborative design

The researchers used **community-based participatory design workshops** as a primary method to engage with underserved communities and explore issues of health and civic engagement.

- Community Partnerships: Collaborated with local organizations and leaders to build trust and co-create research agendas
- Participatory Action Research: Empowered community residents to lead discussions and shape the context of the workshops
- Iterative Design: Adapted workshop methods based on weekly feedback from community residents
- Focus on Lived Experiences: Valued the experiences of participants as a primary source of knowledge

Case Studies

Civic Technology Workshops:

Conducted with Black and LatinX communities to address barriers to engaging with city technologies

Health Workshops:

Conducted with low-income, African American older adults to understand health needs and potential solutions

Proposed Solutions for More Equitable PD:

- **Consider historical injustices & Context** before engaging in research, as a method of trust-building.
  - Engage local community leaders or activists who can provide knowledge of relations between communities and institutions

- **Encourage Rich and Full Accounts Rather than Stressing Honest Disclosure:**
  - **Challenge "Corporate" Design Thinking** focus on realistic, community-driven solutions rather than prioritizing novel tech..

- **Destabilize Norms Through Equity in Design:**
  - Shift the focus of PD to center the needs of underserved communities (co-develop research questions & methods)
  - Build on existing community strengths rather than focusing on deficits).

Discussion

In participatory research, who ultimately decides what counts as "success"? Should it be the community, the researchers, or both?
How do we navigate conflicts in defining success?

What are the ethical implications of short-term research engagements? Should researchers be required to commit to long-term involvement in the communities they study?

Joyojeet Pal. CHI4Good or Good4CHI. alt.CHI. (2017).

Theoretical Perspective: Critique of HCI for Development

Is the HCI community qualified to determine what social good is & how to achieve it?

- Techno-Solutionism : Serious social problems can be solved by technology

- Lacking domain specialty :

  Education, Health, International development, etc. : Domain of social good

  vs. HCI: Design, Type of Interaction

- Lacking tradition of critical examination within the field:

  Definition of social good, practice working with vulnerable communities

  (More on this in PD paper)

Joyojeet Pal. CHI4Good or Good4CHI. alt.CHI. (2017).

Suggestion of New Theoretical Framework

CHI —**For**→ **Good**

Benevolent, Benefactor/Beneficiary - Patronizing, Condescending

Good —**For**→ **CHI**

Expand breadth to designers outside the typical environment & geographical implications

Where are they now?

Initial Impression:

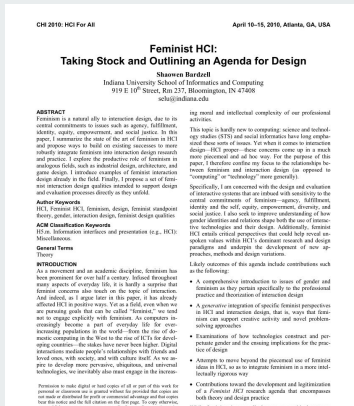CHI4Good does not seem too common anymore, at least in research

Still popular practice in CSR

Feminist HCI: Taking Stock and Outlining an Agenda for Design

"Feminism is the most powerful critique of design history thus far"

Author: Shaowen Bardzell   Published in CHI 2010

Research objective: Aims to integrate feminist theory into HCI design research and practice.

Methodology :

- Provides overview of Feminism as an intellectual discipline

- Introduces Feminism in cognate fields

- Feminism in HCI: The state of the Art

- Proposes set of feminist interaction design qualities to solidify feminist HCI agenda

Feminism: A critical theory domain that examines how literature & other cultural productions reinforce/undermine the economic , political, social and psychological oppression of women

Feminism in Cognate Fields

Science and Technology studies (STS)

Product and Industrial Design

Architecture & Urban Planning

Game Design

Feminism in HCI: State of the art

Opportunities to Draw on Feminism in HCI Research

Theory:
Feminism can critique core operational concepts, assumptions, and epistemologies of HCI.

Methodology:
Feminism can be incorporated in user research, iterative design, and evaluation methodologies.

User Research:
The notion of "the user" can be updated to reflect gender.

Evaluation:
Feminism can make visible how designs configure users as gendered subjects.

Qualities of Feminism Interaction

Pluralism:
Rejects one-size-fits-all design models. Encourages diverse, context-sensitive interaction designs.

Participation :
Prioritizes user voices and lived experiences in all design stages.

Advocacy:
Design as an activist practice, explicitly addressing social inequalities.

Ecology
Considers design in relation to its broader social, cultural, and environmental impact.

Embodiment
Investigates how bodies, identity, and gender performance shape interaction.

Self-Disclosure
Encourages transparent, user-controllable interactions.

Discussion

"Yet as a field, even when we are pursuing goals that can be called "feminist," we tend not to engage explicitly with feminism."

Is the still the case in current HCI Research ? Why ?

Thank You