
Bridging Accessibility and Disability Studies Research to Speculate Beyond Ability Norms

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Abstract

In this position paper we reflect on how the field of human-computer interaction (HCI) traditionally approaches accessibility and highlight ways in which critical disability studies (CDS) can inform HCI accessibility research. We then propose that a collaborative speculative design approach using cultural probes as a starting point may be well suited to guide accessibility work that rejects current ability norms by integrating CDS concepts, particularly interdependence and access intimacy.

Author Keywords

Accessibility, Critical Disability Studies, Cultural Probes, Speculative Design, Access Intimacy, Interdependence

Introduction

Critical disability studies (CDS) provides analytical tools to identify ability norms that privilege the abilities of non-disabled people and challenges the historical perception of disability as an unmitigated tragedy [3]. Instead, CDS argues that disabled ways of being are valuable and can create a better future than our current ableist world [20]. However, human-computer interaction (HCI) work on accessibility has traditionally focused on building tools to allow disabled people to access the world as is, rather than challenging ability norms.

In this paper we reflect on how HCI approaches accessibility, highlight ways in which CDS can inform HCI accessibility research, and propose that a collaborative speculative design approach using cultural probes as a starting point may be well suited to guide accessibility work that dismantles current ability norms. Combining speculative design's capacity to articulate alternative futures and cultural probes' sensitivity to people's daily context could guide radical design that rejects the notion that disability is something that technology ought to adapt away from.

Current HCI Approaches to Accessibility

Traditionally, HCI and accessibility researchers have focused on tools to allow disabled people to navigate the *existing* physical and digital worlds, rather than on interrogating the ability assumptions that underlie our tool design. This focus dictates what kind of research gets done, including, for example, captioning systems that give d/Deaf and hard of hearing people access to audio information [14], making plugins so that blind programmers can more easily use existing development tools [21], and investigating the social acceptability of assistive technology [22].

The adoption of frameworks such as ability-based design and universal design (see [25] for an overview) has contributed to a substantial increase in the accessibility of many digital and physical spaces and has bled into industry user interface design. In an industry context, accessibility work focuses on ensuring that digital content can be navigated by disabled users, emphasizing aspects such as screen reader and keyboard navigability [23].

The work that is done within HCI to make digital and physical spaces more accessible is vital, as disabled people's right to access is not yet sufficiently realized. Yet as the HCI accessibility research community is moving to broaden the perspectives underlying our research, we seek to imagine what it might be like to place disabled ways of being at the center of our work. An increased focus on including disabled people on research teams and the adoption of co-design methods that engage participants in design decisions has resulted in work that aims to better address the barriers that disabled people actually face and has begun to engage non-disabled people in access work (e.g. [2,17]). These are important steps towards centering disability in how HCI approaches

accessibility but the field has largely not focused on transgressing ability norms. We turn to CDS in order to build a framework to do so.

Relevant CDS Contributions

As the field of disability studies grew, it followed the trajectory of many other social studies fields in adopting a critical turn around the mid-2000s, bringing with it a commitment to including a multitude of perspectives and becoming Critical Disability Studies (CDS) [11]. We turn to two contributions from CDS, *interdependence* and *access intimacy*, that we believe can be key to motivating accessibility work that defies ability norms.

In the early years of the Disability Rights Movement activists like Ed Roberts fought for disabled people's right to live independently in the community rather than in institutions [15]. However, in the 90s the term interdependence entered disability studies literature, and was later taken up by CDS [7]. Interdependence, or the idea that no person is actually independent but that non-disabled people's dependencies are treated as normal, answers critiques of independence as the goal for disabled people [24]. Mia Mingus, a disability justice activist, explains that interdependence "*moves us ... towards relationships where we are all valued and have things to offer*" [19]. This reframing shifts from individualized conceptions of what disabled people can and can't do, which are often dominated by medical model thinking, towards viewing disabled people as part of a communal web of support, where they both give and receive help. Bennett et al. [4] have begun to explore the ramifications of this reframing within HCI.

Related to the notion of interdependence is the term access intimacy¹, which Mia Mingus created and defines as “*that elusive, hard to describe feeling when someone else ‘gets’ your access needs. The kind of eerie comfort that your disabled self feels with someone on a purely access level*” [18]. Access intimacy is not pitying or charity work, but a new way of being together that is based on mutual care. Mingus argues that “*it moves the work of access out of the realm of only logistics and into the realm of relationships and understanding disabled people as humans, not burdens*” [19]. At the core of access intimacy is the notion that even in spite of an inaccessible world, access can be created at a relational level when all parties work to make it happen. Making access intimacy a value of HCI accessibility work could have a huge impact in changing how we approach this research.

Both interdependence and access intimacy are responding to centuries of horrific violence done to disabled people and the societal notion that disabled is the worst thing a person can be [3]. These framings do radical work in claiming disability as valuable [13]. Their orientation towards building better disabled futures make interdependence and access intimacy strong jumping off points for speculative design work. Hamraie and Fritsch have begun to frame out political commitments using these frameworks in their *Crip Technoscience Manifesto* and we seek to continue to learn from them in imagining a future for HCI accessibility that builds on CDS [12].

Speculative Design and Cultural Probes

Speculative design is part of a trend within the design field which seeks to use design to provoke reflection, imagination, or criticism instead of creating artifacts for daily use. Speculation is broadly defined as a way of envisioning possible futures or alternative presents. Speculative design aims to create artifacts that invite observers to reckon with their ramifications [1]. It seeks to turn design from attending to the concerns of the present towards provocative visions of the future [9].

Within its own domain of practice, CDS is also attempting to lay out new visions of the future. Therefore, when we bring questions of disability, interdependence, and access intimacy into the world of design and HCI, speculative design practices are well suited to take up the provocations for the future that CDS provides. Yet, while speculative design is powerful in its ability to drive imagination, it is often done from the perspective of a small team that has tight control and is not often inclusive in creating these visions [8]. We also acknowledge that speculative design’s history of being practiced by the most privileged has created futures that exclude many, often disabled people, and we follow work such as [16] towards a more justice-oriented speculative design practice. With our goal to enable researchers and participants to collectively create an understanding of what it could be like to design beyond ability norms, we find it necessary to seek alternative entry points to speculative design.

¹ This comes from activist knowledge rather than the academy, but we include it in this section in line with CDS’ dedication to being informed by multiple perspectives

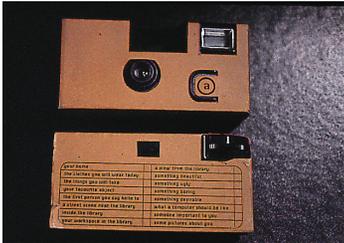


Figure 1: From Gaver et al. [10], these photos show the original cultural probes kit. The packet includes maps for participants to label with information about their neighborhoods, postcards with writing prompts, and, as seen in the second image, a disposable camera with a list of prompts for different photography tasks.

Our goal is to inclusively create speculative imaginings for worlds that shift ability norms. In planning for collaborative design workshops with disabled participants, we will use cultural probes kits as a generative starting point to bring materials into the workshops. Cultural probes kits are driven by a desire to empower participants to direct researchers' understanding of their world, and therefore design activities are purposefully playful, open-ended and non-utilitarian [6]. Cultural probes, as originally created by Gaver et al. [10], are kits of design activities that are created by the research team and distributed to participants who complete them on their own schedule and then send results back (or in our case, bring to a workshop). See Figure 1 for examples of Gaver's original probes.

Cultural probes are very focused on understanding participants' current situations, but because they are exploratory and open by nature, they are a great starting point for speculation [10].

We recognize that this framing uses the assumption that designers and researchers are not familiar with disabled modes of moving through the world, and we do not wish to erase the many disabled researchers doing work within this space. While there is still a majority of nondisabled researchers, this method would also provide insight for disabled researchers who are not members of the specific population they are working with, given the heterogeneity of the disability community.

Proposed Work

We, as designers and HCI researchers, are in the process of investigating how to adapt design workshops

and cultural probes kits to work with disabled participants. One case study we propose is using this approach with blind participants to investigate how collecting everyday moments through sound, voice and texture creates materials to imagine together during the workshop.

Possible activities for this probe kit include:

- Recording narrations of how participants experience familiar spaces
- Providing a list of sounds to record, echoing Gaver's original photography probe
- A set of small boxes for participants to fill with various textures

We then plan to conduct design workshops with participants, building on materials collected via the probe kits to imagine what it might be like to create for a fully non-visual world. Potential activities include combining collected sound clips to represent complex ideas and telling stories through tangible materials, including the collected textures

Towards the Workshop

As a part of this workshop, we plan to share our early thoughts about this method and, more importantly, discuss open questions such as:

- How might the parallels between CDS and speculative design be generative in breaking down ability norms?
- How might we, as sighted researchers, best undertake designing these cultural probe kits?
- How do we best integrate access intimacy and interdependence in these kits?

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