

Introduction

Technology shapes human behaviors across the globe everyday. Digital technology, especially, has become so ubiquitous and puncturing that it is evidently situated, cultural, and political. Modern digital tools have created sociotechnical systems that exist far beyond efficiency or communication—it is now clear they have abilities with the likes of surveilling communities or breaking down democracies. At the heart of these products' influences is their design and development. Definitions of product and user interface design are blind, narrowing their peripheries only to functionality and aesthetics, failing to evaluate the embedded power and privilege they create within social and economic structures. Moving forward, it is imperative that designers begin to consider the intersecting political relationships between themselves, their products, and their users. Beyond this, they must also acknowledge impacts on community, national, and worldwide levels, and think critically about the institutionalized systems they produce and reinforce.

Where does one begin with such a daunting task? How do we approach the enormity of conceptualizing human complexities and designing for them? Researchers Shaowen and Jeffrey Bardzell propose the adoption of feminist social science to technology design and human-computer interaction. In this sense, feminism extends far beyond concerns surrounding gender. It can be broadly considered as a collection of ideas and approaches, including the application of critical knowledge, upheaval of the status quo, and commitment to social change.¹ More specifically, feminism examines issues of gender, race, class, and their intersections, as

¹ Bardzell 680, *Towards a Feminist HCI Methodology*

well as power structures and dynamics. It avoids proposing a “just-add-water procedure” and encourages a pluralist approach to research and interpretation.² Feminist theory’s fluidity and attention to critical theory is well-matched to pair with design practice.

Design as a process exists past the specialist work of architects, graphic designers, industrial designers, or product designers, as it permeates nearly every aspect of our world. In essence, all objects, processes, and systems are designed, although we may not initially consider them to be.

Anne-Marie Willis, a design theorist, sums this up:

“Designing is fundamental to being human—we design, that is to say, we deliberate, plan and scheme in ways which prefigure out actions and makings... we design our world, while our world acts back on us and designs us.”³

Design is a highly holistic process that aims to solve problems while accounting for their constraints and variables; it must be speculative to grapple with situated effects, and accepts that there possibly are no right answers. In most situations, designers must synthesize dozens of moving parts and cohesively put things together to bring new artifacts into the world. Design affects users at the individual level, but it also changes the ways we interact with other people, objects, and environments, making way to build larger societal and cultural systems.

Because design can have such vast influence, many have adopted a “design for good” mindset. However, researcher and activist Sasha Costanza-Chock challenges designers to “think about how good intentions are not necessarily enough to ensure that design processes and practices

² Bardzell 680, *Towards a Feminist HCI Methodology*

³ Willis 80, *Ontological Designing*

become tools for liberation.”⁴ Therefore, designers must step back and analyze their positionality, work to understand sociotechnical power systems in place, and actively practice critical methodologies. Again, paired with design theory, feminist epistemologies are a productive tool for achieving this.

Situated Knowledges

A core pillar of feminist philosophy of science rejects the notion that traditional science is value-free. Feminist scholar Donna Haraway believes science to be formed by and constantly in the process of producing rhetoric. She refers to this as performing the “God trick,” which involves the mythical practice of “seeing everything from nowhere” yet speaking authoritatively and manufacturing “objective” truths.⁵ Haraway argues that all vision is screened through perpetual systems built by our embodied experiences within larger communities. Furthermore, she sees knowledge as a “condensed node in an agonistic power field,” implying that facts and understandings are entrenched in institutions of authority and privilege.⁶ In order to practice true feminist objectivity, we must recognize standpoint and *situated knowledges*, and aim to understand how “systems work, technically, socially, and psychically.”⁷

This theory is naturally applicable to design work. Designers do not necessarily aim to uncover indisputable truths, but they do concern themselves with the life experiences of users, which are inherently situated and embodied, as all humans are. Per Haraway, it is imperative that we

⁴ Costanza-Chock 6, *Design Justice*

⁵ Haraway, *Situated Knowledges*

⁶ Haraway 577, *Situated Knowledges*

⁷ Haraway 583, *Situated Knowledges*

contest the notion of a user as isolated, in a vacuum, and recognize all individuals as members of complex systems. Even then, these individuals do not exist in a “fixed location in a reified body,” but in ever-changing “nodes in fields, inflections in orientations, and... material-semiotic fields of meaning.”⁸ By examining information about users as situated, designers gain the ability to understand human conditions with much greater depth and criticality. This has a spiraling effect, impacting perspective on problem definition, and ultimately in design solutions.

However, as designers themselves often exist in and benefit from privileged systems, they are thus prone to recreating or reproducing those systems in their work. We must consider the standpoint of the designer: Who has the background and privilege to become a designer? What is the designer’s lived experience, and how might it subconsciously seep into their work, knowing that “designers tend to unconsciously default to imagined users whose experiences are similar to their own,”⁹ In the technology sector, designers are overwhelmingly white, cisgender, heterosexual, able-bodied men of upper-middle class socioeconomic status with access to high-speed internet, smartphones, and laptop computers.¹⁰ A lack of diverse lived experiences in the field of design results in a “spiral of exclusion”, pushing innovation towards products built for these privileged groups.¹¹ Beyond an individual level, designers are employed within larger structures and environments: Who does the designer work for, and what are the values of that organization? What is the organization’s goal or motive behind this design project? Designers

⁸ Haraway 588, *Situated Knowledges*

⁹ Costanza-Chock 77, *Design Justice*

¹⁰ Costanza-Chock 77, *Design Justice*

¹¹ Costanza-Chock 77, *Design Justice*

must constantly reevaluate their standpoint individually and corporately, recognizing its impact on their vision in an attempt to reach feminist objectivity.

Matrix of Domination

If technological artifacts are inherently political, how should designers approach their implied political power when creating products? Particularly from a feminist human-computer interaction perspective, exercising power provided by one's technical skill is a delicate and dangerous act. The position of the designer, however, prevents one from ever practicing true neutrality. Designers as humans, living embodied experiences and participating in larger systems, always exercise politicized perspectives. In addition, designers are uniquely situated to enact sociotechnical change, as they stand at the exact crosspoint between users and developers, translating nuanced human needs and forming creative solutions. Therefore, we must turn to the question: because we must conduct politicized design, how do we implement a practice that is productive, deconstructive, and beneficial to the world? How do we turn focus away from designing frivolously for privileged groups and towards creating positive impacts the marginalized desperately need?

Sasha Costanza-Chock, design justice advocate and scholar, specifies that designers should adopt values that explicitly work to break down the *matrix of domination*. The matrix of domination, birthed within the field of black feminist thought by Patricia Hill Collins, “reconceptualizes race, class, and gender as interlocking systems.”¹² It emphasizes the intersectional frameworks

¹² Costanza-Chock 17, *Design Justice*

between white supremacy, heteropatriarchy, settler colonialism, and capitalism (Costanza-Chock also adds ableism to this matrix). Essentially, these systems cannot be examined as independent from each other—to understand one is to grasp its relation to another. The erasure of people who are “multiply-burdened” is common, and design is by no means exempt from this, in fact, it frequently imposes a *single-axis analysis*.¹³ When designers attempt to engage with these issues, they often approach them as isolated concepts, failing to address the complex discrimination that can truly shape a person’s life. Implementing consciousness of the matrix of domination in design work not only addresses crucial inequities, but also understands them through a feminist lens as malleable, intersecting, and situated.

Anti-Universalization

The feminist approach opposes natural science’s position as factually objective and universal, and works to break down its normative conventions. Through critical fluidity, feminist epistemologies aim to uncover alternative methods, particularly those that deconstruct pernicious institutions and assist marginalized communities. Looking at these concepts through a design lens, Shaowen Bardzell coins the phrase *quality of pluralism*, which refers to “design artifacts that resist any single, totaling, or universal point of view.”¹⁴ Pluralist design is genuinely human-centered, acknowledging the depth and complexities of the human experience and welcoming the idea that one solution cannot fit all. This creates a foundation for the acceptance of “cultural, social, regional, and national differences in user experiences and outlooks” that simultaneously has the power to resist Western (or any) technological norms.¹⁵ It also provides

¹³ Costanza-Chock 18-19, *Design Justice*

¹⁴ Bardzell 1305, *Feminist HCI: Taking Stock and Outlining an Agenda for Design*

¹⁵ Bardzell 1305, *Feminist HCI: Taking Stock and Outlining an Agenda for Design*

designers with the perspectives needed to create for those marginalized by Collins' matrix of domination.

Costanza-Chock speaks a great deal to universalist design principles in their book *Design Justice: Community-Led Practices to Build the Worlds We Need*. In looking at the intersections between disability studies and design, Costanza-Chock notes that "...some people are always advantaged and others disadvantaged by any given design, and this distribution is influenced by intersecting structures of race, class, gender, and disability."¹⁶ If some user groups are always privileged in design, and truly universal design does not exist, it is of even more importance that we pay critical attention to who we design for and make these decisions explicit.

Costanza-Chock encourages a shift away from standardized design and towards "one-to-one" solutions. While recognizing the economic impracticality of one-off approaches, they still argue:

"...at least in the digital domain, adaptive design that enables personalization and flexible configuration of shared core objects, tools, platforms, and systems provides a path out of the tension between the diverse needs of individual users and the economic advantages of a large-scale user base."¹⁷

Flexibility and adaptive functionality may be the most feasible midpoint between universal and singular design. However, in designing for diverse societal, cognitive, and physical needs, it is crucial to recognize that these solutions may contribute to dangerous reproductions of cultural stereotypes. Costanza-Chock blatantly states that design justice does not offer a resolution to this

¹⁶ Costanza-Chock 53, *Design Justice*

¹⁷ Costanza-Chock 54, *Design Justice*

paradox, but instead pushes designers to be cognizant and intentional with their decisions, placing themselves accountable for their work.

Framing Design

Feminist perspectives critique traditional science for its positioning of problem spaces in a way that “tend[s] to be framed in terms of what is wrong with the person who is experiencing the problem, rather than in terms of what it is about the current social order that makes the problem likely.”¹⁸ This places Haraway’s situated knowledges into the context of problem-solving, something design aims to serve. In an effort to uncover personal contexts and reach towards feminist objectivity, Sandra Harding suggests starting research from the lives of women, specifically in the context of feminist studies.¹⁹ Costanza-Chock expands on this concept and interpolates it with the design process, stating

“...the most valuable ingredient in design justice is the full inclusion of, accountability to, and control by people with direct lived experience of the conditions designers claim they are trying to change.”²⁰

They ask that we center design research around voices typically marginalized by design, most notably those impacted by the matrix of domination, and prioritize their embodied knowledge.

New methods have emerged to address this, mostly notably the field of *participatory design* or *co-design*. Co-design brings all stakeholders into the design process for a more “inclusive,

¹⁸ Bardzell 679, *Towards a Feminist HCI Methodology*

¹⁹ Harding, *Rethinking Standpoint Epistemology*

²⁰ Costanza-Chock 25, *Design Justice*

participatory, and democratic” approach.²¹ It breaks down distance that “cuts the bonds of humanity between researcher and subject,” one that has proved to be a critical issue in many scientific fields, by bringing designers and users together as collaborators. In this sense, we think of designers more of translators and facilitators rather than experts. Instead of attempting to translate and synthesize a lived human experience into bite-sized pieces a designer can digest, co-design eliminates this unwieldy bridge. Users are no longer research subjects, but essentially become designers themselves, using an existing expert as a tool rather than a filter. Along the lines of feminist agendas, this also aims to transfer power from the designer to the user or community.

²¹ Costanza-Chock 89, *Design Justice*