Prismatic Interfaces: Making Room for Intersectional Feminist Approaches in Interface Studies

Marisa Elena Duarte

Arizona State University
Tempe, AZ 85287, USA
Marisa.Duarte@ASU.edu

Abstract

Intersectional approaches to interface study and design find their root in the lived experiences of political and structural violence experienced by women of color. Centering the lived experiences of differently raced and gendered individuals means appreciating how interfaces are epistemically multi-faceted. Approaching interfaces as prismatic interfaces allows intersectional feminist researchers to craft studies that address social change.

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Introduction

It has been 28 years since Crenshaw coined the term *intersectionality* to indicate how "race and gender interact shape the multiple dimensions of Black women's employment experiences," and "structural and political aspects of violence against women of color." [5,6] Since that time, feminists have expanded intersectionality to develop structural interventions in

the fields of education, public health, law and policy, community development, and social science.

Importing the praxis of intersectionality into the fields of Internet studies and interface design has been less easily realized. While there are multiple possible reasons why, there is nevertheless acknowledgement that methodically understanding the life-worlds of individuals from diverse social groups contributes to a deeper understanding of the impacts of interfaces, infrastructures, and assemblages. [2,3,12] Presuming that interface researchers value the alleviation of violence against women of color, this deeper understanding is "pivotal to inspiring critical design imaginaries and identifying opportunities for creative resistance." [12]

Applying intersectional feminist approaches to the study and design of interfaces requires that we appreciate 1) how interfaces function as boundary objects, 2) how--evaluated across use scenarios among raced and gendered users--interfaces become *epistemically multi-faceted*, and 3) design methods and outputs support structural and political change for multiply-marginalized social groups. This position paper thus proposes an approach to the study of *prismatic interfaces*: interfaces that through intersectional analysis reveal the social, economic, and political impacts of interfaces and associated assemblages for raced and gendered social groups.

Intersectionality Centers Lived Experience
Intersectional approach require foregrounding the social structures that constrain the lived environment of the raced and gendered individual.

In this vein, a feminist data scientist has described the lived experience of being pregnant while observing increasing data colonization and data policing in everyday life, from shopping at Target to carrying water for undocumented peoples crossing the desert in Arizona. A Black feminist scientist has analyzed the digital discursive strategies of Black women contending with the lack of mass media representation amid the urgency of #blacklivesmatter and in the wake of pop-star Beyonce's ode to race politics and romantic love in her 2016 music film *Lemonade*.[13] In a 2014 analysis of Black Twitter, a Black feminist scholar identifies six constraints to entrée. A user cannot simply 'join' Black Twitter, as if it were another clickable channel in a slew of white-owned media, but rather, a person has to *be Black* to be accepted within Black Twitter. [4] Finally, an analysis of a subset of tweets gathered during the 2016 presidential campaign by a team led by Native American researchers reveals that Native American activists were far more likely than the general American population to use limited bandwidth to tweet about life-and-death issues—including missing and murdered Indigenous women--rather than the US presidential candidates or their platforms.[14]

These studies reveal how feminist intersectional approaches to digital interfaces move beyond the scope of the single interface or workspace by centering the lived experience of raced and gendered individuals *operating through* marginalizing social structures. The digital interface, which is but one feature within a workspace, is read as a part of a socio-technical and politically historicized environment. In terms of design, the researchers issue recommendations framed in the tactics of justice advocacy: calls to action; creating groups of like-minded activist/scholars; applying digital

tactics within their communities; and reporting findings to serve policy-making needs. This approach requires a balancing act on the part of the ethnographer, the coder, the designer, the humanist, the social scientist, and the activist. How does one encapsulate these disciplinary perspectives into the analysis of a single interface, and still leave space to listen well to the lived experiences of raced and gendered individuals who imagine their own spaces for creative resistance?

Methodological Approaches to Prismatic Interfaces

In 2016, the Human Security Collaboratory (HSCollab) at Arizona State University convened a group of six intersectional feminist researchers with distinct approaches to data science, from digital humanities to design. Considering how to conduct a multi-level analysis of a single set of wearable health activity monitors from varying standpoints, the group proposed the concept of *prismatic interfaces*. Interfaces that are prismatic can be analyzed in terms of everyday user experience and then, over time and place, layered against the user experiences of others to reveal the complex social, economic, and political impacts of these interfaces for raced and gendered social groups. The idea of prismatic interfaces requires an embrace of epistemic complexity, and also a commitment to supporting structural change through the analysis and design of interfaces. While HSCollab is still in the midst of data collection and analysis, the basic premises of the concept are nevertheless useful for revealing the theoretical stakes of designers emerging from an intersectional lineage.

Comfort with Epistemic Complexity
Moving beyond reflexive ethnography and participant ethnography, intersectional feminist approaches make room for the epistemic experiences of individuals who are differently raced and gendered than themselves. Epistemic complexity pulls from borderlands, feminist, and Indigenous social theorists who allow for the complementary existence of radically competing and sometimes incommensurable worldviews.[7,9,10,11] The researcher acknowledges the intellectual genealogy and limitations of her own experience, and considers these against her participants' or fellow researchers' intellectual genealogies and lived experiences. An example of this is found in the pregnant data scientist who considers the data structures tied into the changes in her womb as these relate to her experience with undocumented mothers—individuals from a different class and racial group—who must contend with another set of marginalizing data structures.[8]

Embracing epistemic complexity also means engaging architectures of listening that may be beyond the reach of the perceived mainstream user audience. An example is found in the activist–scholar who identifies aspects of Black humor that position Twitter as a place to circulate Black peoples' ideas and goals above any other: Black creative resistance.[4] This reveals the efficacy of the cultural insider who designs studies to further the radical imagination of raced and gendered social groups.

Research to Support Structural Change
Methodologies based in critical social theory are invariably oriented to encourage social change. Researchers who are interested in shaping social change may create studies that through the design

process, theory-building, or dissemination strategically target opportunities for change. The essay by the data scientist writing about data colonization appeared in a feminist collective writing project produced through collaboration between the Frank-Ratchye STUDIO for Creative Inquiry and the CyLab Usable Privacy and Security Laboratory at Carnegie-Mellon University (CMU).[8] The text can be read as a boundary spanner, marking a point at which disparate labs combined infrastructural capacities to create space for feminist approaches to digital security. Researchers may also build teams that commit to multiple theoretical and design outputs, including the peer-reviewed publication and design prototype as well as arts openings, public lectures, contributions in blogs and feminist technology forums, and community-based advocacy projects.

Finally, perhaps most integral to the theoretical commitments of intersectionality, research teams who develop interfaces for creative resistance deeply incorporate the talents of individuals from underrepresented groups. The goal is to disrupt the class, race and gender privilege of the research team such that people who experience marginalization are supported as "epistemic design partners.[1]

The intellectual backgrounds, race, gender, class, sexualities, and social and political consciousness of the research team makes a substantial difference. From an intersectional feminist approach, users are not interchangeable, interfaces are prismatic, the structures of individuals' life-worlds matter, and the lives of the researchers are made better for the contributions they make to building healthier communities for people of color. It is the work of the present to identify and articulate precisely how through methodological and conceptual contributions.

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