Interactive Tabletops Aren't Going to Situate Themselves

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Abstract

Research situated in non-Western contexts continues to be exceptionalized and marginalized in Computing venues. We describe how this exceptionalization is caused by the creation of centers and peripheries of discourse through mechanisms of presentation of group identity. Power difference between the center and periphery result in additional labor of self-location performed by the periphery in order to be understood by researchers situated in Western contexts. We argue how increasing self-location in research on non-peripheral populations is a way to address this marginalization and improve the quality of such research.

Author Keywords

ICTD; CSCW; center and periphery; marginal labor; self-location; situated knowledge; mechanisms of presentation.

ACM Classification Keywords

H.5.m [Human computer interaction (HCI)]: Miscellaneous

Introduction

We write from a place of frustration. There is a need for recognizing the processes that enable the creation of a center and a periphery in the CSCW or Computing community, the norm and the after-thought, the metropolis and the satellite [2] or the core and the margins. We hope to find solidarity in frustration through this workshop.

The technology in developing regions (ICTD) community has been making efforts of pluralizing the imagination of what a technology user looks like by venturing into studies of adoption, creation, and rejection of technologies from cultures other than those of WEIRD (Western, Educated, Industrialized, Rich, and Democratic) nations. Yet research situated in developing regions continues to have a specialized status in conferences that originated and are mostly held in the Global North. So much so, that a lot of the work that is technically and scientifically challenging, robust and interesting regarding a particular HCI or computing phenomenon, gets bracketed as work that is only relevant to people interested in the non-white, non-western populations and their interaction with information systems.

Despite the active and multiplying efforts of people to bring in diverse cultural, social and economic perspectives of information technologies, for some reason the exceptionalization of ICTs and their use in the parts of the world that are not the Global North does not seem to get resolved. One of the authors remembers attending CSCW conference in 2016 as a new PhD student working on feminist technologies in India, she was surprised as well as somewhat annoyed to see that all research that was done on information systems that were deployed outside of the US or European context was clubbed together under a panel called ICTD. The papers in this panel, although very exciting, had no similarity or solidarity with each other in terms of either the systems or the people that these socio-technical projects were working with - they were together simply by the virtue of being projects that involved subjects from 'the margins.'

Mechanisms of presentation are social mechanisms [5], sets of processes and interactions of members of a community which contain value statements assigned to the group identity and simultaneously differentiate the group from others.

In this paper we argue that this exceptionalization is a result of the processes of presentation adopted both by the center of such scholarship and what comes to be known as its 'periphery.' We do this by talking about, (1) how centers and peripheries of a discourse are formed, (2) how the differences in power between these groups means more labor for one than the other, (3) and how self-location by those at the center in the process of knowledge-production is the way to resolve this problematic dichotomy.

Social Production of Center and Periphery

Center and periphery are social constructs; they exist only because people interact in ways to define group norms and boundaries. These interactions are *mechanisms of presentation* that include both definitions of what it means to be a member of a group as well as definitions of the Other. Definitions of the Other are typically stereotypes, as they typecast outside groups in a monolithic manner and are derived from borrowed understandings.

The history of literature in ICTD demonstrates this typecasting of outside groups. ICTD has its origins in the practice of identifying opportunities at the nexus of computing and social development in parts of the world that were not Europe or USA. In early work, the representations of communities from the "developing" countries and their need for computing technologies was based on the stereotype that these countries are poor or underprivileged. These countries were seen to be in need of technological advancement to solve their problems, and the center (in this case, the developed countries) could provide the knowledge transfer necessary to do this. [6]

Periphery groups can also utilize mechanisms of presentation to define themselves and stereotype the center, thus creating a counterculture, which implicitly acknowledges the existence of separate groups but also allows members of the periphery to self-define their group identity. *It is not the existence of such mechanisms alone that denotes which groups are the center and the periphery, but the difference*

Mechanisms of presentation are not limited to academic papers, but include mass media, the clothes we wear, the words and grammar we use, how we decorate and delineate our spaces, and so on.

Socialization describes the process by which individuals interact with each other to be exposed to mechanisms of presentation, and how this exposure results individuals learning and internalizing the values presented. Together, socialization and mechanisms of presentation are a process of identity formation [11].

in power between groups.

The center is the group that holds dominance over the periphery in a particular context. Such dominance may come from a variety of sources of power, such as historical circumstance, being the majority in a location or domain, early adopter phenomenon, etc. For example, the dominance of the perspective of WEIRD countries in ICTD literature is due to the what Keniston and Kumar call the 'digital divide.' They describe how technology usage and research in the WEIRD countries is much more widespread as compared to the rest of the world [7].

Consequences of Power on the Periphery
One consequence of the difference in power between the center and periphery groups is that the norms and representations produced by the center are considered the default rhetoric, and members of periphery are obligated to perform extra labor in order engage in conversation with members of the center. This is because members with the center are likely to only have stereotyped conceptions of the periphery, owing to the limited reach of the mechanisms of presentation of the periphery.

In the human-computer interaction community, the research published in the CHI conference is a good example of mechanisms of presentation with differential reach between the center and periphery. Those from wealthy countries in the "center" are more likely to attend and publish in this conference, whereas those coming from the "periphery" in regions that find it very expensive to travel to CHI are less likely to have access. While regional CHI conferences exist, such as AfriCHI, researchers from the "center" are less likely to publish here, and thus they are less likely to read the proceedings of these conferences.

Unlike members of the center, those in the periphery are

under the influence of messages from both the center and periphery. They must do the work of sorting through these extra messages in order to create and make sense of their own identity [10]. Since those from the center do not experience peripheral presentations of themselves, members of the periphery must also do the work of situating themselves in relation to center's understanding of peripheral group identity when interacting with a member of the center. These forms of work are called *presentational labor*.

One example of this difference in labor taking place can be seen in the publications for educational technology targeting users in WEIRD countries versus countries in the Global South. In Martinez-Maldonado et al.'s work in 2013 [9] describing a user study of collaborative learning on interactive tabletops, the authors do not feel the need to situate their user study in the context in which it was performed. There is no mention of the demographic nature of the participants nor of the history or relation of these participants to other potential users. The authors and the audience cannot judge how cultural factors influenced the outcomes of the study. The students in this study are presumed to be anyone, though judging by the pictures and the location of the researchers, were most likely university students in Sydney, Australia [9].

In contrast, Lazem and Jad's work in 2017 [8] on a similar collaborative learning environment built using projectors and cameras, was careful to describe how it was situated in the context of a rural Egyptian school. In this paper, the authors described the age, gender, and grade of students who participated in the study and the challenges faced by the students and teachers in this particular school and educational system which influenced the design of their intervention. Finally, the authors describe how conflicts between the parties involved in their study, such as the expectations of

institutions and the norms of students, impacted the usage of their educational tool [8].

Researchers working with populations at the periphery in human-computer interaction and collaborative learning are thus required to perform additional presentational labor when publishing to venues at the center. This labor is inequitable from the perspective of periphery communities, and the lack of an expectation of the same labor for center communities is a disservice to the project of seeking knowledge and truth. As long as this difference in expectations and labor exists, researchers addressing the periphery will continue to be exceptionalized.

Dissolving the Center-Periphery Dichotomy
Having understood the differences in power between the groups at the center or periphery in general theoretical terms, it is timely to make an epistemic turn in this paper to demonstrate a way of dissolving this binary and the consequent experience of marginalization produced by the center of a discourse. We believe that the problem lies within the very processes of presentation employed by the center which forces those at the margins to perform undesired labor.

While the aforementioned understandings of center-periphery are useful to make sense of the broader concept and process of marginalization through specific examples, they are also doing what Haraway describes as the "God-Trick of seeing everything from nowhere" [3]. They claim to have objective knowledge of what this process of marginalization looks like for social groups irrespective of their histories or embodiment of the experience of marginalization. This is what Haraway refers to as the politics of the wandering eye, where the speaker themselves *"is unmarked, disembodied, unmediated, transcendent"* [3] in a way that they

don't feel the need to position themselves because they are the norm against which everything else will need to locate itself. This is reminiscent of a characterization that Du Bois makes where he identifies the women of his life as *relations* and not as *beings*. *"They existed not for themselves, but for men; they were named after the men to whom they were related and not after the fashion of their own souls"* [1].

We draw a parallel between this gendered understanding of women's existence being articulated in relation to that of men to what we observed before in the study of interactive table-tops. The relational labor of identifying against the normative setting was performed by Lazem and Jad, who were researchers working at the periphery. Men get to simply be - to exist - present themselves as such and women exist to present themselves in relation to that norm. Similarly, the technological work done in Global North or with a WEIRD understanding is presented as a matter of fact, against which the technical work of the Global South must be relationally located via a *'separate context'*.

We argue that the center in the case of both CSCW community, and related Computing fields, continue to make claims to objective knowledge about information systems by not self-locating themselves in their own work, as well as not self-locating their work in a way that the "margins" of this community are expected to. For example, in the above example of interactive table-tops, the group studying them in Australia claim to have a generalized understanding of how these systems are experienced and used. Not only is that claim misleading, it also continues to perpetuate a norm of indifference to the particularities of Western contexts that affect the knowledge produced in these studies.

Self-location by those at the margins starts with the center presenting itself without a body, location, gender, race, etc. This labor of relational identification done by the margins is

Eurocentrism is the assessment and evaluation of European and other societies from a decidedly European (also American) point of view. Eurocentrism, therefore, is defined as a thought style in which the assessment and evaluation of non European societies is couched in terms of the cultural assumptions and biases of Europeans and, by extension, the West.

made invisible by its unquestioned status in the scholarly community. Additionally, it also devalues and contributes to exceptionalization of concerns and populations which don't fit the Eurocentric imagination of a technology user. If we are to truly destabilize this center, then it must acknowledge the partiality of the knowledge that it creates. We argue that acceptance of the partiality of scientific and technical work done owing to the situated nature of such pursuits in the social, economic and cultural contexts, will lead to what Sandra Harding calls 'strong objectivity' [4].

Conclusion

In the above sections we have articulated the process of marginalization, the experience of doing marginal labor, and a possible course of action that can lead us towards a more situated understanding of computing and information systems.

The ideal is a community where everyone is locating themselves. In fact, we think that self-location should be the new center in the world of scholarship and knowledge-production in the computing and information sciences. This is a community where context is not only established through qualifications of demography of participants, but also through the labor of situating the particularities in the same way that non-Eurocentric, 'developing,' or 'marginalized' communities do so today.

The argument is not simply that of social or epistemological justice. The argument is that situating one's knowledge is also the way to accurate and precise knowledge creation which leads us closer to a fuller, richer, and truly objective truth about humans interacting with technology.

About the Authors

In this paper, we discuss mechanisms of presentation, and its influence on unequal labor in the academic community of CSCW and related computing fields, but we believe this framing on how to understand the processes of marginalization may be useful to much broader contexts. Additionally, we do believe that locating ourselves in this community is the first step to also embodying the knowledge we produce. We believe that solidarity begins with self-location, relational both to our personal and professional contexts. Below, we describe how we have experienced the labor of presentation in our lives inside and outside of academia. We do this both with the hope of making visible the ontological labor required from those working at or from the margins themselves, as well as demonstrate the turn in scholarship we would like to see materialize.

Anthony Poon
I am a second-generation, Chinese-American whose recent research involves educational technologies in sub-Saharan Africa. I must constantly situate this work when presenting to development and non-development scholars, describing the context of the schools, the educational systems, and cultural factors which influence my research. Outside of research, situating myself and navigating conflicting messages on group identity is something that I'm familiar with. As the descendents of Chinese immigrants growing up in the United States during the 1990s, my exposure to representations of East Asians in mainstream media mostly comprised of martial artists. On the other hand, my parents would have rather I spent my spare time in artistic pursuits, such as music and calligraphy. Navigating this conflict was a large part of determining my own identity as I grew up. Today, these differences may be exacerbated by the proliferation of many more voices, in YouTube and other mediums, on what it means to be Chinese-American.

Palashi Vaghela

I am an international student in the USA, born and brought up in India as a Dalit woman, a lower caste community. I had never experienced being brown as is understood in the global or American context before I moved to the US, nor had I participated in a global technology research community before starting a PhD. Growing up as a Dalit woman in urban India, I had to take forward the legacy of breaking out of caste stereotypes and subjugation imposed on my community for generations, in addition to navigating the terrain of sexual politics of being a woman in India. At my university, I am one of the three South-Asian women in the department. My research looks at politics of ways in which technology is employed in the projects of women-empowerment in India, which tends to operate in the margins of the information science in US by being grouped with ICTD scholarship that builds or designs for 'developing regions'. I see my research to be a brown feminist, decolonial intervention in the field of information science writ large. I believe that while a community of solidarity could be found in ICTD, I also feel like my work is continuously invisibilized and marginalized in the broader community by the virtue of being situated in the Global South.

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