

Encountering Development Ethnographically

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HCI for Development (HCI4D) lies at the intersection of information communication technologies for development (ICT4D) and human-computer interaction (HCI). The mainstream HCI community creates user experiences for the developed-world consumer, while ICT4D is concerned about creating relevant technologies for developing nations. The fusion—HCI4D—evolved and realigned goals to design user experiences for a new audience, namely populations living in a context of low rates of telecom diffusion and digital literacy.

The foundation of good interaction design is understanding the user [1]. While usable interfaces are critical for good user experience, contextual factors such as institutional arrangements, literacy levels, and social, political, economic, and infrastructural issues often guide the usage and sustainability of development projects. In this regard, ethnography is a highly favored field technique in HCI4D research. This is due to the perspective it lends in gauging the sociocultural relevance and acceptability of technologies in a given context.

At the core of ethnographic research is field immersion of the researcher as a participant-observer. It follows that ethnographic studies are not only vulnerable to biases held by the researcher, but also are products of relationships established between the researcher and informants. Ethnography has historically involved power imbalances between researcher and informants. In the context of HCI4D, projects may fall into the trap of mistranslating findings into a

design irrelevant to the needs of target users in specific socioeconomic contexts, even with the best of intentions. Misreading cultures can disrupt the developmental underpinnings of HCI4D, which is concerned with technologies that move toward fulfilling human developmental goals. From our own experience in employing ethnographic methods in HCI4D, to avoid these traps:

1. Rearticulate the assumptions of developmental projects,
2. Outline a repertoire of field techniques improvised for low-income settings, and
3. Highlight lessons learned from tensions rooted in the conflicting cultural contexts of the HCI4D researcher and informants.

Our ideas developed out of field engagements between 2008 and 2009 in the slums of Bangalore, India, where we observed female domestic workers, and Mumbai, where we studied small businesses and their socioeconomic networks [2]. While our reflections are not new to the field of anthropology, we present ways to manage these age-old problems in the context of HCI4D. Some salient observations from our fieldwork are as follows:

Question the notion of development.

Understanding the meaning of development is critical to any developmental project. Broadly speaking, development as a goal addresses the necessities of human life, such as food, sanitation, health care, education, and employment. However, a critical component in strengthening the socioeconomic and moral foundations of the project is to elicit the idea of development held by the target

[1] Norman, D., *Design of Everyday Things*, New York: Basic Books, 2000.

[2] Sambasivan, N., Rangaswamy, N., Cutrell, E., Nardi, B., *UbiComp4D: Interaction and Infrastructure for International Development—The Case of Urban Indian Slums*, UbiComp 2009.



community—what do they consider empowering, progressive, upwardly mobile, or beneficial? Should the aim of introducing the Internet be to push digital literacy at any cost, or to make literacy relevant for community needs? Do information kiosk users downloading MP3s and wallpapers of film stars and watching YouTube videos counter development goals? Rangaswamy studied a state-sponsored telecenter for community development, which survived power crunches and unstable Internet infrastructure, by using a PC for offline copying, publishing, and digital photography [3]. Through a PC, the telecenter transformed traditional services to a more diverse, efficient, and sophisticated practice.

Understand scope. Most development projects are limited by funding and scale. The effects of interventions, however, have a longer life than their funding sources. Any HCI4D project needs to allot significant care to understanding local social arrangements, including those that may seem exploitative. It is one thing to be appalled by the degree of injustice in the field, and another to attempt to intervene without understanding cultural mechanisms of injustice. Development interventions may sometimes exacerbate existing social divides and inequalities. In one of our field sites, we were dismayed by high rates of alcoholism and domestic violence, and the community acceptance of these practices. We were tempted to include video episodes to counter domestic violence in our participatory video-exchange program. But on deeper introspection, we turned our focus from domestic violence to raising nutritional and educational awareness. This worked on two counts—it generated a positive response from our audience, and it avoided a serious and controversial community issue that our short-term design intervention was ill equipped to address. A humble approach toward development research goals—and sensitivity to local context—aided in creating impact within the scope of the project.

Understand internal politics. Access to informants is critical when conducting research in any community. In our case, we snowballed our pool of informants initially recommended by our key informant—an active member of the local NGO. While the snowball sample ensured a trusted path for obtaining informants, it precluded our interviewing those unknown to or hostile toward the key informant. This generated heated reac-

tions from members of the community whom we did not approach. In response, we redesigned field schedules to interview a wider range of members and make peace in the community. Spending time over casual conversations with the local NGO helped in understanding internal politics, local dynamics, and historical changes in the community. We learned that it is important to stay alert to tensions within the community.

Understand the moral economy. Gift giving is a characteristic research incentive, but it can have unintended consequences. Choosing the appropriate gift is important in avoiding creation and escalation of tensions between study participant and nonparticipants. A seemingly innocuous gift of a school bag for an informant's child proved disproportionately valuable in relation to the family and community's income standards. While everything was fine when we were in the field, the local NGO reported ill feelings among those who did not get a bag. Fortunately, we spotted gift-giving tensions early in the research, and assuaged community sentiments. Ultimately, we gifted our informants with bed sheets and stainless-steel utensils.

Remix the method. Certain field techniques elicit rich data, while others lead to cul-de-sac. Ethnography is concerned with responding to the immediacies of the situation. Our informants did not provide us with detailed responses on health and educational issues when we posed direct questions. We modified our method to reflect the contemporary idiom, similar to the Bollywood technique [4]. Popular TV soap operas function as yardsticks to assess reaction and response to existing and changing social environments [5]. A persona modeled on a character in a popular Tamil TV soap opera—"Kolungal"—however, elicited revealing data. The character, Abhinaya, a brave young middle-class woman who faces a slew of difficulties, mirrored the aspirations and day-to-day struggles of the informants. Participants were asked to guess the persona's reaction to specific health issues. By speaking for a third person, they were able to simultaneously situate and distance themselves, providing concrete details on these issues, making the exercise extremely enjoyable.

Socioeconomic analysis of subjects is a vital methodological aspect of most projects. However, directly asking about an informant's income, assets, or business practices can result in make-believe responses to "save face." Looking for physi-

[3] Rangaswamy, N. "Disruptive IT in South India." *SARAI reader 2003: Shaping Technologies*. Centre for the Study of Developing Societies, Delhi, 2003.

[4] Chavan, A., Munshi, S., *Emotion in a Ticket*, CHI 2004.

[5] Mankekar, P., *Screening Culture, Viewing Politics: An Ethnography of Television, Womanhood, and Nation in Postcolonial India*, Durham, N.C.: Duke University Press, 1999.

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cal manifestations of income such as domestic appliances or a scooter may furnish vital data. It also provides opportunities for conversations of exchange, rather than difference.

Mind the gap. As noted earlier, there are inherent power differences between the interviewer and study participants (income, social class, language, skin color, appearance, and so on). Efforts to reduce this gap are imperative. As standard ethnographic practice, it helps to level differences by adopting appropriate posturing: sitting on the floor, wearing traditional clothes, sharing a meal, and revealing genuine concern for the informant, all of which aids in generating engaged and deep responses.

Reflections also point to “keeping the gap” despite the asymmetry of social status. Informants narrating from within a patron-client relationship, consisting of the researchers and themselves, may open up deep personal accounts of critical community issues, creating a feel for community dynamics. For instance, a group of foreign visitors accompanied us to one of our field sites. As the first author was a native ethnographer who had established sufficient rapport with the community, a couple of women volunteered to host the group. The visitors were welcomed with great enthusiasm and cheer. Drinks and sweetmeats were offered. While talking with pride about their financial independence and ability to support their children’s education, the women openly criticized their endurance of drinking and the ensuing violence of their husbands. Surprisingly, what took us months to uncover was unraveled within minutes in front of a group of people with foreign, power-laden identities. The particular asymmetric “presentation of identity” in the field led to interesting revelations.

With this article, we hope to have highlighted the problems of conflicting cultural contexts between the researcher and the researched and their impact on development research. We discussed creative ethnographic engagements with informants that can potentially transcend gaps in the field to provide a foundation for good HCI4D research.

Acknowledgements

We wish to thank Ed Cutrell, David Hutchful, and Aishwarya Lakshmi Ratan for their input. Arturo Escobar’s *Encountering Development* inspired the title.



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