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# There's Methodology in the Madness: Toward Critical HCI Ethnography

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**Abstract**

We examine the expansion of topic areas for qualitative research in HCI publications, focusing on representations of users and field sites. We examine further developments in anthropological methodologies during a critical period of the late 1980s and 90s. We identify concerns shared by both research communities, in particular, the relationships between researcher and informant, and the construction of bounded settings for field work. We then argue that ethnographic approaches and theoretical commitments which came to the fore after Anthropology's critical turn can be usefully applied, in ways that can inspire design, to investigations of social practice and technology appropriation.

**Keywords**

Ethnography, mobility, DIY, rhetoric, methodology.

**ACM Classification Keywords**

H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

**Introduction**

Three years ago, at CHI, Harrison et al. [9] proposed the existence of a growing "third paradigm" in HCI, contrasting with older approaches grounded in

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*CHI 2010*, April 10–15, 2010, Atlanta, Georgia, USA.

ACM 978-1-60558-930-5/10/04.

engineering and cognitive psychology practices. This paradigm includes a variety of projects coming out of ethnography, design, and art, but the common thread is a centering of “situated perspectives” and attention to qualitative aspects of experience, rather than the solving of specific usability problems, or the efficient transfer of information. Entailed by this centering of experience is a focus on embodiment, a critical orientation towards “what it means for a system to be ‘good’ in a particular context”, and a concern with locating users, interfaces and researchers.

The third paradigm is contemporaneous with the appearance of papers at CHI on a variety of new topics: social media, religion, play, mobility, and globalization and development. To discuss the entire expansion of diverse topic areas of HCI would be beyond the scope of this paper. We hope to focus on a few trends becoming evident in HCI publications (largely at the CHI and CSCW conferences as well as interaction-focused areas of Ubicomp) and to illustrate certain underlying commonalities. The first trend is a complication in the rhetoric of the user. Both Information Technology for Development (ICT4D) and DIY (do-it-yourself) and challenge traditional representations of users in HCI with examples of people who design longer term solutions as they use. The second trend is an expansion of field sites from four-walled workplaces and homes to more mobile or virtual conceptions of the field, as embodied in multi-sited ethnographic studies.

This broadening scope presents challenges for HCI methods. Many of our qualitative methods were developed and refined largely in the context of studying stable, local subcultures or the sort of collaborative

work characteristic of industrialized societies. Quantitative methods adopted from cognitive psychology, which are still measurably favored at CHI [2], tend to involve experimental studies in even more tightly controlled settings such as usability labs.

Our goal in this paper is to build on prior calls to master more diverse methods of design and evaluation [2] by identifying a few of the underlying challenges of these diverse settings, as HCI researchers and practitioners have encountered them in existing work, and to pinpoint ways that we might shift our qualitative methods to better serve these new domains. We refer to a body of work from anthropology’s critical turn to help us understand how a shift from *method* – prescriptions of investigative practice – to *methodology* – understanding and working with principles underlying methods of inquiry – might better accommodate in situ research in a world that is increasingly mobile, connected, and technologically savvy.

### **Postcards from the Field**

Our explorations begin with our own experiences doing design-oriented fieldwork.

Irani spent several weeks as part of a team designing water filters for village households in Andhra Pradesh, India. Using ethnographic approaches, the team sought to understand the role of water in everyday family life to inform filter design. Researchers planned to screen participants, and to engage with the household through observations and one-on-one interviews.

These plans were quickly revised, however, when the team arrived to see not a household but a loose union of homes and water infrastructure shared among

extended families. Their first participant slept under his aunt's roof while he built a neighboring home for his mother and sister.

As researchers began a planned one-on-one collage exercise meant to provoke discussion of health and lifestyle issues, more and more neighbors gathered round, drawn by the unusual encounter. Rather than attempt to single people out for individual exercises in which the participant might feel self-conscious, researchers decided to change the exercise into a cooperative group activity, reasoning that their underlying goal had been to understand shared (rather than individual) hopes, ideas, and meanings. The improvisation did, they reasoned, not undermine the research goals.

Williams conducted a long-term ethnographic engagement with a charitable organization in Bangkok, Thailand focusing largely on their use of digital imagery and media in configuring local and transnational networks of financial support. Much of the field work took place on site over the course of several months: visiting the arts and crafts space, hanging out with the children who lived and attended school there, designing the organization's website and annual report, and providing various computer support as needed. While the participants in this study would not have characterized themselves as professional designers, or even as particularly tech savvy, much of the everyday work at the field site consisted of various forms of design, creation, and critique.

To leave Bangkok for North America, however, was not to leave the field site. The activities around which Williams designed the website continued in her

absence, requiring her to intervene in and maintain the site. Feedback from supporters, breakdowns in webhosting, and donation processing problems all informed Williams' understanding of the field as a site for design. The time interacting with the organization from across the world offered crucial insights into technology, social order, and meaning in the organization.

These experiences raised several issues for the authors. First, the boundaries of our field sites were never quite where we thought they would be. Second, some of the design methods we had been trained to use were not as portable as we had initially believed, requiring some amount of in situ improvisation. Third, an engagement in which the ethnographer also plays the role of designer, implementer and tech support provided its own useful insights but interrupted the traditional role of "neutral observer." Lastly, embracing participants' capacities to design, improvise, and appropriate proved a crucial element to the success of our engagements. These ethnographic studies disrupted some of our boundaries: between the field and our homes, and between the roles of designers, researchers, and users.

### **Re-presenting the user**

The user of computational systems – including his or her needs, abilities to process information, and perceptual abilities – has been at the center of HCI discourse since the inception of HCI as a coherent research agenda. Cooper and Bowers [5] once suggested that the notion of the "user" in HCI could be considered as a "discursive construct" used to legitimate the very existence of the discipline. "That users are not like designers (or computer scientists, or

system managers or programmers, etc.) is repeatedly emphasized in HCI texts," they demonstrated[5].

The discursive construction of the user is also at work in explanations of ethnography's contribution to technology design, where ethnographers are positioned as translators that can bridge the gap between designers and users:

At work, designers, marketers, and developers are often entirely circumscribed by their work culture. At its best, ethnographic research in an industry context reconnects these workers with the world they inhabit and helps them imagine worlds they may have never seen...[19]

Recognizing the role users, designers, and ethnographers typically play in HCI research is a first step in understanding how the field's language may create analytical blind spots. Do researchers' continued existences depend on authoritatively speaking for and representing users as the quote above suggests? Might we instead explore opportunities for users to represent themselves, or to place the dichotomy between "design" and "use" into an ecology of practices: designing, crafting, making, appropriating, hacking, tinkering, borrowing, stealing, playing, perverting, rejecting, and so on?

As ICT4D researchers have worked to design sustainable technologies, they have discovered the limitations of the designer-user dichotomy. Researchers frequently partner with NGOs [18], local translators, and others who guide researchers' cultural understanding. These research partners are often potential users of the systems being designed. Marsden

et al. have also argued that rather than designing for individuated users, designing for larger communities populated by different kinds of users-maintainers-developers is a more sustainable approach [13]. Grassroots cultural innovation practices, such as jury-rigged *jugaad* solutions in India, or local traditions of maintaining and rebuilding technologies suggest that global orientations toward technology are far broader than the producer/consumer dichotomy of designer/user – an inheritance of cultures of mass production and obsolescence – would suggest.

DIY (do-it-yourself) communities also complicate designer/user dichotomies. DIY may encompass anything from customizing mass-produced furniture to building a house full of furniture (indeed, perhaps even the house) from scratch. Arduino [35], as an open source hardware project, involves users deeply in design and creation. Arduino designers emphasize ease of use, following a legacy of HCI, but do so in a context of open creativity rather than task-oriented performance. Arduinos are not a finished consumer product, but rather usable *components* that can drive DIY projects. Arduino usability is understood not only at the level of "plug and chug," but also at the level of being easily modifiable. The hardware and software are open source and well-documented to support users in designing new versions. Users have generated and distributed a variety of Arduino forms, each suited to particular creative niches. Arduinos, then, exhibit good "usability" both as tools and open systems. Arduino, and DIY more broadly, trouble distinctions between designers and users, and in doing so, they generate new possibilities for kinds of systems and kinds of participation.

### **Re-Locating Field Work**

As people move through different settings they may experience technological devices and infrastructures in different ways. It is often through these located practices of mobility that technology becomes usable, useful, and desirable. Understanding the embodied experience of mobility requires modes of observation, participation, and reporting that are also mobile. Following people and their technologies across multiple sites shows both how changing contexts and mobility itself condition the meanings and uses of technology, and also how cultural similarity can exist in geographically very separate places.

The analysis of technology use across multiple sites can reveal common, if distributed, cultural settings where commonsense, geographically rooted notions of culture would expect distance and difference. Studies of urban mobility [10], for example, show how young, mobile professionals in Tokyo, Los Angeles, and London participated in multinational cultures of “global” mobility despite being separated by language and nation-state. As evidenced by the nearly indistinguishable contents of their pockets, their local practices and meanings were in tune with cosmopolitan resonances; their local mobility is embedded within a system of global mobilities. The multi-sited approach allowed Mainwaring et al. to see first, how distance is not the same as difference, and second, how global logics manifest in the specific, everyday practices of these young professionals. By choosing a particular sort of practice – cosmopolitan mobility – rather than a location or community, researchers were able to trace out alternate, consequential cultural practices associated with globalization.

Multi-sited ethnography [12] allows researchers to understand how different cultural settings shape the meanings and uses of technology as it moves with people [21]. Following the device, people, or bits as they move shows that human-computer interaction is not something that occurs purely between the human and the device, nor is the meaningfulness of technology embedded within the individual. It is instead highly contingent, generated in interaction among people, devices, and contexts. Furthermore, where modern ethnographers are often concerned with mapping the relationship between local experience and global structures, multi-sited ethnography, as originally envisioned by Marcus [12], acknowledges that ethnographic informants already consider and interpret their relationship to the global, and that consideration is itself an important form of knowledge. In short, the researcher’s understanding of mobility, technology and practice is not the only point of view that matters in a multi-sited ethnography.

In the following section, we will expand on the ways in which anthropology has attempted to adapt its methodologies to a globalizing world, and how such constructive change can ground HCI research practices.

### **A Critical Turn**

Having discussed the relationships between designers and users and the settings for which we design within HCI, we now hope to find informative parallels in the relationships between ethnographers and informants and the problematization of the easily bounded field site within anthropology. Though others have done so before, it is useful here to set the stage with a brief history of ethnographic field work in HCI; we draw from previous accounts of its uptake [6][7].

Ethnography initially rose to prominence within anthropology, with Malinowski's pioneering long-term fieldwork in the Trobriand Islands [11]. It remains the dominant mode of inquiry within that field. In brief, ethnography typically involves participant-observation in a process of tacking between culturally immersed practice and distanced reflection. Its analytic goal is the production of a "thick description" [8], which goes beyond simply describing members' actions, but attempts to understand and convey the *experiences* in those actions.

Ethnography was later taken up by sociologists of the Chicago School, who applied it to the study of subcultures closer to home. Chicago School sociologists focused on the situated ways in which work gets done, both in the conventional understanding of the word, and the social work that underlies everyday activities. Dourish has argued [6] that the contribution of Suchman's *Plans and Situated Actions* [20] to HCI was not only a rigorous empirical study, but an analytic perspective regarding ongoing, situated processes by which people organize social action. These ongoing, social actions include human-computer *interaction*. This focus on everyday work eventually facilitated the uptake of ethnographic methods by researchers in CSCW and HCI who were concerned with designing for actual work *practice* rather than idealized work *processes*.

However, the uptake of ethnography by HCI practitioners by no means signaled the end of ethnography's evolution within the discipline of anthropology. On the contrary, during the 1980s and 90s, anthropology entered a period of intense reflection and self-criticism around its practice of ethnography. As

anthropologists considered the history of their research in supporting the work of colonial administration, they began to question the forms, language, and conventions of ethnography that treated cultural others as part of a bounded, unified, unchanging cultural system, wholly distinct and *other* from the researcher. These same genre conventions of a bounded, unified, unchanging culture did not account for the obvious cultural transformations underway as mobility and ICTs made cultural and financial flows pervasive.

We describe here how these movements resulted in a questioning of a pervasive metaphor that structured decades of anthropology and is beginning to be called into question at CHI: the observing self (or designer) and cultural other (or user), and by extension the fixed location of the other.

#### *Self and Other*

In a reflective essay on how ethnographers have historically constructed their authority to speak about and for the people and cultures they study, James Clifford [4] pointed out various rhetorical strategies of written ethnographies within anthropology. While early ethnographies claimed exclusive authority for the anthropologist to interpret informants' practices, due to his experience, training, and ability to "read" culture like a text, these claims became subject to critical scrutiny. Later *discursive* modes of ethnography sought to produce ethnographic knowledge in dialogue between researcher and informant(s). This model reveals the fact that the ethnographic account may be heavily guided by privileged informants with a reflective outlook on their own culture. The *polyphonic* ethnography, in turn, attempts in various ways to share

the stage with these “indigenous ethnographers”, from quoting extensively, to sharing authorship.

Clifford’s essay is more than just a history of different approaches to the ethnographic encounter, it is a critique that reveals ethnography as a strategic writing practice, much as Cooper and Bowers [5] did with HCI. Like Cooper and Bowers’ HCI researcher, Clifford’s ethnographer is not a transparent, objective conduit for information about his informants. Rather the ethnographer must unavoidably pick and choose how to represent experience in a written account. This written account will always be shaped by the ethnographer’s own embodied experiences and interests at the time. The anthropologist, then, generates data, always incompletely, through their interactions with the field. Capturing perfect, complete data is not only impossible but a philosophically suspect claim in this view.

Though concerned with representations of informants, Clifford omits the bodies and backgrounds of the ethnographers themselves, implicitly assuming them to be Western and usually-but-not-necessarily male – in short, unmarked by physical signs of *difference*. Though he points out the existence of smart and reflective informants who have a *natural* ethnographic mindset, the idea of a native who is a *professional* ethnographer never bears mentioning in his text.

The “native” ethnographer is thought to “write about their own cultures from a position of intimate affinity” [15] rather than traveling to and gaining acceptance by Other cultures. This distinction, however, is not unproblematic; the native ethnographer may feel distanced from her society of origin by emigration, class or education. Instead, Narayan [15] (herself a

“native” ethnographer) argues that she performs an “enactment of hybridity”, indicating not merely mixed ethnicity from birth, but a hybridity between embodied knowledge and the text presented to colleagues, between ties to the community of study and ties to one’s profession. She argues that “while people with Third World allegiances, minorities, or women may experience the tensions of this dual identity the most strongly, it is a condition of everyone.”

This split self generates productive tensions, engendering an acute awareness of positionality, or the fact that “every view is a view from somewhere”. Abu-Lughod [1] calls for ethnographers to trouble the construction of other cultures as discrete and distinct from “our” own — not an erasure of difference but a recognition of more diverse, complex and cross-cutting differences existing alongside diverse and complex connections. She urges a focus on the dynamism of practice and the agency and pragmatics of everyday life over static structures of rules, models, or texts. Another important focus would be the interconnections, rather than the boundaries, between a community, the wider world, the anthropologist working there, the historical processes enabling her to be there, and the circumstances in which each of us are situated. Lastly she asks if there are ways for the ethnographer to “constitute the other as less other”. While ethnographers sometimes state the goal of making the familiar strange [3], here we may desire to make the strange familiar to recognize new possibilities.

We wish to take a moment here to reflect on the ways that some of Abu-Lughod’s recommendations for critical ethnographic writing – a focus on interconnection and everyday pragmatics rather than representing from a

distance – might be regarded as compatible with the objectives of ethnographic work in HCI. Ethnographic practice in HCI, thanks to the influence of ethnomethodology, already has a demonstrated concern with the pragmatics of everyday achievement. As a community of practice that, in part, designs and builds technologies for interconnectivity, we may even have special insights into the ways that communities and field sites are cut off, tied in, or differentially connected to other places and the world at large.

### **Discussion**

The authors of this paper would be among the first to admit that some of the essays marking anthropology's critical turn may seem opaque and disconnected from HCI's aims to create good, practical design work. Underlying the gaps in our respective disciplinary canons and vocabulary, however, are some shared fundamental concerns. HCI professionals are, after all, in the business of translating, representing, and anticipating the experiences of our users. We are also deeply concerned with the settings of everyday life, how technologies may connect or interpenetrate with them, and how to design technologies that fit them. Perhaps, then, we might learn something from anthropology's crisis of representation of both informants and settings.

#### *Generative Methodology*

Methods in HCI have historically been valued for their replicability by a broad range of practitioners who may lack a deep theoretical understanding of the method's underlying principles. Nielsen, for example, describes his book as aiming to "provide concrete advice and methods that can be systematically employed to *ensure* a high degree of usability in the final user interface"

[16]. The italics are ours to emphasize the sense that a method is meant to ensure a certain outcome, much like a manufacturing process or an algorithm.

Yet the portability of methods cannot be taken for granted as HCI moves into new contexts. The challenges that arose in Irani's Andhra Pradesh engagement, as well as in much HCI4D research, simply dramatize and defamiliarize the improvisations that often enable design methods to work. Design methods, while typically conceived of as prescriptions of practice, are actually configurations of materials, people, and technologies that are not equally appropriate or possible in all places.

There is nothing wrong with running usability tests as prescribed in contexts where they are known to be effective. However, we must be cognizant that those methods do not necessarily make sense or accomplish what is desired everywhere. In contexts unfamiliar to HCI, we believe, some amount of improvisation will be unavoidable – indeed we suspect that design methods are successfully ported into different contexts because of the quiet efforts of people finding the best fit in the field, giving accounts of their work by naming accepted methods but not taking the methods for granted. We would like to see this sort of work, done to make methods fit situations, more often articulated, justified, and evaluated as a legitimate part of HCI research practice. Designers working in these contexts, then, need a grounding in methodology: the analysis of principles that underlie methods. In approaching the problem in this way, an unfamiliar field site becomes an opportunity to contribute to the development of robust and nuanced methodology.

### *Criteria for Ethnographic Rigor*

The critical turn taken by anthropology was in part a response to the contemporary conditions of global capitalism, in which people are increasingly mobile and connected. Anthropology's area of inquiry had shifted under their noses, creating a misfit between traditional methods and the realities of in situ experience, and necessitating an adjustment of criteria for ethnographic rigor. As it became evident that fewer boundaries, both of the field site and those between self and other, could be taken for granted, the field came to expect that a rigorous ethnography would explain and justify the boundaries of its field site and the ethnographer's position relative to informants.

Arguably, we may be seeing the beginning of a similar shift in ideas of what constitutes "good" (or at least "interesting") research. Anthropology's critical turn suggests that a "crisis" – of representations, theory and methodology – can occasion new, communicable standards of quality and rigor. It may be reasonable to expect rigorous HCI ethnographies to account for researchers' and informants' relative positions and relationships in analysis, or to explain why the field site was bounded in a certain way. We do not suggest that we must import anthropology's standards of rigor wholesale and without question. Rather, in our experience, these articulations can inspire fruitful design collaborations and understandings of technology use. There may be other standards of rigor that HCI can develop through dialogue. Typical criteria for rigor in qualitative research currently include how many interviews were performed and for what duration. However, as CHI moves toward new topics of interest, such criteria may not suffice. In many participatory web systems, for example, participant interviews provide

insight into how people narrate their experiences. However, ethnographically participating in a system, by editing Wikipedia or doing Mechanical Turk work, can provide crucial insights into physicality and sociality that interviewees may not state directly and that cannot be directly observed in others. If critical ethnography calls for reflexive accounts generated by "the body as an instrument of knowing" [17], then alternate criteria for rigor might focus on whether the duration and practices of the ethnographic encounter justify the analytical conclusions. "Unbiased" qualitative data would not, in this rubric, be rigorous.

More broadly, this is one of several papers within HCI [7][9] calling for a reevaluation of conventions around qualitative research. CHI's interdisciplinary community could benefit from such an explicit discussion of what can be considered rigorous methodology and how it can be appropriately derived with regard to the topic and setting at hand. While a successful cross-disciplinary research effort must allow for differing criteria of validity for different paradigms of research [9], it must also learn how to communicate those criteria more explicitly across its constitutive disciplines.

### **Conclusion**

Drawing from our experiences with design across spatial and infrastructural distance and also across cultural settings, we have proposed that improvisation is not only inevitable in design research that approaches unfamiliar settings, but that taking it seriously can help HCI researchers and practitioners think flexibly about design method. Recognizing already existing tensions in HCI constructions of the user and the field offer possibilities for new design and research spaces. We argue that a shift from methods as recipes

to methodology as theoretically justifiable principles of design research engagements allows researchers to follow the people, the bits, and the technologies as they are taken up and made meaningful on the move.

### Acknowledgements

We owe a big thank you to the participants in our field studies and to our many reviewers.

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