

# Ethnography Considered Harmful

Andy Crabtree, Tom Rodden, Peter Tolmie

School of Computer Science & IT  
University of Nottingham  
{axc, tar, pdt}@cs.nott.ac.uk

Graham Button

Fac. Arts, Computing, Engineering and Sciences  
Sheffield Hallam University  
g.button@shu.ac.uk

## ABSTRACT

We review the current status of ethnography in systems design. We focus particularly on new approaches to and understandings of ethnography that have emerged as the computer has moved out of the workplace. These seek to implement a different order of ethnographic study to that which has largely been employed in design to date. In doing so they reconfigure the relationship ethnography has to systems design, replacing detailed empirical studies of situated action with studies that provide cultural interpretations of action and critiques of the design process itself. We hold these new approaches to and understandings of ethnography in design up to scrutiny, with the purpose of enabling designers to appreciate the differences between new and existing approaches to ethnography in systems design and the practical implications this might have for design.

## Author Keywords

Ethnography, ethnomethodology, systems design.

## ACM Classification Keywords

J.4 Social and Behavioural Sciences: *Sociology*.

## INTRODUCTION

The title of this paper reflects a long tradition in systems design. It is succinctly summed up by Saul Greenberg and Bill Buxton in a recent CHI paper on usability evaluation in HCI [20]:

*“In 1968, [Edsger] Dijkstra wrote ‘Go To Statement Considered Harmful’, a critique of existing programming practices that eventually led the programming community to adopt structured programming. Since then, titles that include the phrase ‘considered harmful’ signal a critical essay that advocates change.”*

This, then, is a critical essay. It is concerned with the changing nature of ethnography in systems design. By systems design, we refer to the development of computing systems and applications. Our purpose is to inform systems designers – i.e., those parties who are actively involved in the development of computing systems and applications, be they human factors experts, requirements engineers, or

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee.

CHI 2009, April 4–9, 2009, Boston, Massachusetts, USA.  
Copyright 2009 ACM 978-1-60558-246-7/09/04...\$5.00.

programmers – as to the changing nature of ethnography in systems design and the practical implications this may have *for design practice*.

Since Suchman’s pioneering studies of human-machine communication [33], designers have had an interest in how ethnography can be used to shape the development of technology for the everyday world. To date there has been a particular focus upon the everyday world of *work*. As the computer moves out of the workplace, this has led HCI researchers to question the use of ethnography to study work-practices and fostered a call for ethnography to return to its anthropological origins and the study of *culture*. This may appeal to designers who do not have a disciplinary interest in ethnography but who are concerned to build technology upon social science insights. However, this paper intends to make visible and convey the methodological dangers that emerge *for systems design* in returning ethnography to its cultural origins.

The return to culture results in new approaches to and understandings of ethnography being offered to systems designers. They are new in the sense that they have not been employed in design before. They are, however, already well established in the social sciences. They derive from different, even competing, perspectives on culture and society and reflect a degree of epistemological diversity that it is not possible to address here. We focus instead on different approaches that draw upon them and are emerging *within systems design*. These have been developed for design purposes by a number of authors. We attend to the more prominent as they provide exemplars of new approaches to ethnography within systems design that many members of the CHI community will recognize.

New approaches to and understandings of ethnography within systems design provide for an entirely *different order* of ethnographic study to those that have largely been employed in design to date. As Bell et al. [5] put it, the “role differs from the one usually assigned to ethnography in HCI”. It is characterized by “ethnographers turning their attention to consumer culture” and “cultural practices” [2] to provide designers with “critical readings of the social context of use” and to “generate innovative suggestions for and approaches to design problems” [4]. New ethnographic approaches draw upon “humanities-based disciplines such as anthropology, literary, cultural and media studies” to provide novel ways of “understanding how we relate to and think about technologies as cultural artefacts” [4].

This is a significant shift in orientation towards ethnography in design, which has until now explored a foundational concern with studies of *situated action* [33]. In a design context, ethnography has largely focused on detailed empirical studies of what people do and how they organize action and interaction in particular settings of relevance to design. In contrast, the dominant concern for new approaches is to engage designers instead in a critical dialogue based on *cultural interpretations* of everyday settings, activities, and artefacts.

While the use of ethnography for critical purposes is unproblematic,<sup>1</sup> our concern is that a turn to new design domains has become associated with a call to reinvent ethnographic practice and that this represents a potentially problematic shift in the relationship between ethnography and design. A particular issue is the way in which detailed analyses of the methodical ways in which people organize action and interaction *in situ* [e.g., 13, 21, 34] get replaced by the kinds of broad generalizations of setting, action, and the cultural character of artifacts that characterized pre-Suchman investigations [e.g., 3, 6, 7]. Replacing this kind of detailed empirical study with generic cultural interpretations runs the real risk that attention will be diverted away from what people do and how they organize action and interaction in diverse contexts of everyday life. In turn, this may well have a detrimental impact on the practical relationship between ethnography and design that has developed over the last two decades.

Our purpose here is to hold new approaches and understandings of ethnography in design up to scrutiny. First, we articulate the extent to which the call for new approaches rests upon a common misunderstanding of ethnography in design. We then examine a range of new ethnographic practices that have emerged as a consequence. Our purpose in doing this is to draw out the differences between new approaches and the very tradition that gave rise to ethnography's utility in design. That tradition is one that relies upon a distinct *analytic orientation* to fieldwork, which seeks to uncover the locally organized character of action and interaction [33, 15]. We suggest that Suchman's original emphasis on the importance of situated action for design still holds as research moves beyond the workplace. Also, that designers should be aware of the fundamental differences between studies of situated action and the kinds of new ethnographic practices that offer broad cultural commentaries on action in new contexts and critiques of the design process itself as resources for design.

#### **NEW CONTEXTS AND OLD MISUNDERSTANDINGS**

There is broad recognition amongst ethnographers, academic computer scientists, and industrial technology developers that the context of systems design is changing.

---

<sup>1</sup> Suchman's seminal work on artificial intelligence [33] and office automation [32] in the 1980s, for example, provided a critical corrective to the prevalent design conceptions of the day.

The workplace has ceased to be the exclusive focus of design. The digital, like a host of technologies before it, is permeating society at large. The contemporary challenge for design is to better understand how the computer in all its forms may be developed to support activities in a broad range of non-work settings. At the same time a shift away from work is being propelled by new agendas in design, notably the emerging field of ubiquitous computing [36].

These kinds of observations and arguments provide the motivation for new approaches to systems design [e.g., 7, 17, 30]. The movement of the computer into new contexts is accompanied by a call for new approaches that move design beyond the rationality of work and a preoccupation with production and efficiency. As Bell et al. [4] put it,

*"In the workplace, applications tend to focus on productivity and efficiency and involve relatively well-understood requirements and methodologies, but beyond this we are faced with the need to support new classes of activities ... .. Current understanding of user needs analysis, derived from the world of work is not adequate to this new design challenge."*

No one would disagree with the call to chart new territory and develop rich understandings of new domains as design moves out of the workplace. However, it is important to recognize that new contexts of design do not necessarily demand the development of new approaches to develop new understandings.

The purchase that ethnography has in design at present is one that is largely associated with studies of situated action. These are also called 'ethnomethodologically-informed ethnographies' [12], 'studies of work' or 'work-practice' [11, 21]. Historically, they are closely allied with the development of workplace systems [25]. It might be assumed that new contexts of design demand more of ethnography than work-practice studies to understand user needs. However, this would be to assume that somehow or other the analytic practices of ethnography in the workplace *are different* to the analytic practices of ethnography in, for example, the home or the museum.

In this respect it is important to understand that the analytic practices employed in ethnomethodologically-informed ethnography were not developed to study the workplace. Rather, they were developed to study the situated practices through which action and interaction is organized by the parties to it *wherever* it is done. That an approach has been used to unpack the rationality of work and inform the design of systems that support production and efficiency does not mean that these phenomena are inherent to the approach itself, in contrast to being *inherent to the particular settings* studied.

The association of ethnography with the workplace reflects an old misunderstanding of what the notion of 'work' in this kind of ethnographic study means. The notion is derived from ethnomethodology and refers to the *interactional work* through which people organize a

setting's activities [16]. 'Work-practice' does not just refer to the practices through which a job of work is organized then. While it may do that, the notion draws a general contrast to understandings of human action as the passive result of rule-following or structural determination. The idea of work-practice engages with the idea of 'agency' in the human sciences, which views human beings as shaping their actions rather than action being shaped by their environment. In this respect work-practice emphasizes that action is not merely done but requires agency, or more precisely, 'work', for its accomplishment. Thus 'work' in the idea of 'work-practice' draws attention to the situated *accomplishment* of action wherever it occurs.

This issue of human agency was at the forefront of Suchman's *Plans and Situated Action* [33], which argued that human action is much more complex than cognitive models in design recognized. The aim of work-practice study is to make the analysis of human action amenable to Suchman's argument about the importance of human agency *wherever* it is 'at work'. Certainly, to date, ethnographic studies in the tradition of Suchman have often been conducted in the workplace, but not because they have been designed for the workplace. Rather, they have been designed to apprehend the interactional work involved in the accomplishment of situated action *whatever* the action and *whatever* the situation.

Studies of work refer to ethnographic studies that attend to the interactional work of a setting (to what people do), and work-practice to the methodical ways in which people accountably organize whatever it is that they do.<sup>2</sup> Studies of work and the careful 'explication' or description and analysis of work-practice move us beyond cognitive accounts and make the social organization of situated action visible and available to design reasoning. The sociality of the matter resides in the *interactional methods* that people use to organize and accomplish action and interaction [15, 16]. Whether working alone or together, the methodical ways in which action and interaction is accomplished are *socially distributed*, tied not to individuals but to the activities they accountably engage in. The social distribution of methods provides a 'social machinery' as it were [28], which is synonymous with and provides for social organization.

As the computer moves out of the workplace understanding the social organization of action remains critical to design. We would argue that detailed ethnographic studies of work and the attendant explication of work-practice is essential to the ongoing development of computing systems that resonate with, support, and enhance what people actually do in new design contexts and how *they* organize what they do.

---

<sup>2</sup> By 'accountable' we mean what people observably say and do *in situ* – 'naturally accountable' is another way of putting it; it contrasts with the broad interpretations of action and its organization offered by social or cultural theorists [15].

However, researchers are now offering designers a range of new ethnographic practices, which are not so deeply rooted in empirical studies of situated action and the careful explication of how it is organized or internally ordered by participants or 'members'. This new generation of ethnographic practices for design owes more to an arsenal of social science practices of accounting for social organization, than it does to the particular settings studied and the naturally accountable organization of the members' actions and interactions that animates them in real time.

## NEW ETHNOGRAPHIC PRACTICES

What new ethnographic practices are being offered to the designer in place of studies of work and work-practice? In this section we consider some key examples of new forms of ethnographic practice that are emerging in design. We explore the relationship that these might have to design and the issues likely to emerge if development teams move to adopt them without recognizing the *very different nature of analysis at play*.

### Ethnography and Conceptual Rhetoric

In an article entitled *Back to the Shed* [6] Genevieve Bell and Paul Dourish articulate a new approach to ethnography, which we construe of as 'conceptual rhetoric'. By way of example, the authors tell the reader that they use the garden shed as,

"... a lens through which to scrutinize the conceptual frames within which technical conceptions of domesticity are situated."

The purpose of scrutiny is to revise technical conceptions through the use of sociological and anthropological ones. In this case what new ethnographic practice offers design is an assessment and revision of the social or cultural *adequacy* of technical concepts. Thus, we learn that the garden shed is not only a building of sorts but also a distinct cultural form characterised by a specific gender orientation. It is a masculine space, a private space, a messy space, a dangerous space, an inherently disordered space where things get done, a space of secrets and mystery, of male refuge and isolation, ritually divided from female space. The shed is a space that obliges designers to recognize and incorporate the centrality of gender into technical conceptions of the domestic environment, to recognize that homes are not ubiquitously safe, that boundaries permeate the home, that work and domestic routine are different, etc.

All well and good. However, what this approach does not seek to do is to reveal the 'lived work' involved in the everyday conduct of domestic life – i.e., to reveal what people do and how they organize what they do: Just how are sheds used and organized for use? Just what makes up the activities that are characterised as taking place within them? Just how do household members - in contrast to the analyst - reason about them? These and other issues central to our understanding of the shed or any other setting are left untouched by such approaches to ethnography.

In contrast to an ethnographic practice that draws upon detailed analyses of the methodical organization of action and interaction in the settings under study to revise technical concepts, this approach seeks to do so by transforming technical concepts into *rhetorical objects*. The practice works through the production of texts based on selective observation and reporting, generalization, abstraction, stereotyping, and politicized assertion. Through it ethnography is transformed into a *literary practice* and design is offered conceptual rhetoric that turns upon the literary skills of the ethnographer, rather than the organized conduct of those who will ultimately use the technology. The inherent danger is that we turn the ethnographer into a wordsmith rather than a fieldworker, and in doing so run the risk of removing the foundation of an empirical base to locate ethnography, and in turn design, in practices for producing social and cultural texts instead.

### **Ethnography and ‘Defamiliarization’**

The movement of ethnography away from studies of situated action to practices of writing social and cultural texts is perhaps most pronounced in the proposition that ‘defamiliarization’ be employed as an approach for understanding new contexts of design:

*“Defamiliarization ... is a literary technique and can be used as a method which calls into question our usual interpretations of everyday objects.” [5]*

The aim of defamiliarization is to render the familiar strange in order that systems designers might appreciate the ways in which people ordinarily or ‘naturally’ understand social or cultural life and the various objects and implements employed therein. In turn, the approach is intended to provide “defamiliarizing narratives” that help designers rethink the assumptions built into domestic technologies.

Treating the familiar as ‘anthropologically strange’ is not new. It was recommended by Harold Garfinkel as long ago as 1967 [15] as an orientation to be adopted when conducting fieldwork by according the most extraordinary attention to people’s ordinary actions in order to explicate how the familiar structures of everyday life are routinely produced and sustained. Defamiliarization as a newly coined approach to ethnography in design moves beyond this simple piece of sound advice in two key respects: 1) by placing emphasis upon analytic renderings (defamiliarization narratives), and 2) in the purpose or function it attributes to these renderings.

The defamiliarization narrative is the central component of the approach, which is to say that it is the “story” that the ethnographer tells – in contrast to members’ accountable conduct - that is held up as important. Consequently, and as Bell et al. put it, new forms of ethnographic practice “cannot help” but make their objects seem strange:

*“The act of, for example, analyzing a kitchen sink in terms of its cultural or social significance would seem to many people like quite an odd thing to do.” [5]*

This new approach to ethnography in design “cannot help” but do this because of the ways in which defamiliarization would have us account for the familiar: not in details of the lived work of kitchen sink use, for example – which just about any member of society might recognize - but in terms of the consumer society, industrial processes and trends, standardization, alienation, marketing, etc. [5]. Thus, new ethnographic practice transforms the naturally accountable and analyzable character of everyday objects, as given in members’ mundane actions and interactions, into *analytic objects as given in social science narratives*.

In this way new approaches to ethnography in design not only transform ethnography into a literary practice, but also transform the way in which it is to *inform design*. As Bell et al. put it,

*“It is important to note that this role differs from the one usually assigned to ethnography in HCI. Normally, it is used to better understand our target users and their practices so that our designs can better address their needs ... we are instead suggesting that it can provide alternative viewpoints on assumptions in the design process itself.” [5]*

The adoption of literary practice transforms the role of ethnography, from active participant *in* the design process, helping designers “better understand target users and their needs”, to a critique *of* the design process. There is always room for the critical use of ethnography in design, and studies of the design process have played a central role in critique, but that is not what is being offered here. Rather, the order of critique is one that seeks to get designers to see everyday life from an *alternative perspective* and to adopt that perspective to reconfigure the design process.

The perspective advocated is one that necessarily makes the familiar strange and transforms everyday objects into objects of social science reasoning. If we look at the order of that reasoning we find that technological processes are often not well regarded in the social sciences, but seen as tools of domination, enslavement, alienation, etc. The aim of social science critique is, then, to remodel technological processes and make them into processes of social transformation and emancipation. However laudable this goal, it is not at all clear how the transformation of ethnography into a literary practice in design will provide *constructive* criticism of design. That is, criticism which actively informs *the actual building* of new technology, in distinction to criticism of a moral and political order.

### **Exotic Tales from Home and Abroad**

The adoption of literary practice is complemented by an interest in the exotic, or rather, in the production of “stories” about exotic settings both at home and abroad. Bell [2, 3], for example, reports ethnographic studies in Europe and Asia:

*“From our research, it can be said that there are a number of ways in which it is possible to generalize about European life. There is a greater awareness of*

*environmental issues in Europe ... a stronger sense of the need to balance work and home life ... cooking, and eating ... are associated with strong rituals ... Public spaces and places seem to have different use patterns and are frequently treated as an extension of the home.” [2]*

*“ ... urban Asian homes are very infrequently free-standing dwellings ... There is often not a great deal of technology in Asian homes ... the home is frequently an important hub of family life ... Gendered divisions of labor and space exist ... new technologies are linked to communication and community formation – instant messaging is used to re-cement familial ties across a far-flung diaspora ... .. ” [3]*

Closer to home, where home means that the studies take place within the researchers’ own country of residence, we find that such settings as the American Mega-church have been accorded a similar treatment, e.g.,

*“ ... the first thing we noticed when entering sanctuaries were the large screens on both sides of a central stage ... During services screens were used extensively to accompany music, illustrate sermons, and share announcements and video. Words to hymns and Bible verse were frequently displayed over a background depicting religiously-inspired imagery. It was also common for the pastor to read selected Bible verses that would then be displayed on the screen. We observed parishioners following along and looking at screens to know what verse to turn to in their Bibles. The appearance of a new verse on the screen was followed by a flurry of paper turning.” [38]*

While ethnography has its roots in the study of exotic settings both abroad and at home, and while these sorts of study do illustrate the diversification of digital technologies in everyday life, it is imperative that ethnography provide more than *surface descriptions* of action and interaction. The danger is that adopting what might be called an ‘exotic tales methodology’ in design will result in descriptions that offer up little more than ‘scenic features’ of action and interaction for consideration, thus sensitizing designers to little more than the grossly observable features of a setting or culture [10].

Ethnography thus conducted might be said to engage design in a form of *tourism*, providing a level of description that may be described as “I went there and this is what I saw”. However, while attending to some of the constituent actions in a setting or settings, the danger is that this scenic form of cultural anthropology misses ‘what is done in the doing’ of situated action [26]. People are not, for example, simply “looking at screens” or engaged in “a flurry of paper turning” in the American Mega-church. They are doing being at prayer, and doing so congregationally in the company of others.

It would not be unreasonable to ask ‘is this what ethnography should be and what is needed of it as design moves into new contexts – i.e., tourism for the design

community?’ However, it is perhaps more important for designers to consider whether or not the order of description offered by scenic forms of ethnography is sufficient for the purposes of *design*? The thrust of the work introduced by Suchman into the design community was to ground studies and design in the locally produced and socially achieved orderliness of members’ activities [33], rather than in thin descriptions and gross generalizations about human action and interaction. This is how ethnomethodology understands and constructs the ethnographer’s role and we believe that it is critical to ethnography’s continued purchase in design.

New approaches and exotic accounts essentially beg the question of detail: where is the work of a setting, what does it consist of, and how is it organized by members in the course of its accomplishment? It is not possible to find in exotic accounts the mundane ways in which, for example, meal times are ritually organized in Europe, let alone within different countries in Europe; or how gendered divisions of labour and space are constructed day-by-day by household members in Asia, and how that is done within different communities; or how technologically mediated prayer is congregationally produced in American Mega-churches. In turn, if the level of naturally accountable detail upon which ethnography’s relationship to design stands is absent, the production of exotic accounts begs the question: Why? What does it seek to achieve?

### **Critical Reflection**

Those whose work we hold up as exemplars might argue that we have misunderstood the purpose of their studies: that they are not intended to inform design in the ways that ethnography has traditionally done [5]. Instead, they intend to inform design by providing accounts that *engender critical reflection amongst the parties to design*. This, after all, is the primary function of ethnography as a literary practice and rhetorical device [5, 6], and it is in this respect that ethnography is invoked by others to promote new agendas in design. Foremost amongst these is the effort to promote and foster the uptake of “new values” amongst designers [9] - the old values being those of productivity and efficiency. The suggestion is that by adopting new values, designers will develop critical faculties:

*“Critical reflection identifies unconscious assumptions in HCI that may result in negative impacts on our quality of life. Critical reflection itself can and should be a core principle of technology design for identifying blind spots and opening new design spaces. We argue that ongoing reflection by both users and designers is a crucial element of a socially responsible technology design practice.” [31]*

While research suggests that productivity and efficiency is a mundane concern for household members [35], what concerns us here is the assumption that designers (and users) are not already possessed of critical faculties. The risk is that designers and users are seen as ‘cultural dopes’,

unreflectively reproducing the values of a culture of capital production.<sup>3</sup> Those who urge the adoption of new values suggest that the situation may be remedied by importing values from the arts and social sciences. This might be achieved through design efforts, for example,

*“... to embody cultural critique in systems; i.e., systems may be designed, not to do what users want, but to introduce users to new, critically-informed ways of looking at the world around them.”* [8]

We do not dispute the need for critical reflection in design or any other technical practice as that notion is ordinarily understood [23], but then we would argue that designers and users are already possessed of that faculty. As Garfinkel [15] argued long ago, members - be they ‘designers’ or ‘users’ - are not in real life the cultural dopes represented in theoretical models of society and the value schemes they represent and reflect. We would also argue, as any member of the HCI community will recognize, that social responsibility has long been a core concern of designers and is a recurrent theme at CHI.

We could argue the pros and cons of unreflectively and uncritically importing the values of the arts and social sciences into systems design: values from the arts which set out to create “design provocateurs” [17] and from the social sciences, and anthropology in particular, to create “the intellectual wing of the indigenous peoples movement” [24] focusing especially on the socially, politically, economically and technically disenfranchised, and thus constructing the ethnographer as a *people’s champion* in design. However, we will confine our comments to the ways in which ethnography has been invoked to support the adoption of new values in design. Of particular issue is the way in which ethnography has been invoked in support of cultural probes [17] on the basis of its perceived reliance on a “critical interpretive frame” [9]. Our concern is not with cultural probes, but with the understanding of ethnography that has been invoked by ethnographic researchers to explain cultural probes. Of particular concern are the parallels drawn between cultural probes, ethnography, and participatory design, and the understanding of ethnography this conveys to the design community.

### **The Critical Interpretive Frame**

Parallels between ethnography and cultural probes have been drawn in the past. Gaver et al. [18], for example, draw an analogy between probes and ethnography in design and have the following to say about the approach:

---

<sup>3</sup> Garfinkel [15] uses the term ‘cultural dope’ to emphasize the way in which many social analysts strip people of their obvious ability to reason about and analyse *their* situations and to take action on the basis of *their* considered understandings, replacing people as we ordinarily understand them with what Alfred Schutz called “puppets”, animated by the tenets of generalized and abstract theory rather than by the practicalities of situated action.

*“Ethnography was introduced to HCI and CSCW largely by sociologists pursuing ethnomethodological studies of technology use ... Over time, however, ethnographic techniques have been [used] to service approaches other than ethnomethodology. This is of some concern to ethnomethodologists because the varying uses of ethnography as a technique can distract from, or muddle, appreciation of ethnomethodology as an approach.”*

We whole-heartedly agree, though a more important point from our perspective is that new approaches to ethnography “muddle” what ethnography is in design and what it does for design. Ironically, nowhere is the muddle more evident than in efforts to clarify how cultural probes work, most notably in the suggestion that *interpretation rather than facts* are key to ethnography, participatory design and cultural probes alike:

*“What is ... frequently missing from narrow accounts of ethnographic work within design contexts ... is the critical interpretive frame. Cultural probes are designed not to provide data about settings, but to spark design inspiration; similarly, ethnographic investigations are organized not to extract facts from settings but to stage encounters between cultures that may then be supporting of appropriate interpretive analysis. What cultural probes, ethnography, and participatory design share, fundamentally, is a recognition of the **essential role played by the interpreter**, which runs against common conceptions in HCI ... This loss points to a deeper and more disturbing trend in the amalgamation of research methods into an interdisciplinary context: a disengagement between methods and their underlying methodology.”* [9, our emphasis]

Boehner et al. concern in making these comments is to remind designers of the importance of the relationship between method and methodology or, to put it another way, of the dangers of separating method from the analytic mentality or disciplinary perspective that underpins its use. It is a concern we share and one that motivates the writing of this paper: to articulate the ‘disengagement’ of fieldwork from the distinct analytic orientation on situated action and its methodical organization which has largely underpinned the utility of ethnography in design to date. Nonetheless, we are concerned by the characterization of ethnography offered by Boehner et al. by way of explaining how cultural probes work, as it is one that offers a canonical view of ethnography and in so doing inadvertently legitimizes new approaches to ethnography in design. It does so by placing emphasis on the role of the ethnographer as cultural facilitator and interpreter, rather than fieldworker and analyst of the naturally occurring and naturally accountable character of situated action.

We disagree then with Boehner and others when they lump together cultural probes, participatory design and ethnography as united by a common concern with the interpreter [9]. Far from Participatory Design emphasizing the “essential role of the interpreter”, from its inception the

quest was one of how to *involve* the eventual users of a system in its design [19]. It is also in this respect that ethnographic studies in systems design emerged as a significant resource for design. Ethnographic studies of work have been employed to ‘bridge’ between users and designers [22], enabling the designer to understand what people do in a setting and how they organize their activities. The careful explication of work-practice achieves this by laying bare the methods that people themselves use to account for - i.e., to make sense of and recognize - action and interaction as the very mechanisms through which they accomplish it. In other words, ethnographic studies of work bridge between users and design by explicating the *interpretive framework of users* in methodical detail.

The critical interpretative frame is not, then, about staging cultural encounters to develop an appropriate interpretative framework. Rather, it is an empirical matter of uncovering through fieldwork the methods that *members employ* to account for, accomplish and organize action and interaction in the settings they inhabit. It is not a matter of rhetoric, literary practice, critical reflection, or cultural interpretation, but one of uncovering ‘social facts’ as the methodical accomplishment of the members of society [15]. The critical interpretive frame is that which provides for the naturally accountable accomplishment of situated action. Uncovering that frame has underpinned and propelled ethnography’s uptake in design and continues to provide for its utility for many designers. New approaches to and understandings of ethnography divorce the approach from it, subordinating the users’ interpretive framework to that of the professional interpreter. This draws into serious question ethnography’s long-term ability to inform design as it moves out of the workplace into new contexts.

## KEY PROBLEMS WITH NEW APPROACHES

Our observations regarding the potential transformation of ethnography within systems design are underpinned by three principle concerns: -

### 1. The Perceived Need for New Approaches

To suggest that ethnographic studies which focus upon the workplace are fine for understanding the world of work and informing the design of technologies for that domain, but that something else is required for other settings and other technologies, is to misunderstand them. Certainly, much of the focus of ethnographies aimed at the design community has been on the organization of activities in the workplace. This is because it was in the area of CSCW, with its emphasis upon cooperative work, that the relationship first blossomed. The phrases associated with these ethnographies - such as ‘work-practice studies’, ‘workplace studies’, ‘ethnomethodological studies of work’ - were never, however, epithets for a particular domain, requiring something new for other domains. Rather, they emphasized the distinctiveness of such ethnographic studies: that they uncovered the *interactional work* of a setting and methods whereby its members organize action and interaction.

Ethnomethodological ethnographies have over the years showed that organized activities, or social facts in ethnomethodology’s language, are at all times accomplished. It takes ‘work’ on the part of human beings to do them, and in the course of that ‘work’ participants (not ethnographers or other social or cultural analysts and interpreters) display the socially organized character of a setting. Suchman’s contribution to design was to articulate the salience of the interactional work of a setting and its incarnate social organization to the development of computing systems. If an understanding of the social and cultural world is still important to the design of technology, then *that way of apprehending* the social and cultural world is just as appropriate for understanding the accomplishment of action in the home as related to leisure and play, for example, as it is to understanding action done in the workplace as related to efficiency and productivity.<sup>4</sup>

### 2. The Alignment of Design with Members’ Concerns

There is a problematic relationship between what new ethnographic practices say of what people do, and what people do. This is because the accounts or descriptions they offer are grounded in the methodological and conceptual apparatus of social science enquiry rather than in the methodological and conceptual apparatus of those they purportedly study. The warrant for what stands as a socially or culturally meaningful account of action thus resides in the particular social theories and concepts the ethnographer is using, not in the ways in which a setting’s members display what is socially and culturally meaningful in their practical orientations to particular matters.

For example, for the observation that the home is zoned according to gender to be warranted [3, 6] - rather than merely asserted - it would be necessary to show how, in their actions and interactions or ‘work’ together, people constitute or produce that on particular occasions, and what the actual methods or work-practices for constituting gendered space are. The warrant, then, needs to be rooted in what people do and the methodical ways in which they do it, not in broad generalization or theoretical abstraction, otherwise there is the danger that what the analyst has to say will go over and above members’ concerns. This is

---

<sup>4</sup> As design moves into new contexts it is worth noting, as Weiser did in developing the idea of ubiquitous computing,

“ ... that people live through their practices and tacit knowledge so that the most powerful things are those that are effectively invisible in use.” [37]

This concern with the taken for granted and mundane underpinned a long-term relationship between designers at Xerox PARC and ethnomethodologically-oriented ethnography. Its primary contribution has been to reveal that it is not the setting of action that is the important element in design, but uncovering what people *do* in the setting and how *they* organize what they do. As ubiquitous computing moves out of the research lab, design may continue to benefit from ethnographic studies that address the interactional work of novel design settings.

important if we wish to design technology that supports members' concerns as opposed to what observers might, due to their disciplinary and theoretical interests, portray those concerns to be.

The issue at stake, then, is one concerning the alignment of design trajectories with members' (users') concerns: with what they do in a setting, with how they organize their affairs, with what they view as essential, and what is open to change. However, new approaches to ethnography are poorly aligned with members' concerns. They "cannot help" but be so as they are rooted in literary practice, rather than in the *naturally accountable* character of situated action. It is for this reason that new approaches, while alluring, fail to provide sufficiently detailed social analyses to ground design in what people do. Indeed, the values that underpin new approaches may actively discourage interest in members' concerns and compel us "not to do what users want". This raises real issues regarding the alignment of new approaches with members' concerns and, in turn, their alignment with design trajectories that seek to move computing out of the workplace and into new contexts.

### 3. The Contribution of Ethnography to Design

It might be argued that new approaches are not intended to support traditional design trajectories, that we are being conservative, and would shackle systems development to the status quo. Those who whose work we critique might argue that design should be about changing the world and research about showing that new opportunities exist. One might point to technologies that have changed the way people do things by way of example, such as the internet, email, mobile phones, etc. Our aim is not to critique adventurous research and creativity in design, however, or the turn to culture in design (in contrast to ethnography) and the articulation of radically new possibilities. It is to caution, as Sacks remarked [29], that however different new technologies may be, what people *do through them may not*. New technology may seem dazzling because people can now do the most familiar things in places they could not before, but if the technology does not support familiar activities its actual use can become problematic.

This hits upon the mainstay of our concerns with new approaches: how to take a way of working in one discipline and make it turn for another. In this respect, the third issue we have with new approaches to ethnography is that the wholesale movement towards design critique, whether of design concepts or processes or both, is a *retrograde* step if it is done at the cost of empirical studies of work. A shift of this form would set the relationship between design and the social sciences backwards significantly. Through studies of work and work-practice, a relationship has been fostered over the last twenty-five years in which understandings of situated action are developed as part of the design of a system by designers themselves, or are developed by ethnographers and utilized by designers. In other words, ethnographers and designers have explored the *practical*

*implications for design* of the incarnate social organization of human action and how it may be supported, automated, or enhanced by a system.

Prior to this, ethnographic studies sought to make visible to designers - through critiques of design - that cultural and social organizational features *per se* should be attended to and incorporated in the design process. This was an important step. It sensitized designers to the fact that incorporating human factors was not just about engineering ergonomic or cognitive solutions. Through an historical and ongoing interdisciplinary effort, the relationship between ethnography and design has moved on from one of general exhortation to one of practical engagement. However, new approaches raise the spectre of ethnography taking a step back to general exhortation. They tell designers that they should suspend their cultural biases, adopt new values, engage in critical reflection, and so on. Instead of detailed empirical accounts of particular organized activities in particular settings relevant to systems design, new approaches offer the designer a return to a world of moral and political invective. Once again, a key question arises for designers to consider, namely, will that do the job? Can you *build* computer systems on that basis?

### RETURN TO STUDIES OF 'WORK'?

As design diversifies, we believe it important for the design community to consider the role of ethnography *within design*, in contrast to its role to within social science. The social sciences do not build systems; they have no practical interest in doing so; and their practices are not designed for the task. What they are designed for is writing 'culturally approved texts' or texts which conform to the norms, values and expectations of social science. We do not use the term pejoratively; rather we are rendering the kind of work we caution against through an ethnomethodological terminology which contrasts theoretically generated statements about the social and cultural world with empirically grounded observations. Our argument is that the substitution of detailed empirical studies of situated action for culturally approved texts runs the serious risk of undermining the contribution and value of ethnography in systems design in the long term.

Consequently, we think it timely that designers recognize what these new approaches deliver and seek to achieve, along with their limitations. In other words, it is time that designers ask themselves, *what are ethnographic studies for?* For the reasons cited above, it is no good turning to the social sciences for an answer. Rather, and in the manner of Plowman et al. [25], who asked the same question in a different design context, designers need to consider the relationship they have established between ethnography and what is required of it in contemporary times. If the answer is conceptual rhetoric, literary practice, exotic tales, critical reflection, and staged cultural encounters, then new approaches to and understandings of ethnography may well suffice.

However, if the answer, to borrow from Plowman et al., is to convey the importance of the social to design; to reveal interesting and relevant social phenomena as displayed by members and suffuse design thinking with them; to make visible the real world, real time sociality of a setting; to provide detailed analyses of action and interaction on which to ground design recommendations; to evaluate implemented systems and address the ‘discrepancy problem’ or mismatch between system and use where it arises; *if* it is these things that designers require as they move into new contexts of design *then* there is a need for ethnography to temper its current concern with the production of culturally approved texts and return to the socially organized world of ‘work’.

The fundamental premise of that program is that the ongoing accomplishment of social facts is observable and reportable. That is to say that the social organization of situated action, wherever it occurs, be it in the workplace, the home, on the streets, in museums, etc., is *naturally accountable* to the members who accomplish it and to the ethnographer as well. What this means is that design need not rely on the production of culturally approved texts to understand what people do and how they organize action and interaction as it moves into new contexts. Instead design might employ ethnography as it has in the past to look directly, in a theoretically unmediated fashion, at what goes on in social settings and develop concrete insights of relevance to design by carefully explicating what people do and say there. Design might attend then to the ‘work’ of the setting and the interactional methods or practices members employ to order that work. To reiterate, we are not necessarily talking about a job of work when we invoke the ‘work of a setting’, but rather, the accomplishment of *whatever* is done in the setting - the situated actions and interactions that inhabit and animate the setting.

By carefully explicating the naturally accountable character of situated action, ethnography may continue to constructively engage in conceptual and critically reflective discussions with design in empirical details that *do* convey the sociality of work, reveal relevant social phenomena, make visible the real world, real time sociality of the setting, and so on [e.g., 1, 13, 34]. The return to studies of work and the explication of work-practice is a return to the practical engagement of ethnography *with* design. Unlike its literary alternative, the studies of work program does not eschew the need to bring ethnographic studies to bear on the invention of the new and seek to engage designers in a critical dialogue instead. It does not seek to replace empirical studies of situated action with rhetoric, strange stories, and exotic tales, and then leave designers to critically reflect upon what has been said in order to figure out the kinds of things they should build as their work moves into new contexts. Instead, and as it has done in the workplace before, it provides concrete insights into the lived work of novel design settings, which may be drawn upon to ground design in what people actually *do*.

## CONCLUSION

New turns are being taken in ethnography and systems design. They are motivated by the movement of the computer out of the workplace and the emergence of new design agendas, particularly ubiquitous computing. They also reflect a common misunderstanding of ethnographic studies in systems design: that they have previously focused on work and that new approaches are therefore required. This derives from ethnography’s use in the development of workplace systems. Ethnography’s focus on work is much, much broader however. It derives from the ethnomethodological orientation to situated action - which has driven ethnography’s adoption and use in design - and to action and interaction as ‘work’. ‘Work’ in ethnomethodologically-informed ethnography refers not only to what happens in the workplace then, but to action and interaction everywhere, *wherever* it occurs.

This means that we cannot assume that new approaches are required by default as design moves into new contexts. Instead, those that have served us well in the past may well do so in the future. Despite this, new approaches to ethnography, imported unreflectively from the social sciences, are being advocated as suitable candidates for use in new contexts of design. Our purpose in this paper has been to review a range of new ethnographic practices being offered to the design community and to address the nature of the analytic contributions they make. Fundamentally, they offer a *different order* of ethnographic study, providing designers with cultural interpretations of action and critiques of the design process in place of empirical studies of what people do and how what they do is accountably organized by them *in situ*. This leads us to caution designers to carefully consider the contributions different approaches make to design. They are not all the same and widespread adoption of new approaches may undermine the practical relationship ethnography has developed with design as the computer moves into new contexts.

This latter contention will not turn on argument but on matters of practical concern for designers. However many papers are generated arguing the pros and cons of different approaches to ethnography, and however compelling their arguments may be, in the end it is the extent to which design *can* employ ethnography and ethnographers in the solution to its practical problems that will be the decisive factor. In writing this paper we have sought to make systems designers aware of the potentially problematic nature of analytic practices that transform ethnography into what, essentially, is a literary enterprise. While some ethnographers will say that ‘writing culture’ is what ethnography is all about, the issue revolves around *what* is described and *how* it is done [27]. We hope to have saved designers some time and effort in discovering for themselves that new approaches have their limitations, and that certain risks are attached to them, especially where understanding the real world, real time nature of action in new contexts is at stake.

## REFERENCES

1. Benford, S. *et al.* (2006) "The frame of the game", *Proc. CHI '06*, pp. 427-436, ACM.
2. Bell, G. (2001) "Looking across the Atlantic: using ethnographic methods to make sense of Europe", *Intel Technology Journal Q3*.
3. Bell, G. (2003) "Other homes", *Proc. CHI '03* (Workshop 14, Session 3), ACM.
4. Bell, G. *et al.* (2003) "Designing culturally situated technologies for the home", *Proc. CHI '03*, pp. 1062-1063, ACM.
5. Bell, G., Blythe, M. and Sengers, P. (2005) "Making by making strange", *ACM ToCHI*, vol. 12 (2), pp. 149-173.
6. Bell, G. and Dourish, P. (2006) "Back to the shed", *Personal and Ubiquitous Computing*, vol. 11 (5), pp. 373-381.
7. Blythe, M. (2007) "The digital music box", *Proc. CHI '07*, pp. 2297-2302, ACM.
8. Boehner, K. *et al.* (2005) "Critical technical practice as a methodology for values in design", *Proc. CHI '05* (Workshop 9), ACM.
9. Boehner, K., Vertesi, J., Sengers, P. and Dourish, P. (2007) "How HCI interprets probes", *Proc. CHI '07*, pp. 1077-1086, ACM.
10. Button, G. (2000) "The ethnographic tradition and design", *Design Studies*, vol. 21, 319-332.
11. Button, G. and Harper, R. (1996) "The relevance of 'work-practice' for design", *CSCW Journal*, vol. 4 (4), pp. 263-280.
12. Crabtree, A. *et al.* (2000) "Ethnomethodologically-informed ethnography in information systems design", *JASIS*, vol. 51 (7), pp. 666-682.
13. Crabtree, A. *et al.* (2004) "Orchestrating a mixed reality game 'on the ground'", *Proc. CHI '04*, pp. 391-398, ACM.
14. Crabtree, A., *et al.* (2005) "Moving with the times", *CSCW Journal*, vol. 14 (3), pp. 217-251.
15. Garfinkel, H. (1967) *Studies in Ethnomethodology*, Prentice-Hall.
16. Garfinkel, H. (ed.) (1986) *Ethnomethodological Studies of Work*, Routledge & Kegan Paul.
17. Gaver, W., Dunne, T. and Pacenti, E. (1999) "Cultural probes", *ACM Interactions*, vol. 6 (1), pp. 21-29.
18. Gaver, W. *et al.* (2004) "Cultural probes and the value of uncertainty", *Interactions*, vol. 11 (5), pp. 53-56.
19. Greenbaum, J. and Kyng, M. (eds.) (1991) *Design at Work: Cooperative Design of Computer Systems*, Lawrence Erlbaum Associates.
20. Greenberg, S. and Buxton, B. (2008) "Usability evaluation considered harmful", *Proc. CHI '08*, pp. 111-120, ACM.
21. Hughes, J., Randall, D. and Shapiro, D. (1992) "Faltering from ethnography to design", *Proc. CSCW '92*, pp. 115-122, ACM.
22. Hughes, J., Randall, D. and Shapiro, D. (1993) "From ethnographic record to system design", *CSCW Journal*, vol. 1 (3), pp. 123-141.
23. Lynch, M. (2000) "Against reflexivity as an academic virtue and source of privileged knowledge", *Theory, Culture and Society*, vol. 17 (3), pp. 26-54.
24. Plaice, E. (2003) "Comment on Adam Kuper's 'The Return of the Native'", *Current Anthropology*, vol. 44 (3), pp. 396-397.
25. Plowman, L., Rogers, Y. and Ramage, M. (1995) "What are workplace studies for?", *Proc. CSCW '95*, pp. 309-324, Kluwer.
26. Ryle, G. (1971) *The Thinking of Thoughts*, University Lectures No. 18, University of Saskatchewan.
27. Sacks, H. (1963) "Sociological description", *Berkeley Journal of Sociology*, vol. 8, pp. 1-16.
28. Sacks, H. (1984) "Notes on methodology", *Structures of Social Action* (eds. Maxwell, J. and Heritage, J.), pp. 21-27, Cambridge University Press.
29. Sacks, H. (1992) "A single instance of a phone-call opening", *Lectures on Conversation*, pp. 542-553, Blackwell.
30. Sengers, P., Kaye, J., Boehner, K., Fairbank, J., Gay, G., Medynskiy, Y. and Wyche, S. (2004) "Culturally embedded computing", *IEEE Pervasive Computing*, January-March, pp. 14-21.
31. Sengers, P., Boehner, K., David, S. and Kaye, J. (2005) "Reflective design", *Proc. 4<sup>th</sup> Decennial Conference on Critical Computing*, pp. 49-58, Aarhus, ACM.
32. Suchman, L. (1983) "Office procedures as practical action", *ACM Transactions on Office Information Systems*, vol. 1 (4), pp. 320-328.
33. Suchman, L. (1987) *Plans and Situated Actions*, Cambridge University Press.
34. Tolmie, P., Crabtree, A., Greenhalgh, C., Rodden, T. and Benford, S. (2007) "Making the home network at home", *Proc. ECSCW '07*, pp. 331-350, Springer.
35. Venkatesh, A. (1985) "A conceptualisation of household-technology interaction", *Advances in Consumer Research*, vol. 12, pp. 189-194.
36. Weiser, M. (1991) "The computer for the 21<sup>st</sup> Century", *Scientific American*, vol. 265 (3), pp. 94-104.
37. Weiser, M. (1996) *Ubiquitous Computing*, <http://sandbox.xerox.com/ubicomp/>
38. Wyche, S., Medynskiy, Y. and Grinter, R. (2007) "Exploring the use of large displays in American megachurches", *Proc. CHI '07*, pp. 2771-2776, ACM.

