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Make Room for Ethnography in Design!

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ABSTRACT
Cultural analysis, especially in its ethnographic[1] form/variant, has been applied for some years now within the Computer Supported Cooperative Work (CSCW), the Human Computer Interaction (HCI), and the Participatory Design (PD) communities. These communities attract academics and practitioners, who are concerned about the use-quality of computer based systems. Never the less, Bader and Nyce argue that cultural analysis "will probably not play a significant role in the development process at the least as it is presently defined." We argue that since the design and use of technology is socially constructed, cultural analysis will

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[1] Bader and Nyce use the terms 'cultural analysis' and 'ethnography'. In our argumentation we use only the term 'ethnography' with which we are most familiar.

only play a role if its proponents strive to make room for it. The argument builds on our own experiences, being computer scientists who have integrated an ethnographic style of working with the design of computer based systems, and on the experiences of colleagues within the above mentioned communities. Some of us have gained our experience from projects in private and public organizations, and those of us also working in academia have included ethnographic techniques in our teaching. Such initiatives represent alternatives neglected by Bader and Nyce, whose assumptions seem to be that the role of cultural analysis is limited to assessments of a development process, to enlarging our understanding of the social nature of development and use, or to providing feedback to developers. We argue that ethnography can play a more proactive role within design.

INTRODUCTION

Bader and Nyce claim, in *Theory and Practice in the Development Community: Is There Room for Cultural Analysis?*, that cultural analysis "will not play a role in systems development if by this we mean it will become a routine part of any actual design process", and "it seems unlikely that cultural analysis will ever become part of the tool kit developers and programmers habitually draw upon". Based on their experiences, Bader and Nyce, in short, present their claim's and argument's as follows:

- Ethnographers "share a concern with a socially constructed world and negotiated meaning" and seek ends "to do with the understanding, translation and explication of legitimately different social worlds".
- Ethnographers "knowledge about the social construction of reality is not the kind of knowledge the development community values, can do much with or seems to be much interested in".
- To ethnographers, "the stance developers take towards knowledge, society and their informants are at best naive".
- Designers "use informants or data from informants to confirm their own understanding of the situation or practice in question". They "reduce ethnography to evidence that helps validate their own understandings of user practice", and they assume "that their experiences and the users experiences are pretty much the same". Furthermore, designers believe that "social behavior can be predicted and understood" and that "knowledge is rule bound and (ultimately) so is social behavior".

- Designers take little interest in cultural analysis "because of a basic contradiction between knowledge as they understand it and the kind of knowledge that cultural analysis produces". In order to change this, designers "have to acknowledge the failure of positivism and the lack of an unifying theory of meaning".

We agree with the general picture drawn by Bader and Nyce, when they argue that the kind of knowledge and insight cultural analysis produces does not fit the values and interests of most of today's development communities. But then something has to be done about it. We do not agree when they also claim that development communities cannot do much with knowledge about the social construction of reality - be it knowledge about their own work or about the users' work.

It seems to us that Bader and Nyce report on (and generalize from) experiences from working with designers who have not been affected by later trends within the research communities. Many design practitioners today have a background rooted in technical rationality. Changing their practices might be too ambitious of a goal. But that's not the same as claiming that ethnography does not have a role in design. We have experienced that there *is* room for ethnography in design, and we will elaborate on this in our commentary.

Design is not about what's "right" or "wrong" but about what works. Designers can not be expected to care about ethnographies - as such. The point for the design practitioner is how ethnography has relevance in relation to a design of a product, a design context/situation, or a design process.

Initiatives within CSCW, HCI, and PD show that designers change their work practices in attempts to take ethnography serious. But ethnographers may also have to accept 'unfamiliar' conditions, if they want to have a direct impact on design projects.

> [T]he [sociological] discipline may not in fact stand up very well to the test of having the perspectives and analyses that it proposes incorporated into designs for support systems in the real world, since they were hardly developed in the first place with such an end in view. That is, it may have some difficulty in delivering on the territory it has staked out. [...] [I]f this confrontation is to produce a change in paradigm for computer science, then why should sociology be immune? (Hughes et al., 1991, p. 321)

We greatly acknowledge detailed ethnographies as well as critical case-studies. But in order for ethnography to have a direct impact on a design project, it might not be sufficient to produce critical 'after the fact' analyses. In addition, we believe that a more interventionist approach is needed, in which the role of ethnographers and the role of designers are more blurred than in the examples given by Bader and Nyce[2]. This may be quite frustrating to some ethnographers, as this invites them to participate in changing a phenomenon instead of 'only' describing it. Bader and Nyce view the contradiction between ethnography and design as being between a 'correct' paradigm for interpretation and old fashioned positivism. In contrast, we see the contradiction as being between a descriptive and an interventionist approach.

While it is certainly legitimate to draw upon one's own experience, the strong statements made by Bader and Nyce require a comparative analysis of the approaches developed and the results obtained by others. In the following, we briefly consider some of the key arguments for using ethnography within design. Then we explain how we have changed our practice in an attempt to take ethnography seriously. On this basis, we consider in more detail some of the assumptions, claims, arguments, and conclusions made by Bader and Nyce. Finally, we conclude by highlighting initiatives that try to make room for ethnography in design.

WHY IS ETHNOGRAPHY RELEVANT WITHIN DESIGN?

The relevance of ethnography within design has been discussed for at least 15 years. Suchman (1983) described how problem solving and judgmental practices are embedded in the accomplishment of procedural tasks. Descriptions of work, in terms of procedures, reflect a somewhat "ideal" work flow. This is not how the work is actually carried out. "Standard procedures are formulated in the interest of what things should come to, and not necessarily how they should arrive there" (ibid., p. 326), and therefore, "the procedural structure of organizational activities is the *product* of the orderly work of the office, rather than the reflection of some enduring structure that stands behind that work" (ibid., p. 321). On this basis, Suchman suggests two alternative design-views:

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[2] Schmidt and Bannon (1992, p. 11) voice a more radical standpoint: "Enter, and you must change" and "If CSCW is to be taken seriously, the basic approach of CSCW research should not be descriptive but constructive".

1) The 'traditional' view, where the designer treats the work as rules and procedures executed in step by step instructions. Here the interpretative, problem-solving work is ignored, and the systems are limited to *quantitative* improvements and higher standardization of routine data processing.

2) "Alternatively, the designer can recognize the judgement required in the accomplishment of actions according to procedure", intending the design to "*qualitatively* enhance worker's methods of research and analysis. The goal of such a system is to serve as a tool for the work of accomplishing procedures" (ibid., p. 327).

This view was further elaborated in Suchman's book *Plans and Situated Actions* from 1987, a book which has been and still is often referred to. A main point derived from Suchman (1987), is that we act in the situation and do not follow plans and rules in any narrow sense. Plans should be considered as a resource rather as a procedure which we follow 'in situ'.

Bentley et al. (1993) argue that computerization has concentrated on corporate information systems, automating existing manual systems and personal computers supporting individual work, all of which involve relatively simple applications with a large economic payoff. Because of a lower productivity improvement, the next generation of information systems must, if they are to be accepted, have increased usability, in terms of fitting into existing work practices.

> Current application systems have been successful in spite of their usability problems because they offered so much. An inevitable consequence of the law of diminishing returns is that the next generation of application systems will offer a lower productivity improvement; users will be unwilling to change their working practices to adapt to these systems because the advantages from that change will not be obvious. Hence systems have to be more usable in order to be accepted.
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> An essential characteristic of usability is conformance to existing working practice. Users will not change the way they work to adapt to a computer system if the benefits are not significant and obvious. We must therefore have a clear understanding of the workplace and the way in which humans interact with each other in that workplace. We must also understand how they actually use interactive systems and the ways in which they manage and process information (Bentley et al., 1993, p. 6).

Gougen and Linde (1993, p.162) argue that "it is necessary to consider the effect of a new system on social structures, as suggested by the following questions: will the new system reproduce the existing social order? Or will the order be altered in significant ways? Do the existing social structures suggest requirements that would negate the improvements expected from the new system?"

Blomberg et al. (1993) argue that designers need (thorough) insight in current work practices, in order to participate in creating the context for discussions in a joint exploration of the relation between work and technology and in envisioning how new technologies could support (and thus change) current work practices.

These insights about human work, relevant tools to support it, and the kind of knowledge needed to develop it, are examples of ethnographers' contributions to design. These contributions are our starting point for presenting how we perceive the role of ethnography in *participatory* design.

THE ROLE OF ETHNOGRAPHY IN PARTICIPATORY DESIGN

Since 1990 we have been experimenting with various techniques within participatory design, including ethnographically inspired approaches to design. Participatory design aims at establishing a meaningful cooperation between designers and users (CACM, 1993; Greenbaum and Kyng, 1991; Schuler and Namioka, 1993). Thus we see the main challenge within participatory design as the establishment of a mutual learning process between designers (who have their main competence in computer science and information technology) and users (who have thorough experience with current work practices). We have conducted 10 design projects with private and public companies both in Denmark and in the United States (Bødker and Pedersen, 1991; Kensing and Winograd, 1991; Bødker and Kensing, 1994; Simonsen, 1994; Kensing et al., 1997; Simonsen and Kensing, 1997). During our design projects, we have developed a method for participatory design, where ethnographic techniques are integrated into the overall design activities (Kensing et al., 1996). We use the following techniques for data collection: Unobtrusive and participant observation, (in-situ) interviews, thinking aloud experiments, and audio or video recordings. We use content logging, rough transcripts, and various kinds of drawings as a basis for the analysis.

As designers, we need to establish and maintain credibility in our engagement with users in order to initiate a mutual learning process. It is far

from enough to meet users with a 'pure' technical competence. A professional discussion with users requires a thorough insight into their current work practices. This is an essential part of participatory design (Kensing and Munk-Madsen, 1993). Our approach to this has been to change our work practices by adopting ethnographic principles and techniques.

We focus especially on the role and style of ethnography presented by e.g. Blomberg et al. (1993). Since Bader and Nyce do not spell out their approach, we find it helpful to cite the four main principles that, according to Blomberg et al. (1993, pp. 125-126), guide much ethnographic work:

- First hand encounters: A commitment to study the activities of people in their everyday settings.
- Holism: A belief that particular behaviours can only be understood in the everyday context in which they occur.
- Descriptive rather than prescriptive: Describe how people actually behave, not how they ought to behave.
- Members' point-of-view: Describe behaviour in terms relevant and meaningful to study participants.

According to our experiences, these principles entail at least two very specific recommendations to designers:

- Work is a socially organized activity, where the actual behavior differs from how it is described by those who do it. This is referred to as the 'say-do' problem (Gougen and Linde, 1993) or the difference between 'ideal' and 'manifest' behavior (Blomberg et al., 1993). This implies that detailed studies of work must include observations and cannot rely solely on for instance interviews. Gougen and Linde (1993, p. 155) state it rather candidly: "Don't ask people to describe activities that they do not normally describe, or if you do, then don't believe the answers".
- Another major point is to deliberately avoid using any type of pre-defined conceptual framework. "The idea is to find the categories that members themselves use to order their social world, rather than impose an analyst's order on it" (Gougen and Linde, 1993, p. 159). Thus, the concepts and categories used to describe observations should be based on the concepts and categories the people studied use themselves (Blomberg

et al., 1993). This goes against using predefined concepts and models, which is common in most computer science approaches to design.

Blomberg et al. (1993, pp. 142-143) also present three different ways in which to link ethnography and design:

- Ethnographers do the analysis which is presented to the designers, who then have the task of identifying relevant aspects for their project.
- A team of ethnographers and designers work together, which helps focus the study and ease the designers' interpretations.
- A team of ethnographers, designers, and users together conduct an analysis and codesign an artifact.

A dominating approach to linking ethnography to design, has been that ethnographers conduct ethnographic studies and inform designers of their findings (Plowman et al., 1995). Recently others have found opportunities for a more direct cooperation between ethnographers and computer scientists (Blomberg et al., 1996; Mogensen and Shapiro, 1998), Our approach represents yet another possibility. We have, as computer scientists and thus as lay persons, integrated ethnographic techniques in our design practice. Thus from our experiences, we want to add a fourth possibility in which to combine ethnography and design:

- A team of designers, who have integrated an ethnographic style into their design approach, work in a team with users. Together they conduct an analysis and codesign an artifact.

We mainly refer to the third and the fourth alternative when we argue how to make room for ethnography, because they represent the context in which we have gained our experience.

Before commenting om Bader and Nyce's article in more detail, let us briefly clarify the development context that we relate to. Grudin (1991) makes an important distinction between three development contexts:

- In-house and custom development: Users and developers are identified from the start.
- Competitively bid/contract development: Only users are identified from the start.
- Product development: Only developers are identified from the start.

Our experiences have to do with the first and the second development contexts, i.e. design for a specific organizational context.

For a discussion of why ethnographic approaches are relevant within a product development context, we refer to Brown and Duguid (1994) and Winograd (1996). Wall and Mosher (1994) and Winograd (1996) give examples of how to integrate ethnographic approaches and of the effects of doing so in various projects.

We will now in the following direct our focus on the assumptions, conclusions, and (intentionally) provocative statements made by Bader and Nyce.

THE PRODUCT OF DESIGN

Bader and Nyce implicitly take for granted that the product of a design effort is hardware or software. When designing for a specific organizational context, we have found that this scope is too narrow. Instead, we argue for the codesign of computer artifacts, work organization, and users' skills (Kensing et al., 1996). This opens up a design space that calls for the development of a proper understanding of current work practices in the organization in question, and we have found that ethnographic techniques are a helpful supplement to the designers repertoire for action. They help designers in understanding the rationale behind current work practices. And ethnographic techniques are effective in finding the breakdowns or weak points, that users experience with current technologies and work organization. Ethnographic techniques have proven useful for the development of a sound basis for the design of artifacts that fit the desired and redesigned work practices, and for proposing the areas within which users need new skills in order to apply the new artifacts in the new work organization (Blomberg et al., 1996; Heath and Luff, 1996; Kensing et al., 1997; Simonsen and Kensing, 1997; Mogensen and Shapiro, 1998).

DEVELOPERS REDUCE ETHNOGRAPHY TO FIELD WORK

Bader and Nyce claim that developers reduce ethnography to data collection techniques. Some might indeed do so, and in the case that they do, their designs will reflect solely the knowledge they have derived through interviews and observations, and through discussing this knowledge with users and fellow designers. Some designers do not go through the painstaking experience of transcriptions and analysis. Others find ways for quick and dirty ethnography (Hughes et al., 1994; Kensing, 1998). Yet

others base their designs on an in-depth analysis of collected materials (see e.g. Blomberg et al., 1996). In any of the above mentioned cases three points have to be taken into consideration.

First, how much time are you able to spend on the project and how do you divide the time between analysis and design? This is basically a matter of what the customer is willing to pay for. We see no other way than to demonstrate gradually - from project to project - the effects of integrating ethnographic techniques into a design approach and then compare with the results of other projects that spend little time on understanding the use context[3]. From our experience, we have seen that users and managers are beginning to acknowledge the effects of integrating ethnographic techniques into design approaches. They are becoming aware of the flaws of traditional approaches, with which they have had experiences in the past: The traditional approaches might lead to technically sound systems, but they also often entail poor use quality.

Second, when designers allow themselves to experience users working first hand - even with few written interpretations made - they are more likely to elicit their own and various 'tribes' of users' assumptions behind aspects of the current work practices and design ideas. Thus, they are in a better position to account for and question these design ideas and assumptions (see e.g. Bødker and Kensing, 1994). The insights and understandings are embodied in the experience of the designers, as pointed out by Blomberg et al., (1993, p. 143).

Third, it is only to be expected that as one discipline starts to use techniques developed in another discipline, both the former discipline and the techniques will change. We agree that changes in the design and use of computer artifacts are badly needed. But the basis for an evaluation of the ways in which the techniques are used should not be based on the standards of the discipline from which the techniques are imported, but should rather be based upon the effects the techniques have on the receiving discipline.

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[3] Our design project (Simonsen and Kensing, 1997) which Bader and Nyce refer to was in fact one example (out of very few examples) that prove specific consequences on a design based upon an analysis from using ethnographic techniques. Arguing that this was ethnography in a 'discount-version' made by lay persons only strengthens the relevance of using ethnography in design.

DESIGNERS LIKE NOTATIONS, PROCEDURES, AND RULES

Yes it is true, designers cannot do without them. But the point is not to ask designers to stay away from notations, procedures and rules. The point is for designers to be aware of on which basis such abstractions have been developed, and aware of when to use them. In Kensing and Munk-Madsen (1993), we argue that designers need concrete experience of users' context (which is where ethnographic field methods are helpful), in order to develop relevant abstractions (this is where the ethnographic analysis is helpful[4]). We further argue that it is by iterating between abstractions and concrete experience, that designers and users are able to develop the necessary knowledge needed for design.

In communication with users, we tend to stay away from formalisms (Kensing et al., 1996). Ethnographic techniques aid in tuning in to the vocabulary of the users. This in turn makes it easier to translate technically oriented descriptions into accounts in everyday language. We have found such accounts to be very helpful in our oral and written communication with users. Notations, procedures and rules are helpful among designers and when they make programming specifications. For descriptions oriented towards the computer, they are inevitable. However, when notations, procedures and rules represent current work practices, they need to be supplemented with drawings and descriptions closer to everyday language. Such descriptions should deal with the various ways in which users actually perform their work. Likewise, the same is applicable for abstract descriptions of envisioned work practices. This may lead users to agree to follow certain procedures, or managers to insist upon certain standards. At the same time, it may also lead designers (and managers) to acknowledge diversities and to tailor systems for more relaxed boundaries between technologies and situations of use (Trigg and Bødker, 1994).

A crucial question in design is where to draw the line between those parts of users' work that are candidates for automization, and those parts which are better taken care of by users with or without computer support. The challenge is to design applications and work practices around them, that respect that work is constituted by (re-)interpretating and negotiating meaning. This (re-)interpretation and negotiation is part of what an analysis, that is guided by ethnographic principles and techniques, strives to yield. So

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[4] See e.g. Jordan and Henderson (1994) for ways to conduct an in-depth analysis, or Kensing (1998) for a quick and dirty version.

the point is not, as Bader and Nyce put it, whether or not developers could write a better code, if only they could be able to produce enough knowledge in order to identify the rules of behaviour. Rather the point is if and how designers and ethnographers make use of the understandings and insights produced. We advocate that the understanding and insights produced should be used to facilitate a discussion with users and managers. This discussion should focus on which work areas they are willing to (and which they are not willing to) have governed by rules and procedures[5]. The point is also if and how the understandings and insights are used to question specific design ideas and to frame programming and overall design activities.

According to our experience, users (including management) are most often very well aware that their work practices are not rule-bound and that (in agreement with Suchman (1983)) technologies should be designed as a supportive tool rather than as an attempt to automate rules and procedures.

HAS HISTORY COME TO AN END?

Bader and Nyce have experienced that users play the role as 'content experts'. They have also experienced that these content experts are annoyed by being required to question what they as members of a culture take for granted and do not routinely think about. We have experienced the direct opposite of this. In our experience, context experts (including both users and management) usually are very satisfied with being confronted with what they often take for granted. As a matter of fact, that has often been perceived as a major result from a design project (see e.g. Bødker and Kensing, 1994; Kensing et al., 1997; Simonsen and Kensing, 1997).

Bader and Nyce present a study of the ways in which a group of content experts (who in this case were teachers) took part in the development and use of a hyper media system for high school students. They conclude that the teachers found cultural analysis less than useful. Despite the fact that Bader and Nyce presented their findings to them, the teachers apparently missed an opportunity to question their own assumptions about pedagogy and preferable learning behaviours among students. We are told that the introduction of the system led to confrontations between the pedagogical ideas of the teachers and the hierarchy and the authority relations they

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[5] This is not the place to go into the political debate about how users and managers may have conflicting goals and how designers may deal with this. For an example see e.g. Simonsen and Kensing (1997)

sometimes have to enact. The description of the analysis provided by Bader and Nyce is limited to noting that the teachers were seduced by the appeal of the technology. Although there is (and certainly has been) a numerous amount of low quality educational software around, we also see applications that allow students to experience and learn in new ways[6]. It is only to be expected that as teachers and students are exposed to new technologies, they will learn to adapt to some of them, thus by changing their practice, and they will reject others. Eventually this will lead designers, by studying use situations, to acknowledge which features are really useful. One cannot expect deeply rooted practices in schools or elsewhere, to be changed by one project.

Bader and Nyce complain that designers do not take enough responsibility for their role and suggest that they limit those face-saving "end-user failure" explanations. We could not agree more, but, as stated earlier, this also holds for ethnographers who want to have a direct impact on design - normally there are two parties to blame if a communication fails. Since Bader and Nyce neither report on the project's specific circumstances nor on the interactions between their analysis and the design effort, it is hard to tell what went wrong and why.

Let us again turn to Kensing and Munk-Madsen (1993), who argue that in addition to a proper understanding of the current practices, which Bader and Nyce apparently delivered, a design team also needs to bring in or develop knowledge about technological options. By this we mean potential hardware and software, but also potential new ways of organizing work. Applying this to the high school case means that both pedagogical traditions and authority relations in class rooms are legitimate topics for a design team. Bader and Nyce seem to agree on this, but again we are not told how their analysis fed into the design process.

During a recent design project involving multimedia support for a radio station (Kensing et al., 1997), we visited two stations abroad, specifically in order to be able to compare differences and similarities in technologies used, work organization, and the qualities of the radio programs produced. In other projects, we have been able to find organizations closer by, which have served as an inspiration for the design of software and work organization (Simonsen and Kensing, 1997). In some cases, similar visits

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[6] E.g. Kid Pix designed by Craig Hackman for the Macintosh. See e.g. Winograd (1996), or better try it.

have helped users to question (and subsequently reject) their initial ideas for technological support (Simonsen, 1996).

The interplay and co-development of teaching technologies and the practices that evolve around them in schools, are also socially constructed - a process in which they are both likely to change. After all, pedagogical theory and practices have changed in respond to various societal innovations. So the challenge for ethnographers, and for designers, who apply ethnographic techniques, is why and how they engage in a reflective conversation with the materials of the design situation (Schön, 1983).

IS THERE ROOM FOR ETHNOGRAPHY IN DESIGN? MAKE ROOM!

Bader and Nyce ask: "Can cultural analysis play a role in information systems development as it is presently undertaken in the United States?" They produce an argument which concludes that there is a fundamental gap between the knowledge the development community values and the knowledge that cultural analysis produces. And they blame the development community for that gap. Furthermore, they criticize others who have experimented with new ways of using ethnographic techniques for design purposes. We have shown that there are more proactive ways to integrate ethnographic techniques into design practices than those seemingly applied by Bader and Nyce.

Since Bader and Nyce offer, as their best advice to developers, "to embrace contested meaning and the constructed nature of social life", let us conclude by briefly highlighting a range of initiatives taken to challenge the way design is presently undertaken. The initiatives are oriented towards three different arenas[7]:

Arena A: Designing work and systems.

A number of academics and practitioners have reflected on and described the activities involved in their design projects in private and public organizations. They have documented how to apply various versions of ethnographic approaches to inform design decisions (Kensing and Winograd, 1991; Sommerville, 1993; Hughes et al., 1993; 1994; Bødker

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[7] These arenas were originally developed by Gärtner and Wagner (1996), and have been used for a discussion of possible arenas for research and actions in Participatory Design.

and Kensing, 1994; Shapiro, 1994; Trigg and Bødker, 1994). For examples of how the use of ethnographic techniques has had specific consequences on the systems designed, see Blomberg at al. (1996); Kensing et al. (1997); Simonsen and Kensing (1997); and Mogensen and Shapiro (1998). Compared to traditional approaches, these projects have spent more time on the conceptual stage, as Bader and Nyce call for. Some of us have also been involved, as part of the projects, in teaching practitioners how to include ethnographic techniques into their repertoire for actions.

Arena B: Designing methods.
Work in this arena has dealt with how to conceptualize design practices and how to present guidelines for ethnographically informed design, usually in combination with prototyping. The challenge has been to adopt principles and techniques from ethnography, in ways that go beyond traditional design approaches, but at the same time in ways that take the economic and organizational constrains of practitioners into account. See e.g. Blomberg et al. (1993); Gougen and Linde (1993); Kensing et al. (1996); and Beyer and Holtzblatt (1997) for different approaches to include ethnographic techniques in design.

Arena C: Designing new curricula.
Bader and Nyce point to limitations in the teaching of computer professionals. Also in this arena initiatives have been taken both in the United States, in Canada, and in Europe. New curricula have been developed that introduce students to various ways of paying more attention to the use context, than is normally included in computer science and information systems programs. Some programs include ethnographic techniques others do not, but they share a concern about the ways in which computer artifacts are developed and used, which is comparable to the concern of Bader and Nyce. For an introduction to initiatives taken to change university curricula, see e.g. Kapor (1990); Winograd (1990); Bennett et al (1992); Kling (1993); and Krautz (1996).

We have experienced that our method for participatory design, in which ethnographic techniques play a significant role, has proven to be successful in projects in private and public companies, where we act as the designers (Kensing et al., 1996; 1997). Our next question is how this method works when design practitioners use it. This is the aim of our current research project, where three companies have agreed to learn, apply, and evaluate our method in relation to their design projects.

Changing our own work practices in research projects, having design practitioners testing our method, evaluating experiences in cooperation with companies, and, finally, letting these findings influence university education and curriculum, is our approach to taking ethnography serious and to changing research and professional practises accordingly. But it is also a long lasting process, where the decisive factor is the new generations of university candidates that spread into the industry. However, since the usefulness of ethnography in design now has been established as a fact in several major research communities, we believe that this inevitably will effect research driven education.

Maybe we cannot succeed in convincing Bader, Nyce, and others, who are sceptical, as to the impact ethnography has and will have on the everyday life of designers of computer artifacts. However, for the debate to flourish, we found it proper to point out for the readers the initiatives already taken involving ethnography in design - initiatives neglected by Bader and Nyce. Our hope is therefore for these initiatives to be taken up and contested by others in further discussions of ethnography in design.

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