Introduction

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The papers in this issue of Ethnographic Studies were presented at a conference on Workplace Studies organised by the British Sociological Association Language Study Group and the Department of Sociology, Manchester Metropolitan University in October 2000.

Forty people attended the conference from a variety of disciplinary backgrounds. There were ethnomethodologists working in the field of Computer Supported Co-operative Work (CSCW) associated with the research groups led by Graham Button at the Rank Xerox Research Centre in Cambridge, Dave Randall at Manchester Metropolitan University, John Hughes at Lancaster University, and Christian Heath at King's College, London. There were also a number of doctoral students in computer science departments, and ethnographers employed by technology companies who wanted to know how ethnomethodology can contribute to the design process.

This collection of papers is intended for these audiences, although we hope that the three substantive studies, by Barry Brown, Ged Murtagh and Max Travers will also interest the general reader. There are already two excellent collections that introduce CSCW research edited by Luff, Hindmarsh and Heath (2000) and Engestrom and Middleton (1996). Our own conference was, however, distinctive in that two of the papers focused on methodological debates internal to ethnomethodology that are not given much emphasis in these introductions. The call also asked contributors to think critically about the issue of 'usefulness'. John Hughes took up this invitation in his plenary address, reviewing how ethnomethodologists became interested in systems design at the universities of Lancaster and Manchester, and different views were expressed during the day.

In this introduction, we will attempt to explain these debates, and identify what is distinctive about ethnomethodological studies of technology, when contrasted to constructive traditions in CSCW, and wider sociological literatures on work and technology. Our aim is to clarify some conceptual issues, and also to raise some questions which result in further work and hopefully further questions.

Conceptualising Ethnography

Those computer scientists familiar with the history of ethnomethodology will know that it can be divided into two research traditions that share broadly similar theoretical assumptions, particularly in their commitment to investigate the taken-for-granted interpretive and communicative procedures used by members of society, but differ in the methods they employ to investigate the social world. Conversation analysis has become the largest research tradition that has most respectability in mainstream social science. It is based on the strict methodological requirement, set out by Schegloff (1991) and others, that the analyst should only investigate tape-recorded conversation. Attention to the ethnographic context, such as the identities of the speakers, their motives and goals, or where the conversation is taking place, is viewed as only being relevant if speakers can be shown to

orient to such matters in the talk. The goal of the analysis in studying institutional settings is either to map out the distinctive turn-taking system that constitutes that setting as a normative environment for speakers, or to examine how participants are using resources or devices from everyday conversation in achieving occupational tasks.

As reported in Andy Crabtree's paper, Harold Garfinkel has expressed misgivings about this programme, arguing that it misses what is specific or unique to a particular interactional encounter: for example, he wants "a conversational analysis of persons talking chemistry or talking law ... to respect the fact that they are talking chemistry or talking law". Garfinkel argues that this "can't be done in CA" if it is just concerned with "conversational structures". Instead, the only way to investigate some activity or skill is to become a competent member (what Garfinkel and Wieder 1992 term "the unique adequacy requirement of methods").

Crabtree makes this ethnomethodological case against "canonical" conversation analysis in his paper, and he suggests that "the primary challenge for the work analyst is first and foremost to develop vulgar competence" in a given occupational practice. It was, however, pointed out at the conference that many kinds of occupational activities can easily be understood without an observer becoming a competent practitioner, and that "competence" itself should be viewed as an ethnomethodological topic (in the sense that people might disagree about what to do next faced with the same set of circumstances). One might also want to argue that, even if the study of recorded talk cannot tell one everything about work in an occupational setting, it can reveal a great deal. This is why even the greatest critics of conversation analysis, such as Michael Lynch, often end up studying transcripts in their own work.

This critique of conversation analysis has, on the face of things, little relevance to the field of CSCW since all the ethnomethodologists working there employ ethnographic rather than purely discourse analytic methods. This is sometimes described as conversation analysis, but it is not the "canonical" variety, and is geared to the practical questions that interest designers. On the other hand, the work of Christian Heath's group which is based on the close analysis of video-recordings in control rooms (see, for example, Heath and Luff 1996) can be contrasted with studies employing conventional fieldwork methods.

Randall et al's paper does not engage directly with the work of Heath's group, although the earlier version they presented at the conference did criticise the value of adopting a purely video-based analysis of how visitors look at exhibits in museums (see Vom Lehn et al 2000). Instead, they focus on a methodological school in CSCW, known as Interaction Analysis. Although this claims to adopt a broad ethnographic approach, so that the analysis of audio- and video-recordings is supplemented by interviewing and fieldwork, Randall et al argue that, in practice, it restricts itself to examining what can be seen or heard taking place in what they regard as "de-contextualised" episodes of interaction.

Their complaint is not simply that the specifics of the work, and what might be called the oriented-to context for the participants, is not addressed using this research methodology but that interactional analysis, without fieldwork, can be positively misleading, since there are many

features of work which are not available from transcripts. This approach can only

> …be undertaken by taking the *analytic* work of ethnography seriously ... Our problem as analysts in CSCW is ... to identify how and in what way interactions may be germane to design, and if so, what interactions. We are most likely to conduct this enterprise successfully if we recognise the elements of "at work" organizational life. Those elements ... have to do with the skills, knowledges and competences that organizational members have and display.

Randall et al only give one example of how their critique might bite, and it is not immediately clear to us why video-based analyses should not be equally successful in moving out of control rooms to examine new technologies such as distributed systems. However, it does illustrate the value of thinking critically about ethnography, rather than using it as "a gloss for a set of observational practices relating in some sense to design". It also makes one think critically about the issue of "usefulness": the extent to which different ethnographic techniques can address and solve design problems.

Understanding 'Usefulness'

The ultimate warrant for using social scientific theories and methods in the design process is that they result in more effective and robust technological products. There are, however, a number of different analytic traditions working in the field of CSCW, and researchers invariably promote or justify their own approach by critiquing other traditions. When Randall et al criticise Interactional Analysis in their paper, they do so because they believe their own ethnographic approach offers a more useful way of contributing to design.

The greatest rivalry in this field, however, is between ethnomethodology (whether it employs ethnography or discourse analysis) and cognitive science. Ethnomethodologists invariably present their own approach as being more useful, because it is grounded in a better understanding of action (Suchman 1987; see also Watson 1999). Those expecting some kind of Kuhnian paradigm shift are, however, likely to be disappointed. As will be clear from Randall et al's paper, cognitive scientists continue to believe that their approach is the most useful, and that there are serious problems with Suchman's work because it cannot address wider organisational processes.

It is also interesting that some traditions adopt a modest stance in recommending the value of examining the social character of technology, while others make much grander claims. Some commentators believe that CSCW can radically change the way people think and live by making us question taken-for-granted practices:

> In order to develop computer-based technologies which can enhance the ability of actors to accomplish their cooperative endeavours, we cannot take the orderliness of cooperative work for granted....The primary role of workplace studies in CSCW is thus to dismantle the common-sense conceptions of cooperative work, take them apart, unpack and disclose the hidden practices of articulation work....This role is critical in the sense that it is crucial, but it is also critical in the Marxian sense of uncovering the social practices through which categories which are otherwise take for granted are produced as necessary 'thought forms' (Schmidt 2000, p.145)

One can contrast this idealistic belief in the capacity of sociologists or other technical experts to change

society, with the more sceptical views expressed at this conference. In his contribution to this volume, John Hughes notes, that "technology is only a small part of the story of organisational life and, moreover, one which is very often dependent on what else happens in that life". He argues that it is important to appreciate what has been achieved through examining the detail of work practice, but also to remain modest and realistic:

> Ethnomethodology and ethnography have much to contribute to design - and today we are going to listen to some of these contributions - ... but let us not be over-ambitious or run away with the idea that we are the elusive 'silver bullet' that will solve the problems of design - or get rid of werewolves.

Ethnomethodology Versus Constructive Analysis

Whatever position one takes in these debates about usefulness and methodology, one is left with a set of studies that are distinctive in the field of CSCW, and in the wider sociological literatures on work and technology, in examining how people use different technologies in everyday settings. None of the three studies in this special issue employ video-based techniques, or are based on the analysis of transcripts, so we cannot use them to illustrate the methodological issues raised by Crabtree and Randall et al's papers. Nevertheless, they do show how ethnomethodologists can employ a variety of ethnographic techniques in studying how technology is used in the workplace, or in everyday settings like railway carriages.

Barry Brown's paper explores how work is represented using timesheets in a large British company, drawing on analytic resources from Michael Lynch and also Bruno Latour. This paper is based on a lengthy period of fieldwork in one work setting in which he tried to understand the practices involved in completing and interpreting timesheets, and how these were affected when this was computerised. He argues that problems were created for the time-writers, but life was made easier for the company's accountants.

Ged Murtagh reports the findings of a study based on observing how mobile phones affected the way people interacted in railway carriages. It is the closest to a video-based analysis in the sense that he describes, in close behavioural detail, how people shifted their gaze in order to respect the private space of someone taking a call, and the circumstances in which a ringing telephone caused annoyance to fellow passengers.

Max Travers conducted short periods of fieldwork in three high street offices, with the aim of discovering both how they organised work using paper records or shared systems like diaries, and their response to technological change. He found that staff preferred working with paper systems, because they could not achieve the same level of customer service using commercial software packages. Computers were, however, important for presentational purposes, since they provided a way to appear modern and professional.

These studies were made possible because technology companies see the value of obtaining information about the performance of actual or potential products, although it is not clear what impact, if any, they had on the design process. Most ethnographers report that computer scientists are always hungry for information about what people do in workplaces. This information is now viewed as essential for a requirements analysis and, for some companies, employing an

ethnographer has become a cheap and superior alternative to interview-based market research.

If one reads these studies, it will be apparent that they are not centrally concerned with the issue of usefulness, but in the best traditions of ethnomethodological research, they do supply close and detailed descriptions of taken-for-granted activities, such as how to behave normally in a railway carriage, or how check-lists are used in small businesses. Here they can be contrasted with other approaches in CSCW, and with literatures in the sociology of work and technology where the aim is to theorise about rather than describe social life (see, for example, MacKenzie and Wajman 1985, Grint and Woolgar 1997). Someone made the point during the conference that computer science, just like any other branch of academic enquiry, has "a craving for generality", which partly explains why approaches like cognitive science continue to flourish. Ethnomethodology provides a refreshing alternative to this constructivist literature by focusing on the ordinary, taken-for-granted character of work. As Wes Sharrock (quoted in John Hughes' paper) observes, "it ought to bring us back in touch with the things we recognise as the most normal, ordinary, natural things in the world".

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