

December 2001

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Recommended Citation

Bhattacharjee, Anjana and Paul, Ray, "System Design and Ethnomethodology" (2001). *AMCIS 2001 Proceedings*. 422.
<http://aisel.aisnet.org/amcis2001/422>

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SYSTEM DESIGN AND ETHNOMETHODOLOGY

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Abstract

This paper assesses the current state of intellectual relationships between information system design and ethnomethodology (EM), a form of sociological inquiry. Attention is drawn to an apparent trade off that arises between (a) seeking to make EM more “visible” to the system designer, and (b) seeking to manage the “devotion” of time in getting to know one another’s way of working. Possible limitations to contributions from EM to the development of “technomethodology”, an information systems sub-speciality, are examined. This opens up new areas of co-operative research between system design and EM as a phenomenological approach. Research in progress is directed at making EM more visible to system designers through an investigation of its phenomenological core using a multi-user domain (MUD) as an explicating device.

Introduction

Sociological approaches to information system design have become more prominent over the past decade. In particular, ethnomethodology (EM) has become something of a preferred approach (Dourish and Button, 1998). The consequences of approaching system design from the EM perspective have been investigated, leading to the development of “technomethodology”:

“[Our] position regards the relationship between our disciplines as a foundational, analytic concern rather than simply a practical one, and so it emphasises how it is that the EM position on the problem of social order can inform, re-specify, and re-conceptualise foundational elements of system design.” (Dourish and Button, 1998)

However, interdisciplinarity in relation to EM and system design requires a willingness to devote considerable time to the process of getting to know each other’s way of working (Crabtree *et al*, 2000). This is further complicated by the fact that, although during collaboration both disciplines are engaged in common research topics, they continue to work from different paradigm perspectives.

In order to facilitate collaboration, therefore, this paper begins by discussing the notion of making EM more “visible” to system designers. Different ways of learning from EM in practice are examined with respect to their degree of relative “visibility”. An alternative approach to making EM more visible is then outlined.

On “Visibility”

A recognised benefit of the specialisation of roles is the way in which the work of others can effectively be “black boxed,” so that the products of their labours can be depended upon and used without having to worry about exactly how their work gets done (Suchman, 1995). But such black boxes are not conducive to forming foundational relationships between the roles in question. Suchman’s sense of making work “visible” is specifically about how representational practices can be developed in ways that maintain the connections among representations, their authors and their interests as well as other possibly relevant knowledge and images. It is in this sense that the case of making EM more “visible” to system designers is directed.

Dourish & Button (1998) suggest three forms of collaboration between system design and EM with respect to the potential depth of intellectual relationship. In addition, their respective representational practices can be highlighted as follows:

- *Learning from the ethnomethodologist:* A frequent form of collaboration when conducting EM informed system design is to bring together ethnomethodologists and computer scientists in multidisciplinary design teams. Labour is divided such that the ethnomethodologist is sent out into the field to make observations and bring them back as system requirements. How those observations were formed is not visible to the system designer, and problems typically arise due to the underlying differences in terminology. As an alternative to trying to explain matters in technical terms, the ethnomethodologist trades in stories. Although design activity is thus permitted to continue without having to rely too much on technical language, the “story” of EM itself is not made explicit, and is effectively black-boxed.
- *Learning from EM accounts:* Some EM informed studies have been conducted on the basis of EM accounts. This can be a two step process, for example, where the EM work is carried out prior to the system design project. The EM done is represented by its resulting “accounts” of work process and work practice, and so can be more visible to the system designer than trading in stories. However, the accounts are considerably detailed and lengthy, requiring considerably more devotion of time, albeit that the fruits of such endeavours are questionable given the disconnection of work site and design implied by this approach (Sharrock and Anderson, 1994).
- *Learning from EM itself:* As outlined in the introduction above, this position seeks to regard the relationship between the disciplines as an analytic concern, giving rise to “technomethodology”. The type of representational practice used here is rooted in concepts underlying the technical terminology. For example, the notion of “accounts” in EM is used as a basis for a re-evaluation of the role of “abstraction” in designing interactive systems. Although this may render EM more visible to the system designer after the re-evaluation has been performed, it is unclear as to the how deeply familiar the system designer would need to be with EM in order to be able to generate further points of contact. A possible limitation of “technomethodology” therefore is likely to be in the perception of having to devote too much time to achieve what is effectively an unknown, difficult to evaluate, promise of relevance, in spite of EM’s track record of insights to date.

When considering the varying degrees of visibility in relation to the different ways of learning from EM practised to date, a trade off appears to emerge. It is as if increasing the visibility of EM to system designers requires a corresponding, if not disproportionate, increase in the willingness to devote more time in getting to know one another’s way of working. Inherent in the notion of “devotion” is the sense that the system designer might require a considerable degree of faith in the fruits of EM in order to be willing to spend more time on getting to know how it all works. Moreover, ethnomethodologists themselves have required a degree of faith in the fruits of EM as far as the opacity of the pedagogical exercises and forms of apprenticeship have been concerned (Lynch, 1999).

In light of the above, perhaps it would be useful to consider an alternative way of learning from EM, namely through an investigation of EM’s phenomenological core.

EM as a Phenomenological Approach

One particular fruit of EM is its potential solution to the problem of constructive analysis. This is the crux of the methodological distinction between EM-informed ethnography, and ethnography (Crabtree et al, 2000). In other words, EM makes ethnography visible. Nevertheless, in the founders of EM’s own words:

“... although formal structures of constructive analysis are not available to constructive analysis, they are not otherwise unavailable; they are available to EM. That this is so is less interesting than the question of whether they are available to EM uniquely” (Garfinkel and Sacks, 1970)

It can be shown that the reduction of experience accomplished in EM is a more limited and special reduction as compared to the phenomenological reduction (Psathas, 1977). However, although the precise meaning of the term “reduction” is that which renders EM most visible, it involves a paradigm shift to accomplish. The received Kuhnian wisdom is that the transfer of allegiance from paradigm to paradigm is a conversion experience that cannot be forced and does not occur in an instant as does the *gestalt* switch. Consequently, the approach towards conversion has been to present a variety of problems being studied from a phenomenological perspective, through the discipline of phenomenological sociology, which includes EM (Psathas, 1973). Nevertheless, whether it is fruitful to attempt conversions has been recognised as arguable and this is the starting point taken up by the research in progress.

Conclusions

This paper has examined the different ways of making EM more visible to system designers in order to enable foundational relationships to form. In tandem, the willingness to devote considerable time to the process of collaboration has been made apparent. This has led to a reconsideration of the question of whether it might now be fruitful, given the co-development of both disciplines, to render EM more visible through an investigation of its phenomenological core. This investigation takes the form of reflecting possible conversion experiences by using a multi-user domain (MUD) as an explicating device. "Explicating device" is a term coined by Ten Have (1999) to refer to a loose category of research techniques essential to a number of cited EM studies. The EM foundations of such techniques are discussed in more detail in Garfinkel and Wieder's (1992) paper.

By applying Garfinkel and Wieder's (1992) work to our current research domain, we are able to derive that MUD technology is particularly suited to serving as an explicating device. This is primarily because (a) the concept of MUD is familiar territory for system designers, and (b) a MUD framework is adequate for distinguishing between experiential interfaces of activity.

In summary, research-in-progress is finding that MUD technology could be useful for making visible the relative paradigm shifts involved during work across our disciplines, but this would require further research in the first instance. Later research activity is expected to address such findings with a view to compiling a MUD-reflected glossary of technical terminology common to system design, EM and phenomenology.

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