Ethnomethodology as an Approach to Researching Networked Learning

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Abstract

It is forty years since the publication of *Studies in Ethnomethodology* (Garfinkel, 1967), and recent years have seen something of a resurgence of interest in ethnomethodology from management and organization theorists, at least. Within the 'practice turn', there is a strong thread of ethnomethodologically informed ethnographic studies. In contrast to the ethnographic studies, marshalled in the formulation of situated learning theory (Lave and Wenger, 1991), these ethnomethodologically-informed ethnographic studies have not been aggregated to formulate an overarching theory of workplace practices, or learning. Rather, each produces a unique insight into the specifics of situated practices studied through this approach.
In this paper I want to argue that ethnomethodology has a unique contribution to make to the study of networked learning practices amongst other kinds of learning, and will illustrate by discussing a case study of audio-visual learning resources provided for science educators via a national programme of teleconferences, examined in MacBeth (2000), which I would argue is a form of networked learning .

Keywords
ethnomethodology, networked learning, conversation analysis,

1. Introduction

How can we research networked learning? The present paper aims to show some of the potential of an ethnomethodological approach to understanding networked learning as a kind of practical action. To do this, it will, first, provide a brief overview the nature of ethnomethodology and the related area of conversational analysis; second, argue how an ethnomethodologically-informed approach to situated learning may differ from community of practice theory in the study of 'networked learning', and; third, drawing on ethnomethodological studies of classroom learning discuss the implications for networked learning as practical activity.

In recent years, learning theory has taken renewed interest in practical activity as the source of learning, whether in the classroom or workplace (Engestrom, 1987; Lave, 1988; Lave and Wenger, 1991; Brown and Duguid, 1991; Chaiklin and Lave, 1993; Wenger 1998; Engestrom, 1999). This focus on practices has not gone without critical attention (Turner, 1994; Lynch, 1995; Pickering, 1995; Fox 2006). As with learning theory at large, networked learning has also been increasingly understood in terms of social practices informed by situated learning, community of practice, and actor-network theory (Fox, 2002, 2006a). However, as argued elsewhere, the renewed academic interest in social practices is characterized by the attempt to generate a new form of general theory of learning (Fox, 2006b). In contrast with this attempt, ethnomethodology (EM) and conversation analysis (CA) (jointly 'EMCA'), which predate the late 1980s and 1990s 'turn to practice', adopts a very different 'empirical' orientation to the study of practical action. The purpose of this paper is to show what this alternate EMCA treatment of practice implies for research studies of networked learning.

2. Ethnomethodology and Conversation Analysis

Ethnomethodology was established by Harold Garfinkel in the 1950s, and *Studies in Ethnomethodology,* published originally in 1967, his famous book, brought together a set of chapters each profiling a different ethnomethodological study. This book does not so much provide an overarching systematic account of

ethnomethodology but the first collection of diverse EM studies; from which an initial set of study "policies" (Garfinkel, 1967: 31-4) was articulated. 'Ethnomethodology,' as a term, is the study of 'members' methods' (Garfinkel and Sacks, 1986: 162), just as ethnomusicology is the study of member's music. That is, members share methods for making sense of and "achieving social order" (Rawls, 2002: 5). Or as Garfinkel put this:

> ..the activities whereby members produce and manage settings of organized everyday affairs are identical with members' procedures for making those settings "account-able." … When I speak of accountable my interests are directed to such matters as the following. I mean observable-and-reportable, *i.e.* available to members as situated practices of looking and telling. I mean, too, that such practices consist of an endless, ongoing, contingent accomplishment; that they are carried on under the auspices of, and are made to happen as events in, the same ordinary affairs that in organizing they describe; that the practices are done by parties to those settings whose skill with, knowledge of, entitlement to the detailed work of that accomplishment – whose competence – they obstinately depend upon, recognize, use, and take for granted; and *that* they take their competence for granted itself furnishes parties with a setting's distinguishing and particular features, and of course it furnishes them as well as resources, troubles, projects, and the rest" (Garfinkel, 1967: 1-2).

Members produce and manage social settings in the very ways these settings are accountable to them i.e. observable and reportable in the sense that members can see and tell what is going on in the settings of which they are a part; their settings are intelligible to them in the same ways they produce and manage them as an ongoing accomplishment. Members have an entitlement to the work, their work, through which they accomplish ordinary settings of "organized everyday affairs". Garfinkel is not saying that all members see the setting in the same way, however. In the quote above he recognizes that members' competence in accomplishing the accountability of their settings' "particular features" not only furnishes them with "resources" with which to make sense of their settings, but also with "troubles, projects, and the rest". Different members may account differently for the same setting, and may indeed be pursuing different projects within the same setting, but they do at least share methods, or procedures, for making their settings mutually "account-able". It is these shared mutual methods and procedures which ethnomethodology studies. Shared methods are themselves "practical activities" and it is by affording these "the most commonplace activities of daily life the attention usually accorded to extraordinary events" that ethnomethodology seeks to "learn about them as phenomena in their own right" (Garfinkel (1967:1).

A key aspect of ethnomethodological studies is that they are concerned with members' methods of making settings accountable through practical methods, publicly available to each other. As Rawl's (2002:51) puts this, shared methods concern: "..how are social phenomena made and recognized as witnessable phenomena" i.e. witnessable (and hence locally accountable) to the very members of the setting in question. This is an aspect of ethnomethodology which aims

> ..to bring sociology from the realm of conceptual theorizing into the hands of practitioners, in order that we may understand and improve upon both the quality of individual human experience and the possibility of providing high-quality lives for all human beings" (Rawls, 2002: 19).

Whilst ethnomethodology's purpose may be to bring sociology into the hands of practitioners, many critics of ethnomethodology have missed this point, sometimes confusing "ethnomethodological indifference" (discussed in Garfinkel and Sacks, 1986: 142) with social indifference and moral relativism (Gellner, 1975). As Lynch (1993: 142) explains: the policy of ethnomethodological indifference side-steps the question of whether sociologists' "can ever achieve adequate or acceptable accounts of the phenomena they study", substituting an alternative focus on: "how members conduct their "methodological" activities by pragmatically establishing what counts as adequacy, accuracy, and appropriateness". Ethnomethodological indifference is therefore central to the project of bringing sociology into the hands of practitioners.

Garfinkel's written style is sometimes seen as obscurantist (Gellner, 1975) but the form of writing is necessary to the phenomena ethnomethodology discloses, for ethnomethodology looks at the very taken-

for-granted social practices which make "commonplace scenes visible" (Garfinkel, 1967: 36) and other social phenomena "socially real" (Rawls, 2002: 51).

Ethnomethodology took a close interest in the analysis of conversation from the start. See for instance Garfinkel's analysis of a conversation between a husband and wife (1967: 38-42) and the dialogue between 'subject' and 'counsellor/experimenter' (1967: 79-96). One of Garfinkel's early collaborators was Harvey Sacks who would later establish "conversation analysis" (Sacks, 1972; 1995). Together they published a seminal paper - "On formal structures of practical actions" (Garfinkel and Sacks, 1986, orig. 1970) - in which they place their study emphasis upon "practical actions" (1986: 160-2), talk about "members' methods" (1986: 162) and closely examine what they call "mastery of natural language" (1986: 165). From these early writings, produced in the 1960s, ethnomethodology and conversation analysis (EMCA) has become a distinctive way of studying practical activities and practical actions in an immense variety of situated settings, from studies of jurors making verdicts (Garfinkel, 1967); to astronomers discovering a pulsar (Garfinkel, Lynch and Livingston, 1981); to the regulation of multipiece truck wheel accidents (Baccus, 1986); alchemy (Eglin, 1986) and kung fu (Girton, 1986); to a production manager ordering production in a print factory (Button and Sharrock, 2002) amongst many other specific studies. Within this burgeoning field of "ethnomethodological studies of work" (Garfinkel, 1986), a number of writers have specialized in classroom studies of teaching and 'learning lessons' (McHoul, 1978; Mehan, 1979; Pack, 1986; MacBeth, 2000, 2003, amongst others) and have examined various members' methods for learning lessons and designing question and answer sequences which, as practical actions, induce learning. It is this tradition of EMCA studies to which we turn for insights into how ethnomethodology may contribute to our understanding of networked learning in section 4.

Ethnomethodology's interest in practical activities predates the recent attention given to practices in community of practice theories (Lave and Wenger, 1991; Lave, 1991, 1993; Wenger, 1998) but because of its emphasis on "practical activities" (Garfinkel, 1967: 1) or "practical actions" (Garfinkel and Sacks, 1986: 160) it may be confused or conflated with community of practice theories which have become so widely cited and celebrated within education studies and from there have permeated several studies of networked learning (e.g. Jones and Steeples, 2002); as well as organizational learning (e.g. Brown and Duguid, 1991; Fox 2000). To clarify the difference, section 3 will discuss some key differences between EMCA and COPT despite the common interest in situated practices.

3. Ethnomethodology and Community of Practice Theory: Some Similarities and Differences

Ethnomethodoloogy and community of practice theory both deal centrally with practices or practical action and both conceive of practical action being socially situated. Superficially their language sounds similar. For instance, both use the terms 'membership' and 'mastery': Garfinkel and Sacks (1970: 163) refer to 'member' not as to "a person" but as to a shared activity which they gloss as "mastery of natural language", a mastery members routinely trade upon and "witness" in each other's actions in the mutual production of commonsense knowledge. Sacks (1972) later identified "membership categorization devices" as certain ways of talking through which people come to see one another as in or out of certain membership categories. Lave and Wenger (1991: 54), also use the terms 'membership' and 'mastery'; in defining legitimate peripheral participation, they explain that "learning is not merely a condition for membership, but is itself an evolving form of membership", one in which mastery is learned.

For Lave and Wenger the social world is a series of overlapping and interstitial communities of practice; communities of actual persons and these communities reproduce over time, in a cyclical way, through, amongst other things the power struggles amongst the practitioners. Garfinkel does not talk about the social reproduction of some group of people, but does talk about "recurrences" (not to be confused with statistical regularities): things like "a standing crap game" (Garfinkel and Wieder, 1992). Ethnomethodology is not concerned with the survival, as it were of these coordinative practices, as embodied in real whole people in communities of (these) practices; it is interested in how they carry on, how they recur, each "first next time" (Garfinkel, Lynch and Livingston, 1981). To take an example, let us examine the practice of physics which Lave and Wenger (1991) discuss and as it happens is also discussed in pertinent terms by the ethnomethodologist Douglas MacBeth, (2000).

Lave and Wenger (1991: 99-100) see different communities of practice as having differing stakes in physics, differentiating proper physics from classroom physics:

> For example, in most high schools there is a group of students engaged over a substantial period of time in learning physics. What community of practice is in the process of reproduction? Possibly the students participate only in the reproduction of the high school itself. But assuming that the practice of physics is also being reproduced in some form, there are vast differences between the ways high school physics students participate in and give meaning to their activity and the way professional physicists do. The actual reproducing community of practice, within which schoolchildren learn about physics, is not the community of physicists but the community of schooled adults. Children are introduced into the latter community (and its humble relation with the former community) during their school years. The reproduction cycles of the physics community start much later, possibly only in graduate school...

Here the issue, for Lave and Wenger, is of membership in the sense: who is in or out of the community of physicists, a community for which graduate school is the proper periphery; in relation to which, students in school are outsiders, as is the wider community of schooled adults in general, to which the high school students will one day belong unless they happen to go on to study physics proper in graduate school. In section 4, we will examine MacBeth's very different way of understanding the boundary between proper physics and classroom physics, through his study of a science education "apparatus for conceptual change", a networked, "virtual space"; "..a place for "crossing over" from the one to the other – an interregnum that is both formal and vernacular" (2000: 244). As he notes, a challenge often remarked upon by science educators is how to move a student, any student, "from a field of ordinary experience into a field of scientific experience" (ibid.).

4. Ethnomethodology: Implications for Researching Networked Learning

MacBeth's (2000) paper also discusses physics and analyzes a case which may be seen as a form of networked learning. It is the case of the "Private Universe Project", a programme of workshops for teachers and science educators in the US, developed by the Harvard-Smithsonian Center for Astrophysics and supported by US Annenberg/CPB Math and Science Collection, the National Science Foundation and the Corporation for Public Broadcasting (MacBeth, 2000: 228); which had produced a series of nine interactive teleconferences, an episode from one of which is closely examined in MacBeth's (2000) paper.

MacBeth tells us that "The Harvard-Smithsonian Private Universe Project is a program of professional development for science educators". This teaching resource itself embodies a particular pedagogy informed by the literature on "conceptual change" which is a theory of learning widely credited (e.g. by Duschl and Hamilton, 1992) to Posner, Strike, Hewson and Gertzog (1982), despite the fact that these authors never intended their theory to have such practical pedagogical implications (Strike and Posner, 1992; MacBeth, 2000: 235). MacBeth (2000: 235) points out that:

> recurrent in the literature on conceptual change … is a collection of what I want to call "functional design specifications," or virtual designs for a virtual apparatus for conceptual change."

These "virtual designs" are, in a form, embodied within the Private Universe Project, which "developed as a series of interactive workshops televised to science educators across the United States," featuring, amongst other items, a "series of demonstrations of schoolchildren's knowledge and understanding in several science domains" (MacBeth, 2000: 236).

The fifth workshop in the series is on the topic of the "scientific relationship between light and vision," and includes, as a teaching resource, a videotaped interview with an eighth grade student called Karen, on the question: can we see in the dark? The answer might seem to be: obviously not. However, for this eighth grader, basing her answer on her practical lived experience of darkness, rather than what we might think of as 'scientific darkness' or 'absolute darkness' her answer is different. The videoed interview is staged in various ways in order to: (a) show Karen's reasoning and (b) the falseness of her conception of relations between light and vision by scientific criteria and then (c) to reveal for her, via a practical experiment, the 'true' or 'scientific' answer. Consistent with the literature on 'conceptual change', the interview is set up (physically, visually and interactionally although this is not all obvious at once) to demonstrate the gap and contrast between Karen's vernacular and the audience's scientific

understandings of light and vision. Equally, consistent with the functional design specifications (or virtual designs) informed by the conceptual change literature, is the staging of "a controlled collision that would yield the "break," disequilibrium or dissonance that is by consensus the necessary condition of conceptual change" (MacBeth, 2000: 251). To appreciate all of the moves in this social interactional process, one must examine MacBeth's perspicuous paper, (which includes a full transcript of the actual interview as an appendix), but here, for present purposes, we will examine only two short extracts, which follow on sequentially.

Bearing in mind that this is only a tiny part of an interview interleaved within a longer telecast interactive workshop, it is hardly a study which is typical of all forms of networked learning. Rather its methodological interest lies in the way such transcripts of networked learning materials may be ethnomethodologically analyzed in order to explicate or elucidate virtual interactions. And this illustrates how ethnomethodology enables us to research networked learning; in this case as designed according to the canons of conceptual change theory. Ethnomethodology itself is not a learning theory as such, but is a research approach which studies the practical actions of learning in class, or in this case learning in a networked learning situation, in detail and in ways that no other perspective does. In this case we are not simply observing how the Private Universe Project teaches science educators are to teach the scientific relationship between light and vision but *how they* are to learn via this virtual learning design itself embodying the conceptual change programme, as found in science pedagogy. We also see what Karen makes of this pedagogical experiment.

To make sense of the extracts without reading the whole paper (MacBeth, 2000) it is necessary to gloss the steps that led up to excerpt 1.

The video-interview commences with Karen, centre-frame, seated at a table, with an apple in view and the interviewer off camera (MacBeth, 2000: 239). In everyday ordinary vernacular language (i.e. not technical science-speak) the interviewer has asked Karen about the purpose of light in relation to vision. She has explained that "..tha light, like reflects in yer eye, an it reflects in tha apple" (p.239). The interviewer has continued to ask further questions revealing Karen's vernacular understanding, by asking what happens when the lights are turned out. Karen has explained, citing "times like whenever there's ah power outage" and "if you turn off that light before you' go to bed, an like all tha windows are closed or whatever.." (p.241), that in darkness, at first you cannot see anything but after a little while your eyes adjust and then you can see the outline of things like the apple. The interviewer then asks a series of questions which are designed to get Karen to amplify this lay understanding in a way that shows, gradually, the video-clip's audience of science educators that her understanding is unscientific. This is done by progressively asking her to imagine situations which might experimentally yield the idea of pure darkness.

This line of questioning finally invites Karen to imagine, through a "thought experiment" (MacBeth, 2000: 243) the lights off in room with "lead walls .. three feet thick" and "..down a mine shaft.." with "no windows an' doors", "absolutely dark"; while reassuring her that "you're okay in there" (MacBeth, 2000: 243). Even in these imagined circumstances, when asked "Can you see after five or six minutes? Can you still see tha apple?" Karen still maintains "You can ssee it but it wouldn't be red" (p.243). After this demonstration of the gap between lay and scientific understanding the interviewer tells Karen they will now do an experiment and turn the lights out for real, so she can experience what she has just imagined (see Extract 1).

Extract 1

199.   Okay, here we go, one:, two, three. [click] **[room goes to darkness]**
200.   (3.0)
201. K: I can't see anything right now.
202.   (2.0)
203.   Uhm, it's completely dark(h)(h)(h). ((laughing-in-breath))
204. I: // Kay, Can you see tha apple?
205. K: No. No yet.
206.   (1.0)
207. I   D—are you sure you're looking where the apple is?

208. K: I have no idea ((laughter))
 . . .
215. I: So, how much longer before you can start seeing things.
216. K: I think about like four or five more minutes. Sumthin' like that.

[Extract 1: taken from MacBeth (2000: 245-6) Segment 4]

After some time, the interviewer proceeds to question Karen on her in vivo experience (see Extract 2)

Extract 2

297. I: * Kay * It's been about six minutes, somebody jus told me.
298. K: Oh, okay. Well I guess I was wrong then. ((nervous laughter))
299. I: // Well, no,
300.   really d'you think you were (long), you were wrong, or do we hafta
301.   wait longer.
302. K: Um, well its okay, you can turn back on tha lights.
303.   Uhm, (0.5) but I think eventually your eyes will adjust.
304.   * Like * it might take (.) couple' year(s) ((laughter)) but(t) they will.
305.   **[Lights go back on.]**
306. I: Now what do you see?
307. K: Everything. ((laughter)).

[Extract 2: taken from MacBeth (2003: 250) Segment 7].

Here in these two short extracts, we can see in the transcript data, the moment at which Karen's confident conceptual lay understanding of the relationship between light and vision falters and possibly changes, for ever. The video-interview seems to have shown that conceptual change is possible and can be achieved by a controlled collision orchestrated by the science educator supported by "an actual apparatus for conceptual change", such as a lead-lined room at the bottom of a mineshaft with the lights off; or, more economically, this video-interview, staged so as to simulate the room in a mineshaft, as a package provided via the Private Universe project. What can we learn from this?

First, MacBeth's analysis of the video-interview is more ambiguous. He points out that despite the power of the simulated dark room experience, we cannot actually tell if Karen's conception of light and vision has changed or not. Her "Well I guess I was wrong then" (line 298) followed by nervous laughter does not appear convincing. Invited by the interviewer to affirm she was wrong (line 300) "Really do you think .. you were wrong", her reply is: "I think eventually your eyes will adjust" (line 303), she admits "it might take couple of years" but adds that "but it will" (line 304). So, while the effect of the video-interview is powerful and does demonstrate a shift from a certain lay understanding to a more uncertain lay understanding; it does not show a newly scientific understanding.

Second, MacBeth's analysis shows that Karen's "protoscience cannot easily be dismissed as oppositional to real science"; it too is based on imagined observations of how light and vision behave in certain observable contexts (e.g. a "power outtage"), which she is not in a position to illustrate on video, as she's not the one producing the video. As MacBeth (2000: 254) puts this:

> As for the "break" and/or fundamental discontinuity with ordinary experience necessary for conceptual change (and the Project's design), this analysis suggests that the figure-ground relation that the break requires may be difficult to achieve in any actual case. The completely dark room cannot assure it, and the boundaries between scientific and ordinary action may be better understood as continuous and permeable, rather than as a topography of clear lines and elevations, or even multiple realities".

Not only might Karen's understandings not be seen as non-scientific, but the very idea that there is a clear boundary between scientific and ordinary action is one which is open to investigation (see Lynch, 1993, cited by MacBeth, 2000: 254).

Third, this study of 'an actual apparatus for conceptual change' is a study of a simulation, or a 'mock-up'. MacBeth (2000: 253-4) reminds us that:

> Garfinkel and Sacks ... observe of models and mock-ups of various kinds that their effectiveness as demonstrations, exhibits and pedagogies is made of the very ways in which they rely upon deliberate "false provisions" for certain features of the objects and relations that they represent and instruct.

This is unavoidable: models and mock-ups would teach us little if it were not for their "false provisions". Clearly, this video-interview is staged in order to teach one theory's partisan view of the discontinuity between ordinary and scientific action and understandings (see Gibson's (1976), ecological theory of perception, for an alternative view - MacBeth, 2000). However, rather than holding the Private Universe Project, or indeed Karen, accountable to science, MacBeth (2000: 254) argues that:

> we may want to be open to the possibility that science education and classroom science can be usefully regarded as orders of science in their own right.. This may be a useful alternative to the notion that classroom science is to be measured and cut to the dimensions of "real" science, the central return on which has been an unbroken history of criticism and reform .

And it is this possibility which is made visible and open in MacBeth's fine-grained analysis of the turn-by-turn structure of the transcript of this particular video-interview learning resource for science education,

Conclusions: Implications for Networked Learning

Networked learning, relies on virtual designs which simulate the 'real' world as any mock-up does. In the case discussed above, we see a vivid example of the staging of the 'real' by a networked learning pedagogy that owes much to the particular theory of 'conceptual change', as found in science education. Whereas, Lave and Wenger (1991) appear willing to accept that school science/physics is simply not part of the same 'community of practice' as science/physics, MacBeth's (2000) paper shows that it is not necessary to accept such a viewpoint. Moreover, MacBeth's paper provides an exemplary EMCA study of one particular networked learning instance and shows in line-by-line detail how this networked learning set-up works as a mock-up version of the 'real'. His analysis does not conclude that the conceptual change model is 'false', nor that 'Karen is right', but by looking closely at an actual transcript shows us a wholly more complicated account of the relations between science and pedagogy even in the apparently clear-cut, black and white, instance of an eighth grade science lesson on light and vision.

As networked learning becomes an increasing aspect of ordinary teaching and learning, ethnomethodology and conversation analysis provides ways of researching learning as practical activities and practical actions that are observable and reportable in mundane, yet telling ways. Here pedagogical design principles and practices are examined and their assumptions are shown working in practical detail, allowing us to see pedagogical practices in action, whilst critically questioning what we see. EMCA does not replace one pedagogy with another, preferred candidate, but provides a way of looking at members' methods of teaching/learning in situated detail. Its own findings tell us less about the 'truth' of this or that mock-up or imagined model of the world, but a considerable amount about *how* such models are practically designed, staged and organized in action, in networked learning as much as in classroom learning, to achieve the effects that they do.

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