Locating the Analysis of Digital Media Literacy Events in the Context of the Philosophy of Social Sciences

Jonathon ADAMS

Key words: social sciences, ethnomethodology, ethnography, literacy, digital media

1. Introduction

This paper will attempt to place the analysis of digital literacy events within the philosophy of social sciences. The aim is to discuss the majority of philosophies in the social sciences, with attention given to areas of higher significance to literacy events, discussing and highlighting the significance of key figures and theories. Ethnomethodology will be discussed at greater length concerning this field.

1.2 The research area

The research topic is the analysis of second language English speakers communicating with computer-based digital media as the focal point (a digital media literacy event). The role of technology in everyday social practices has led to a shift in the media and language in communication; web-based media on electronic devices are taking a more dominant role in communication. My area of interest is participants speaking with digital media (using notebook computers) in face-to-face interactions to see in what ways meanings are being made with all the communicative modes; and to investigate the extent the role of language is having on the communicative event of people explaining web pages with each other.

1.3 Aims

In order to investigate this area, an understanding of the approaches to human research is needed, and then to locate the research within the broader context of social science philosophy. This will then help to guide and inform the research. For purposes of organisation, this paper will cover developments in the philosophy of social sciences from the earliest to more recent. Key developments and figures will be outlined and discussed within the context of my research topic. In the second half of the paper, ethnomethodology (EM) and will be reviewed and discussed in light of my research interest. Finally, the discussion will be summarised and the question of whether EM and other approaches can contribute to a greater understanding of my research topic will be answered.

2.1 'Scientific' study in the natural and social sciences

The origins of social science have been detailed as looking to the 'natural sciences' for a suitable scientific method. The earliest attempts to identify such a method came in the seventeenth and eighteenth centuries, in the form of empiricism and positivism (Chalmers, 1999:3). Taking the approach of the 'scientific method' used in the natural or 'hard' sciences, the empiricists and positivists argued that such an approach can be applied to the social world. To summarise, empiricists claim that 'true' facts are available from unprejudiced observation and independent from theory, similar to the scientific method of the 'hard sciences'.

2.2 Empiricism and positivism

Positivists share this view point, but, by definition, reject any cognitive or metaphysical value in gaining knowledge. It is worth noting that positivism was defined by Aguste Comte, who has been called one of the first philosophers of science (Bourdeau:2010). From the positivist view, the creation of facts involves a theory. The approach involves induction 'the formulation of a general statement suggesting an association between to or more variables...derived from a series of empirical observations' (Szerszynski, 2010). From this process of induction, the 'facts' can then be applied in the real world through deduction, making a prediction based on these 'facts'.

This process appears problematic on some fronts. First, on the lexical level, the term 'suggesting' appears to vague if the aim is the formulation of concrete 'facts'. Also, the role of empirical data as establishing facts is questionable in the context of social data. In the social sciences, it is highly doubtful if empirical data can be collected without bias or impartiality. The multitude of social factors such as culture, social hierarchy and gender will have a significant effect collected data. It would then be difficult to produce general statements, free of context. Natural science can have a control of their research environments, unlike the social sciences.

Considering the area of analysing digital literacy events, the idea of deduction is not the goal and it could not be accepted that the statements gleaned from observation represent a broader fact. Analysing pairs of participants talking about their favourite websites contains too many variables: assumed knowledge of participants; location of table, chairs, computers and lighting sources; level of familiarity between the participants and computer literacy to name a few. These factors outlining the complexity of recording impartial empirical data illustrate the complexity and diversity of factors involved in collecting data for human research; a positivist approach would require large amounts of quantitative data, and then could not generate general statements without stating contextual constraints, which would in effect, degrade the 'truth' of the statements. Positivism has been dominant in some areas of social science (economics and psychology) but not in others (Szerszynski, 2010) illustrating the point that its application is somewhat restricted.

Another reason positivism is incompatible with much human research is that it shares 'the assumption that, in natural as in social sciences, the researcher can be separated from the object of his/her research and therefore observe it in a neutral way and without affecting the observed object' (Della Porta and Keating, 2008: 24).

2.3 Karl Popper

Contrary to the positivist approach, Popper proposed critical rationalism, arguing that 'there are no unmediated, theory-free observation statements that scientists can use to construct or corroborate theories' (Gorton, 2006:26), claiming that theories come before facts. Popper believed that one can never prove a theory is true, so all theories are open for falsification or refutation. Briefly, falsification is the process in which a statement or theory could be proved wrong. If a theory is not falsifiable, it cannot be challenged, and therefore cannot be accepted as having scientific worth. By placing theory before empirical findings, Popper claimed developments can come from trial and error, and not induction.

With analysing literacy events, the research questions are also proposed through experience and identification of a problem. In a pilot study carried out (Adams, 2009), classroom observations had revealed that participants were in fact doing very little speaking in the task 'explaining a favourite website to another person', instead relying on other communicative modes such as gesture and gaze to direct the other participant. The actual language uttered was also not as expected. Instead of descriptions and embedded reviews, the language was mostly instructional, imperative clauses directing the other participant to the computer screen. The 'speaker' had relied on the digital media to communicate meanings, guided by language, other modes and object manipulation (computer

mouse) to 'explain' the contents of the webpage. This problem identification is the basis for detailed research.

The concept of falsification is significant, as it focussed attention of the language researchers used so writing should be clear and unambiguous. That a theory should be testable and challenged is the contribution Popper's falsification made.

There are problems however, with the concept of falsification. First, Popper claimed, the greater the falsifiability of the theory, the better. In the realm of natural sciences, this may be appropriate. However, in human research the success of research is not aimed at creating bigger facts about humanity but finding answers to specific, targeted groups or situations and contexts.

Real scientific theory does not have one simple statement, which can then be tested or falsified. More likely, a theory will involve multiple statements, and be based in part from previous theories. This makes falsification difficult as other assumptions, instrument setups and so on are vital for any real world experiment. As Rosenberg summarises, 'even the simplest hypothesis requires auxiliary assumptions' (2000:113). Even Popper admitted that 'even in the natural sciences no falsification can ever be deemed clear-cut or final' (Gorton, 2006:54).

Finally, if Popper claims that no theories are ever truthful, but only the best answer for the time, then 'straightforward, conclusive falsifications of theories by observation are not achievable' (Chalmers, 1999:88). How can a theory be falsifiable if it also claims to not be true? Even though Chalmers outlines this contradiction, the critical rationalist concept of there never being absolute truths, but best answers to problems at a specific time, does impose a rule of being open to criticism, and therefore prolonged, dialogic examination by other researchers.

2.4 Thomas Kuhn

Kuhn made a significant impact by claiming that science does not evolve through logical progression, but through phases of 'revolution', shifting paradigms from the old guard to the new guard. He argued that the 'new' and 'old' guards of a scientific discipline were incommensurable, being unable to be measured against the same standard. This questioned the role and function of the 'hard sciences', as science lost its rationality under Kuhn's argument that 'science is, first and foremost, the characteristic set of activities of a particular social group' (McMullin, p.493 in Balashov and Rosenberg (Eds.), 2002)ⁱ. He claimed the revolution happened only because the old guard 'can only confront the new theory as if it were a foreign language...even though the same words were used' (ibid.).

Kuhn's problem with the 'old guard' and 'new guard' offers words of caution. As cultures and social practices change so rapidly and the difficulty of researchers to remain impartial in collecting data on location, the possibility of misinterpretation needs to be considered. Even changes in stock phrases, influenced by media aimed at specific demographics can have very different meanings. Kuhn's rhetoric outlining miscommunication and generational misunderstandings are a very real issue on all levels of research.

He also claimed that when a scientific discovery was tested, it was only the scientists conjecture being tested and not an autonomous theory, or truth as Popper stated. However, despite this radical approach to defining advances in science, Kuhn maintained, unlike Popper, a deep commitment to tradition. What this means is that he accepted a manipulation, or addition of auxiliary assumptions to theories to develop science. In fact, he stated that 'it is often by challenging observations or adjusting theories that scientific knowledge grows' (1962:13).

It is this last contribution of Kuhn that I feel is significant for the study of digital literacy events. Kuhn promotes the modification or adjustment of theory in order to develop understanding. This practice is valuable in my context where the study of literacy has been expanded and adapted to research digital literacies and evolving social practices. By making adaptions of theory from Brice Heath's (1983) literacy event based on children's bedtime stories, the field of literacy has broadened to explore adult literacy practices, second language learner and digital media contexts to name a few.

In my research context, the modification of methodological frameworks is also important to deal with evolving social practices and new means of technology-based communication. The rapidly evolving technologies and social structures require modification of theories in order analyse, and therefore understand the world around us.

2.5 Wittgenstein

In contrast to Popper's epistemological focus, Wittgenstein's was generally linguistic (Rodych, 2003:324), questioning the possibility of a word actually meaning the real world phenomena, and therefore denying that the naming relationship of language could create a raw connection to the world. Even though he did not doubt that a word could represent something, or a word stand for a phenomena, at a core level, the connection was not the relationship of pure meaning, and therefore a bond with the world.

This issue is also raised by Wittgenstein's critics, who use the same argument in favour of the relationship of language and what it describes. Hughes and Sharrock, (1998:148) outline this by stating 'the fact that names can be given to things suggests that if the meaning of a word is the thing that it stands for, then the meaning is determined by the nature of the thing the word stands for'. This places language in a symbiotic relationship with the phenomena they describe, in opposition to Wittgenstein's opinion that on a deep level, words can never 'mean' the phenomena they represent because grammar is autonomous. Wittgenstein justifies the point that language and its connection to the world presupposes social relations, and therefore weakening the argument for a primal bond between phenomena and naming. He claimed that words develop according to the activities in which they are used and how they best fit in.

From looking at both these view points, it seems the critic's view point is acceptable if we take a relativist position. The Wittgensteinian position does not appear to be refutable through language or argument, and in Popper's terms, be unfalsifiable, leading the theory to be accepted or not.

Wittgenstein also influenced EM. Lynch states that ethnomethodologists use readings of Wittgenstein's texts, as a way to 'inspire and guide empirical research' (1993:163). Lynch outlines one of Wittgenstein's paradoxes; a boy is given a counting game, the pupil makes a mistake when the game exceeds a certain number. The pupil had followed the rules consistent with his previous experience; he had made an interpretation based on his previous experience and outside of the practices of the community in which the game was being held. This emphasis on social conventions in context is held up as Wittgenstein 'turning from philosophy to sociology' (1993:168)ⁱⁱ.

2.6 Relativist interpretation in the social sciences

Relativists argue that a language-independent reality can exist, as reality is 'produced, constituted and constructed through reality' (Hughes and Sharrock, 1998:145). The authors state that due to this, there can be as many different realities as there are structures of language. Therefore, what is true in one language can be very different in another language; the relativist position.

Winch (1990) argues against this view point, stating that in natural science, phenomena happen regardless of whether humans are there to describe it. Relativism obviously implies a clear ontological division of the natural and social worlds, and therefore the epistemological implications of this. It is therefore possible to consider relativism as diffusing tension between the natural and social sciences by clearly defining the social world as different, and requiring multiple viewpoints and context specificity. Considering the natural sciences, it is also a concept that should be considered, as even measuring devices and even concepts of time scales are constructed by humans. It is not possible to separate ourselves from the world we belong to and wish to understand.

In the social world, the impact of the social actors involved in the process of understanding their own reality are dependent on the human activities under analysis, which in turn must be defined by those doing them. This is in opposition to the positivist approach discussed above, and it seems more logical. However, some issues arise regarding the possible impartiality of human research. It also raises questions as to the extent we are able to understand actions impartially in our own context, as we are never entirely free from the environment we are attempting to understand.

The relativist approach, I feel, is an important consideration in the context of literacy events. The context of cultures can be and should be considered across smaller scales than countries, to include the micro-cultures and subcultures of populations. It is also important to be aware of the inescapable fact that we are part of the social world we are trying to understand more.

2.6.2 Peter Winch

Winch (1992) presents another view of perceiving reality, by challenging the traditional 'scientific' approach. Using an example of witchcraft, he highlights that the description given by the twentieth century anthropologist Evans-Pritchard was inaccurate, as it had applied a scientific model to analyse religious practices. The implications, Winch argues, present a seriously distorted view of reality. As the opposite to positivism, which sought universal, causal relations, Winch proposed that there were other regularities in the social world. In essence, there was a site-specificity to patterns in human action.

To summarise, Hughes and Sharrock claim the researcher learns from another culture without necessarily being part of the group, and by not taking on a scientific method, but by being taught similar to an anthropologist. They conclude that the social sciences are very different, and need different methodology from the natural sciences because 'social actors already live in a world which has meaning for them...' and these 'are not resolvable by theorising or causal analyses'. This final point underlies the context dependancy of social research, but Winch's focus on interpretation is open for criticism, such as Macintyre (1996) who quite rightly argued that it was important to put into context causes that led up to the event itself' (1996:129) and not just interpretation.

An important contribution Wittgenstein gave was to remind us that the connections between words and phenomena require as a precondition the existence of the social world and therefore, recognition of the importance of the sociocultural context in talking about our world. The influential field of ethnomethodology will be discussed in the next section.

3. Ethnomethodology

As well as Wittgenstein, EM was also influenced by phenomenology, which sought to describe experience from a neutral standpoint. Maynard (1991:279) validates the role of phenomenology by arguing that 'the lack of attention this field has received has been a factor in social theory's neglect of the temporality of everyday life'.

In contrast to Durkheim, who analysed and attempted to describe social order, Garfinkel's approach was to analyse the everyday production of social order (Lynch, 2004), studying everyday activities as 'practical, ongoing achievements' (Garfinkel and Sacks in Garfinkel (Ed.), 1996:167). Proposing that 'the character of actual, real world, practical action will invariably escape the theoretical construals and methodological applications of those doctrines' EM claims 'the organisation of everyday life is presupposed in the practice of professional sociological inquiry, rather than portrayed by it' (Hutchinson, Read and Sharrock, 2008:94). To summarise, EM is a 'micro-epistemology' (Beemer, 2006:82) holding the assumption that 'that people are not pushed about by forces outside of their control but shape, create and recreate their own social world' (Best, 2003:131).

Within the category of interpretive sociology, EM, by identifying 'the objective reality of social facts as an ongoing accomplishment of the concerted activities of daily life' as 'a fundamental phenomenon', analyses 'everyday activities as members' methods for making those same activities visibly-rational-and-reportable-for-all-practical-purposes' (Garfinkel, 1967:vii). In other words, the aim of EM is praxiological; it seeks to describe human conduct.

This shift of focus in the approach of sociology does not detail a specific methodology, but seeks to understand human methods in everyday life. Garfinkel claimed 'social knowledge is revealed in the process of interaction itself' (Gumperz, 1982:158), which paved the way for conversation analysis (CA) and other types of analysis. In CA, Sacks, Schegloff and Jefferson (1974) applied the ethnomethodological assumption of talk being a practical activity that we use to create and maintain our social selves. They focussed the analysis on 'members' methods' (informal rules that individuals draw upon to make sense of the world around them' Best, 2003:132). It has been claimed that EM 'denies the significance of all larger contexts (proper method, disciplines, institutions, etc.) by focusing upon very local, emergent, interactional orders' (Lynch, 2005:141), but considering the influences of EM in other disciplines to explore societal mechanisms and social class membership such as critical ethnography in and the 'founding work in conversational analysis' (Eggins and Slade, 1997:25), this is highly questionable.

A major focus of Garfinkel's EM is indexicality (Attewell, 1974:185). Indexical expressions refers to language 'whose sense depends on the local circumstances in which they are uttered and/or which they apply' (Have, 2004:21). The concept is significant because it places context as essential to understanding human action in situations. This term has been used in applied linguistics, discourse analysis Scollon and Scollon's Geosemiotics (who also use a very similar definition outlined in chapter two (2003:25-44). With literacy event analysis, indexicality is significant in that it has been developed beyond language to include gesture, images such as signs in public places and even computer icons.

A criticism of EM is that ethnographers attempt to describe the culture from participants within that culture, 'rather than focussing on the observable' (Silverman, 2006:102). There are obvious positive and negative points to this. First, the complex, context-specific nature of recording data of interactions cannot allow a proscribed method of recording. Over the last thirty years, data collection methods have advanced from tape recordings to full audio and video recordings. On the positive side, such modern methods allow for minute detail to be captured, which may have been missed with audio-only data. Also, the combination of audio and video can capture data more objectively than field notes and memory. However, factors such as the angle of cameras, choice in what to record are reminders that video data is not necessarily objective. Also, there are issues with the impact such equipment have on the participants, as well as ethical issues concerned with recording people.

One issue which needs to be raised is an apparent paradox regarding the authenticity of ethnomethodological studies. If the data has been collected and analysed within the context of the study, by removing the findings and presenting in specific contexts such as international conferences and journals, would render the insights as severely abstracted from the context in which the data made sense. Therefore the readers or audience of the insights are removed from the insights by context, and any attempts to provide further contextualisations could only be achieved through language or video, which would add further contextual distance between the source of data and the intended audience.

This issue is similar to the communication gap Kuhn stated in the conflict of the old guard having problems with new developments proposed by the new guard; interpretation problems can occur with different groups holding potentially different values. Maynard and Clayman (1991:387) address this argument by defining EM's underlying principle. The authors claim raw experience is already ordered by the actors of the activity (based on Parson's (1937) premise that theory at the most basic level employs a descriptive frame of reference to order the stream of experience). From this view point, empirical generalisations can be derived, and in turn, so can analytical laws to explain the isolated description.

Another issue for criticism is the lack of a shared methodology. However, the very definition of EM rules out quantitative data. EM creates a clear break from the natural sciences, as highly detailed, context-specific investigations, whose methodology is also context specific. It is not just EM's methods which lack categorisation; even its placement in the field of sociology is difficult to locate (Hilbert, 1992:25).

EM's lack of centralised methodology for collecting data has resulted in new forms of collection to record human action and therefore new methods to transcribe and prepare the data for analysis. With little explicit definitions of method, but an emphasis on procedures being 'adequate to the materials at hand and to the problems one is dealing with, rather than them being pre-specified on a priori grounds'. (Have, 2001:23-51).ⁱⁱⁱ As a counter to the criticisms that EM does not contribute any more significantly than other methods, Garfinkel issues a blanket defence of his work, claiming that EM does not dispute the achievements of 'formal analytic technology' but 'asks "What more?" is there that the users of formal analysis know and demand the existence of' (1996:6).

Cross- and intercultural considerations of participants are also part of EM, as an important element of EM is the assumption that people do not share common symbolic meanings (Pfohl, 1985:292-3). Detailed, context-dependent research needs to be critical to avoid misinterpretation. Interestingly, there are similarities with Kuhn's descriptions of scientific discovery as illustrated by Atkinson (1998). The author details an ethnomethodological approach to analysing scientific discourse, stating 'Scientific discovery here is treated as a practical worldly activity of scientists, rather than as a matter for philosophical legislation' (1998:445).

The developments and insights led by Garfinkel have produced various research in many contexts. The emphasis on the 'everyday character of work' has led to 'some prominence in workplace studies' (White et al., 2004). Sharrock (1989:657-658) outlines a wide range of studies 'of a more or less ethnomethodological sort', over diverse institutional settings and conversation, and more importantly, proposes the significance EM can offer social science through the examination of examples 'examining them closely enough to ensure that they do unequivocally example what they are supposed to' as opposed to providing limited examples, treating them in a superficial, often cavalier manner' (1989:663). This statement highlights the perceived contribution to social science from the ethnomethodological perspective, an insistence that understanding human activity can be attained through detailed analysis.

EM has also been credited as 'providing legitimation to ethnographic methods' (Anderson, 1989:251), contributing to the research strategy ethnography, which considered central to research in education and many other areas involving the study and description of customs and cultures of people (Jordan and Yeomans, 1995).

4. Philosophy of social sciences in the Japanese university context of digital literacy event analysis

The theories and philosophies discussed in this paper are only part of the much wider scope of developments in ontologies and epistemologies in the social sciences. Therefore, the conclusions and summaries drawn from the developments outlined are not exhaustive. From comparing and contrasting philosophical approaches, it would be doubtful to align my research with any particular approach in an absolute sense.

What can be drawn from social science philosophy are general approaches and views regarding ontologies and epistemologies (and with this, the broader issues of politics and ideologies). In this section, I will outline elements of theories and approaches of the philosophies discussed in sections two and three.

First, positivist empiricism has contributed to my research from the point of formulation of interest in a topic. The value of empirical observation is high in any situated research. With the exception of the concept of induction, the underlying process of making observations as a starting point has been the basis of my investigations. What differentiates literacy event research from positivism is the concept of deduction: I do not consider empirical data obtained from analysis as fact, and do not aim to draw generalisations from data through deduction. This is mostly due to the nature of methodology, which is a microethnographic analysis.

Popper's falsifiability is a useful concept in the construction of research questions. Despite criticisms of idealism, with real-world theories being too complex to be falsifiable, it does reinforce the issue of clarity of language: research questions should be testable. I agree with Popper's contention that something which cannot be challenged does not therefore have much significance as a contribution to research. Also, Popper's position that a theory can never be claimed as true is another value applicable in my context. The search for universal truths appears naive and somewhat outdated, especially considering the acceleration in social theories over the past forty years.

The work of MAK Halliday and his systemic functional analysis of language as a social semiotic have offered important insights into applied language and communication in my research, and Wittgenstein has been credited as an influence as well as CA and EM (Lowe, 2008). This highlights the significance of Wittgensteinian ideas within my context, and the connection to developments in linguistics and EM.

Thomas Kuhn's contribution to my context can be summarised as identifying that the modification of theories can be carried out to develop and positioning myself in the context of the researchers and theories being applied in the university context. Firstly, literacy event interactions involve analysing literacy practices, which require a multidisciplinary approach, combining multimodality, literacy, digital literacy, gesture studies and social semiotics. It would be very difficult to grasp such a topic without modifying theory to address contemporary literacy practices. Kuhn's claim that discoveries come through ad hoc modifications of theories without necessarily changing the general theory justify adaption to different settings. Regarding the theory applied, Kuhn's idea that a scientist is testing their conjecture and not an autonomous theory, is also appropriate in my context.

I do not intend to theorise grand statements from my microethnographic analysis, and with the theory being applied, it is referenced by authors and not a timeless, autonomous theory.

The concept of a theory never being a fixed truth is elaborated upon in relativism, which also has made contributions to conceptualising my research. This is especially important in justifying any assumptions made from research in my context, which involves cross-cultural communication. The participants in my study are Japanese native speakers, communicating in English with computer-mediated texts. This situation represents many areas where potential different viewpoints can arise. Winch's argument that it is impossible to separate the world with the social actors being studied is appropriate. Ethnographic data collection involves the context in its entirety, so the presence of recording equipment and researcher cannot be ignored.

The context-specific nature of human research outlined by Winch supports the ethnographic methodology I intend to apply for my investigation. Significantly, the criticism by Macintyre (1996) that causal factors should be involved in analysis as adds support to an ethnographic approach, which embraces detailed study without a fixed ideology^{iv}.

Finally, the impact of ethnomethodology has been significant in an indirect way. The basic concept of embedded, detailed study and the related complexities are a central consideration for my analysis. However, as discussed above, the focus of my study is different. Therefore, I feel the pioneering work of ethnomethodology by Garfinkel is significant in that it addresses 'situated social action', an issue in my research.

Important to my study are the research approaches which followed such as ethnography, conversation analysis and even gesture studies (Streeck, 2009). Following that, other developments in the fields of interaction analysis, social semiotics and multimodal interaction analysis have addressed the study of everyday interactions with different approaches. The contributions of ethnomethodology in my context are therefore similar regarding the situation of study (situated social action) but different ontologically (primarily, describing communication and not how communication is constructed).

5. Summary

The discussions in the previous chapters have sought to identify the general concepts behind the theories, identify relations between them and evaluate the main points within my research topic. The areas discussed are not exhaustive, and the diverse area of critical realism and transcendental realism has been omitted.

It is clear from the ideas and theories presented throughout the development of the philosophy of social sciences that the general aim of science of finding answers to problems remains. What has changed is the increase in attention the social world has gained in philosophical inquiry, and as a result ontologies, epistemologies and various other philosophies have evolved to answer increasing volumes of issues. Sciences have evolved and advanced with the changes in the real world. The current period of late capitalism has also had an impact on the developments in social theory, implying that social science exists symbiotically with and within the context it analyses.

Having an understanding of how knowledge is built and processed is important for all social researchers as it helps establish a concrete foundation upon which to formulate research questions and interact within the research context. By grasping the concepts of building knowledge, it is much easier to discuss the 'facts' and data obtained. Research findings are defined and discussed within contexts, frameworks and varied underlying ideologies. It is the role of my research to seek answers and explanations not just of the data, but within the social world in which it exists. As a result, the

analysis of digital literacy events in my context cannot be aligned with any particular approach, but commit to the ongoing process of questioning the values, processes and theories surrounding social world knowledge.

Bibliography

Adams, J. (2009). A Multimodal Interaction Analysis of Japanese University Students Speaking with Digital Media. Postgraduate Certificate of Linguistics Research. Department of Linguistics, Macquarie University, Sydney.

Anderson, G. (1989). Critical Ethnography in Education: Origins, Current Status, and New Directions. *Review of Educational Research*, 59(3), 249-270.

Atkinson, P. (1988). Ethnomethodology: A Critical Review. Annual Review of Sociology, 14, 441-465

Attewell, P. (1974). Ethnomethodology since Garfinkel. *Theory and Society*, 1, 179-210. Elsevier Scientific Publishing Company, Amsterdam.

Beemer, J. (2006). Breaching the Theoretical Divide: Reassessing the Ordinary and Everyday in Habermas and Garfinkel. *Sociological Theory*, 24, (1), 81-104.

Best, S. (2003). A beginner's guide to social theory. London: Sage.

Bourdeau, M. (2010). Auguste Comte. The Stanford Encyclopedia of Philosophy (Fall 2010 Edition).

Chalmers, A. F. (1999). What is this thing called science? Buckingham: Open U.P.

Eggins, S. and Slade, D. (1997). Analysing Casual Conversation. London: Equinox.

Garfinkel, H. (1996). Ethnomethodology's Program. Social Psychology Quarterly, 59(1), 5-21.

Garfinkel, H. and Sacks, O. (1986). On formal structures of practical actions. In Garfinkel (Ed.) *Ethnomethodological Studies of Work* (p.167). London and New York: Routledge and Kegan Paul.

Garfinkel, H. (1967). Studies in Ethnomethodology. New Jersey: Prentice Hall Inc.

Gorton, William. (2006). Karl Popper and the Social Sciences. Albany: State University of New York Press.

Gumperz, J. (1982). Discourse strategies. Cambridge: Cambridge University Press.

Hilbert, R. (1992). *The classical roots of ethnomethodology: Durkheim, Weber, and Garfinkel.* Berkley: North Carolina Press.

Hughes, J. and Sharrock, W. (1998). The Philosophy of Social Research. London: Pearson Publishing Group.

Hutchinson, P., Read, R. and Sharrock, W. (2008). *There is no such thing as a social science: in defence of Peter Winch*. Aldershot: Ashgate Publishing Limited.

Jordan, S. and Yeomans, D. (1995). Critical Ethnography: Problems in Contemporary Theory and Practice. *British Journal of Sociology of Education*, 16(3), 389-408.

Kuhn, T. (1962). The Structure of Scientific Revolutions. 3rd edition, 1996. Chicago: University of Chicago Press.

Lowe, M. (2008). Michael Halliday at 80: A Tribute. *International House Journal online*, 24. Retrieved November, 2010 from

http://ihjournal.com/michael-halliday-at-80-a-tribute/print/

Lynch, W. (2005). The Ghost of Wittgenstein: Forms of Life, Scientific Method, and Cultural Critique. *Philosophy of the Social Sciences*, 35, 139.

Lynch, M. (2004). 'Ethnomethodology'. *The Social Science Encyclopedia*, Second Edition. Taylor & Francis Group.

Lynch, M. (1993). "Wittgenstein, Rules, and Epistemology's Topics." In *Scientific Practice and Ordinary Action: Ethnomethodology and Social Studies of Science* (Ch. 5). Cambridge: Cambridge University Press.

Maynard, D. (1991). Goffman, Garfinkel and Games. Sociological Theory, 9. (2), 277-279.

Maynard, D. and Clayman, S. (1991). The Diversity of Ethnomethodology. *Annual Review of Sociology*, 17, 385-418

McIntyre, Lee C. (1996). *Laws and Explanation in the Social Sciences: Defending a Science of Human Behaviour*. Oxford: Westview Press.

McMullin, E. (2002). The Social Dimension of Science. In Balashov, Y. and Rosenberg, A. (Eds.). *Philosophy of Science: Contemporary Readings* (p.493). London: Routledge.

Nickles, T. (2003). Thomas Kuhn. Cambridge: Cambridge University Press.

Porta, D. and Keating, M.(Eds.) (2008). *Approaches and Methodologies in the Social Sciences*. Cambridge: Cambridge University Press.

Pfohl, S.J. (1985). Images of Deviance and Social Control: A Sociological History. New York: McGraw-Hill.

Rodych, V. (2003). Popper versus Wittgenstein on truth, necessity, and scientific hypotheses. *Journal for General Philosophy of Science*, 34, 323–336.

Rosenberg, A. (2000). Philosophy of Science. A contemporary introduction. London: Routledge.

Sacks, H., Schegloff, E. A., and Jefferson, G. (1974). The Simplest Systematics for the Organization of Turn-Taking for Conversation. *Language*, 50(4), 696-735.

Scollon, R. and Scollon, S. (2003). Discourses in Place. London: Routledge.

Silverman, D. (2006). Interpreting Qualitative Data. London: Sage.

Sharrock, W. (1989). Ethnomethodology. The British Journal of Sociology, 40(4), 657-677.

Streeck, J. (2009). Gesturecraft: The manu-facture of meaning. Amsterdam: John Benjamins Publishing Company.

Szerszynski, B. (2010). 'Week 2: Empiricism, Positivism and Falsificationism' Powerpoint.

Have, P. (2004). Understanding Qualitative Research and EM. London: Sage.

Have, P. (1990). 'Methodological issues in conversation analysis', *Bulletin de Méthodologie Sociologique*, 27, 23-51.

White, I., Kelly, S., Randall, D. and Rouncefield, M. (2004). 'Following The Leader: Ethnography, EM and Educational Research'. Paper presented at *the British Educational Research Association (BERA) Annual Conference*, Manchester, UK, 16th-18th September 2004.

(Associate Professor, School of General Education, Shinshu University) 18/ Jan. / 2012 Received 31/ Jan. / 2012 Accepted

Notes

¹ The cycle of Kuhn's definition of 'normal' science to 'revolution' is clearly outlined in Hughes and Sharrock (1998:158).

 $[\]hat{i}$ This example is discussed in further detail in the chapter and questioned for its validity to represent sociological significance, as the act of counting is its own embedded practice. Regardless of this, Wittgenstein has, as stated earlier, had a significant affect ethnography and applied linguistics research.

ⁱⁱⁱ However, Have does state on the same page 'recordings are CA's basic data' (ibid.).

^{iv} White et al. (2004:5) highlight the differences in ethnography and ethnomethodology, with ethnography being 'a gloss on various analytic frameworks' which have allowed for marxist, feminist and postmodern ethnographies, ethnomethodology has a standpoint in 'which member's methods for accomplishing situations in and through the use of local rationalities becomes the topic of enquiry'.