ANALYSING INTERACTION:

Video, ethnography and situated conduct

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Introduction

Some of the finest ethnographic studies of organizations emerged in Chicago following the Second World War. Due in no small way to the lectures and essays of E. C. Hughes, a substantial body of naturalistic studies of work and occupations emerged which began to chart the routines and realities involved in everyday organizational life. Hughes, his colleagues and students, powerfully demonstrate, through numerous empirical studies, the ways in which work is thoroughly dependent upon, and inseparable from a tacit and emergent culture which is fashioned and refashioned in the light of the problems that people face in the routine accomplishment of their day to day work. For Hughes, social interaction lies at the heart of organizational life. It is through social interaction that organizations emerge and are sustained; it is a consequence of social interaction that people develop routines, strategies, practices and procedures, and it is by virtue of social interaction that clients receive, and perceive, goods and services in ways defined by the organizations and its occupation(s). For example at one point Hughes suggests

> The subject matter of sociology is interaction. Conversation of verbal and
> other gestures is an almost constant activity of human beings. The main
> business of sociology is to gain systematic knowledge of social rhetoric.
>
> (Hughes, 1971: 508)

The commitment of Hughes to interaction as 'the subject matter of sociology', reflects a long-standing recognition within the discipline of the importance of social interaction to human existence and sociality. It pervades the writings of major figures such as Durkheim, Weber and Parsons, and

Simmel goes so far as to suggest that the 'description of the forms of this interaction is the task of the science of society in its strictest and most essential sense' (1950: 21-22). Despite the importance that sociology ascribes to social interaction, the details of its production remain surprisingly disregarded. Interaction provides the foundation to social organization, it informs sociological theorizing, it underpins substantive contributions across a variety of fields and yet largely fails to form a topic of inquiry in its own right. It is extraordinary to consider that Goffman in his presidential address to the American Sociological Association in 1982, more than century after the emergence of a discipline of sociology, felt it necessary to plea for the study of 'the interaction order' .

In this chapter, we consider the ways in which the social and interactional organization of everyday activities can be subject to detailed scrutiny. The discussion draws from ethnomethodology and conversation analysis. It is concerned with how we can use video recordings of everyday settings, augmented by more conventional field work, to explore the ways in which participants accomplish practical activities in and through interaction with others. It is not however solely or even primarily concerned with the analysis of talk, but rather with ways in which the production and interpretation of action relies upon a variety of resources - spoken, bodily and of course material resources, such as objects, texts, tools, technologies and the like. We would also like to mention in passing the relation between more conventional ethnography and studies of 'talk-in-interaction,' and explore some ways in which we might interweave one or two concerns within these very different approaches.

The example we will discuss is drawn from a medical consultation in general practice. We have chosen this example since it is a domain which has

been subject to a substantial body of ethnographic or qualitative research from a range of standpoints. It is also a setting which is familiar to us all and does not require a lengthy introduction or explanation. The chapter discusses why and how we might collect video recordings of everyday activities for research purposes and proposes a number of analytic considerations or assumptions which might help inform the analysis of relatively fine details of social interaction. It then focuses on the example. To begin however it is perhaps helpful to discuss why video-based field studies may provide a distinctive contribution to our understanding of the medical consultation as well as of course a broad range of other everyday activities.

Ethnography and institutional talk.

The professions in medicine and medical practice formed topics of particular interest to Hughes, his colleagues and students. Consider for example the powerful study by Strauss (1964) concerned with the organization of psychiatric care, Roth's (1963) treatise on the treatment negotiation in tuberculosis clinics, and Goffman's (1961) influential analysis of the career of mental patients. These and an extraordinarily rich array of related studies (for example Davis 1963, Glaser and Strauss 1965, Becker 1963) have had a profound influence on the ethnographic research, and their approach, their analytic concerns, and their conceptual distinctions pervade more contemporary studies of medical practice and occupational life (for example Strong 1979, Atkinson 1995). In characterizing his own work and the studies of his colleagues and students Hughes neatly summarizes their concerns and approach to the analysis of work and interaction. He suggests that the aims are:

.. to discover patterns of interaction and mechanisms of control, the things

over which people in a line of work seek to gain control, the sanctions

which they have or would like to have at their disposal, and the bargains

which were made - consciously or unconsciously - among a group of workers

and between them and other kinds of people in the drama of their work.

(Hughes 1971: 240)

Despite their commitment to social interaction and the organization of everyday practice, there has been a growing recognition that ethnography, at least studies in the genre of Hughes and related research, fail to get to grips with the practical and concerted accomplishment of work - that is to examine and explicate the interactional and contingent character of practice and action. So for example in medicine, professional practice is accomplished at least in part through people talking with each other, whether its doctors and patients within the consultation or the members of different professions engaged in highly technical activities. The issue is not simply one of detail, or as computer scientists sometimes say 'granularity', but rather that the emergent, practical and contingent accomplishment of work and occupational life disappears from view,- from analytic consideration - in these fine ethnographies. Social interaction is placed at the heart of the analytic agenda and yet the very concepts which pervade certain forms of ethnographic research, concepts such as 'negotiation', 'bargaining', 'career', 'shared understanding', 'trajectory', even 'interpretative framework', gloss the very phenomena that they are designed to reveal.

Over the past few decades we have witnessed the emergence of a very different body of sociological research; a corpus of studies which have attempted to examine in fine detail the social and interactional organization of everyday activities. Emerging through ethnomethodology, research in

conversation analysis has been increasingly concerned with 'institutional interaction' and in particular 'talk at work' (see for example Boden and Zimmerman 1991, Drew and Heritage 1992). Medicine, medical practice and the delivery of health care has become a particular focus of these studies, and there is growing body of studies of talk and interaction in such areas as oncology, general practice, psychiatry, nursing, instruction, and counselling (e.g. Bergmann 1992, ten Have1991, Heath 1986, Maynard 1992, Peräkylä 1998, Pilnick 1999). These studies powerfully reveal the ways in which a broad range of activities such as investigation, diagnosis, treatment and advice are accomplished in and through interaction, in particular talk, and chart the practices and procedures, conventions and reasoning through which patients and practitioners produce and make sense of their everyday practical activities in concert with each other. Despite the analytic richness of these studies however and their concern with social interaction it is not at all apparent that for ethnographers such studies provide a satisfactory contribution let alone a way forward for studies of work and interaction.

There is not the space here to discuss these issues in any detail but it is perhaps useful to mention one or two points that bear upon the following discussion. In general, the tension derives from the very different idea 'context' found within these bodies of sociological research and ways in which particular characteristics can be said to play upon, or feature in, the organisation of conduct. For ethnography, for example, the seemingly narrow focus on talk, and disregard of such potentially relevant features as- the identities of the participants and their professional background, the wider organisational framework, and the physical setting appears to produce a denuded characterization of conduct. For conversation analysis, a rigorous commitment to demonstrating empirically the relevance of particular features

of the context to the actual production of action by participants in interaction removes any liberal appeal to an array of potentially, <u>but undemonstrable</u>, 'broader' contextual characteristics (see Silverman 1999).

In this chapter we wish to address one or two of these tensions by discussing the ways in which we can begin to consider how bodily conduct and material features of the setting, as well as talk, feature in the practical accomplishment of social activities. In particular, we explore the ways in which talk is inextricably embedded in the material environment and the bodily conduct of the participants, and how objects and artefacts such as paper and pens become momentarily relevant with the course of particular actions and activities. We also wish to point to the critical import of undertaking field work as well as collecting recordings when undertaking studies of specialized forms of activity such as medical practice. In this way we hope to illustrate how characteristics of the setting which are given some importance in many ethnographic studies may be reconsidered or respecified using a rather different analytic framework.

Analytic Considerations

Since its inception, qualitative sociology has drawn heavily upon field studies and in particular (non)participant observation of naturally occurring activities in everyday settings. Field work has provided the critical resource for the discovery of indigenous social organization and a whole assembly of concepts and theories have emerged which are richly suited to characterizing observations - concepts such as career, negotiation, labelling, performance, role distance and the like (see for example Hughes 1958, Goffman 1967). Field work is of course critical to any research which is concerned with

investigating specialized forms of social activity and settings with which researchers may be unfamiliar, but it is not clear that it provides the resources necessary for the analysis of social interaction. For example, it is not possible to recover the details of talk through field observation alone, and if it is relevant to consider how people orient bodily, point to objects, grasp artefacts, and in other ways articulate an action or produce an activity its unlikely that one could grasp little more than passing sense of what happened. Moreover, to a large extent, participants themselves are unaware of the ways in which they organize their conduct in interaction; they are inevitably engaged in the topic or business at hand rather than the analysis of the ways in which it is being accomplished. Indeed, as Garfinkel (1967) and in a rather different way Goffman (1963) demonstrate, the competent accomplishment of social actions and activities is dependent upon participants glossing the very ways in which they produce and recognize conduct. So for example consider the way in which we can only provide the most cursory insights into the production of the most seemingly banal activities such as asking a question, stepping on an escalator, pointing to a picture, even though such actions are dependent upon an array of social and interactional competencies. The tacit, 'seen but unnoticed' character of human activity and social organization, coupled with the complexity of action and interaction, suggests that we need additional resources if we hope to explicate the details of human conduct in its 'naturally occurring' environments.

Video recordings help provide those resources. They allow us to capture versions of conduct and interaction in everyday settings and subject them to repeated scrutiny using slow motion facilities and the like. Thus, they provide access to the fine details of conduct, both talk and bodily comportment. They allow us for example to track the emergence of gesture, to determine where

people are looking and what they looking at, and to recover the ways in which they orient to and handle objects and artefacts. They also provide the opportunity to show the data on which observations are based to other researchers and subject their analysis to the scrutiny by members of the academic community, a problem which has long haunted more conventional ethnographic research. Unlike more conventional ethnographic data, video recordings can provide the opportunity of developing a data base which can be subject to a broad range of analytic concerns and interests; they are not simply tied to particular projects, specific approaches, or the interests of a particular researcher.

For those with an interest in the material settings in which action and interaction arises, video recordings provide researchers with the opportunity to analyze the emerging characteristics of those ecologies. We can for example see people writing documents, manipulating objects, using artefacts such as telephones, computers, fax machines and the like; we can also recover changes on screens such as computer or television monitors, additions to records, modifications to plans, and the like. Video recordings therefore provide us with a resource with which to analyze 'situated' action; as it emerges within its ordinary ecologies (1).

> In sum, the use of recorded data serves as a control on the limitations and fallibility's of intuition and recollection; it exposes the observer to a wide range of interactional materials and circumstances and also provides some guarantee that analytic considerations will not arise as artefacts of intuitive idiosyncrasy, selective attention or recollection, or experimental design.
>
> Heritage and Atkinson (1984: 4)

Despite the potential opportunities afforded by video, it is still relatively rare to find video-based field studies within qualitative sociology. In social anthropology there has been a long-standing interest in using firstly film and more recently video as a way of presenting activities and rituals, and the documentary programme now plays an important part in both academic and popular studies of 'other' cultures. In anthropology, like sociology, however, there is not a significant tradition in using either film or video as vehicle to actually analyze the organization of social action and interaction. This curious absence of video as an analytic resource derives perhaps more from the absence of a relevant methodological orientation than a lack of interest in exploiting sociological possibilities of video. Indeed, the conceptual and analytic commitments found within a substantial body of qualitative research, including symbolic interactionism, activity theory and the like, which richly illuminate materials generated through conventional field work, do not necessarily resonate with the details of activities one confronts with video recordings of everyday settings.

Nevertheless, the resources through which we can begin to exploit video for the purposes of sociological inquiry are provided by ethnomethodology and conversation analysis. Like other forms of qualitative social science they do not involve a method *per se*, a set of clearly formulated techniques and procedures, but rather a methodological orientation from which to view 'naturally occurring' activities and events. Before illustrating the approach, it is perhaps helpful to provide a brief overview of three of the key analytic orientations found within ethnomethodology and conversation analysis (Garfinkel 1967; Sacks 1992).

Firstly, talk and bodily conduct are social action and are the primary vehicles through which people accomplish social activities and events. Secondly, the sense and significance of social actions and activities are inseparable from the immediate context; they emerge moment by moment reflexively creating the context in which they arise. Thirdly, participants use and rely upon practices, procedures and reasoning, in short 'methodological resources', through which they produce social actions and make sense of the actions of others.

Schegloff and Sacks (1974) argue that the concern with talk in conversation analysis does not derive from an interest in language *per se*, but from the recognition that social actions and activities are accomplished in and through talk-in-interaction. In face to face interaction, social actions and activities are accomplished through a variety of means, spoken, visual and tactile, and in many cases, talk is inextricably embedded in the material environment and the bodily conduct of participants. So for example, gesture often works with and within particular utterances to accomplish a particular action, and turns at talk are delicately coordinated with the visual conduct, such as visual alignment, of the co-participant(s) (see for example Goodwin 1981, Heath 1986). Participants point, refer to and invoke objects in interaction, they use tools, artefacts and technologies, and the immediate environment provides resources for making sense of the actions of others (see for example Heath and Hindmarsh 2000; Heath and Luff 2000; Hindmarsh and Heath 2000). In face to face interaction therefore, bodily conduct and the material environment plays a critical part in the production and intelligibility of social action.

Unfortunately, research on nonverbal communication tends to separate conduct into different channels and to some extent disregard the ways in

which talk and bodily conduct are interdependent in the practical accomplishment of social action. It also, like much sociological research, disregards the immediate environment, and the ways in which participants invoke and rely upon 'physical' features of the ecology to produce actions and make sense of each other's conduct. For example, an individual's shift in orientation may be sensible by virtue of the ways in which it is aligned towards an object such as a picture. So, it is somewhat surprising that in the social and cognitive sciences, research on communication and interaction, has largely disregarded the ways in which the immediate ecology features in the accomplishment of social actions and activities.

The actual significance, or meaning of these objects and artefacts which are seen, invoked, noticed and the like, is dependent upon the course of action in which they become relevant. Indeed, in recent years there has been a growing interest in what has become generally characterized as 'situated action'. This interest reflects a long-standing concern in the social sciences with context and the uniqueness of events and activities. There is a tendency however, even amongst more radical analytic developments, to treat context as a 'framework' in which action takes place. Features of particular context, including the physical environment, purpose of the occasion, and the like are thought to bear upon the organization of the participants' conduct, and in turn their actions and activities in part reproduce the characteristics associated with particular situations or contexts. Ethnomethodology and conversation analysis adopt a rather different approach. Rather than treating a particular situation as a framework in which conduct takes place, they treat context as the product of the participants actions and activities. Participants constitute circumstances and situations, activities and events, 'in and through' their social actions and activities. Garfinkel suggests for example:

in contrast to certain versions of Durkheim that teach that the objective reality of social facts is sociology's fundamental principle, the lesson is taken instead and used as a study policy, that the objective reality of social facts *as* an ongoing accomplishment of the concerted activities of daily life, with the ordinary artful ways of that accomplishment being by members known, used, and taken for granted, is for members doing sociology, a fundamental phenomena.

(Garfinkel 1967: vii)

With regard to context and situation it is critical to note the concern with the 'ongoing accomplishment of the activities of daily life'. Unlike other forms of qualitative inquiry, ethnomethodology and conversation analysis are concerned with the ways in which social actions and activities emerge moment by moment; situations and circumstances are ongoingly accomplished by participants themselves from 'within' those settings.

In interaction participants produce their actions with regard to the conduct of others, and in particular the immediately preceding action or activity. In turn, their action, forms the framework to which subsequent action is oriented. So for example participants produce actions with regard to the prior action and the frame of relevancies that it establishes; moreover, it is understood by virtue of its location with regard to preceding action(s). Actions are also prospectively oriented, designed to encourage, engender, even elicit subsequent action, which in turn form the basis to the participant's assessment of each others' and their own conduct.

Within the unfolding course of sequences of interaction then, participants build an "architecture of intersubjectivity" (Heritage, 1984, p. 254) in which they display their ongoing and ever-updating orientations towards the

business at hand and the emerging turns at talk. Heritage (1984) refers to the 'context sensitive-context renewing' character of action-in-interaction and points to the emergent, flexible and contingent organization of conduct. The sequential organization of action in interaction is pervasive feature of the ways in which participants both produce and make sense of each other's conduct.

Particular actions establish the sequential import of specific actions by co-participants, actions which are relevant within particular locations, and which in some cases, if they do not occur, they are 'noticeably' or accountably absent. Consider for example the ways in which questions establish the sequential relevance of an answer, and how an answer is recognizable and acceptable by virtue of its juxtaposition with a question; or how, as in the example discussed later, close inspection of a patient's eye is sensible and legitimate by virtue of the patient pointing to the object and describing his difficulty. More generally, action within interaction provides opportunities for subsequent action, and is designed to build possibilities for conduct. The sequential location of action within the emerging course of interaction is critical to the production and intelligibility of conduct, and therefore to the analysis of social action and activity.

The analytic focus of these investigations is with the practices and reasoning, the methods, through which participants produce their own actions and make sense of the actions of others. As an approach, Sacks suggests that this stands in stark contrast to the majority of the social scientific endeavour:

> A curious fact becomes apparent if you look at the first paragraph - it may
>
> occur in the third paragraph - of reportedly revolutionary treatises back to
>
> the pre-Socratics and extending up to at least Freud. You find that they all

begin by saying something like this: 'About what I am going to talk about, people think they know but they don't. Furthermore if you tell them it doesn't change anything. They still walk round like they know although they are walking around in a dream world.' ... What we are interested in is, what is it that people seem to know and use? Here what people know and use is not to be mapped for each area onto what it is that science turns out to know, but is to be investigated itself.

Sacks [verbal quote in Hill & Crittenden, 1968: 13].

Through detailed scrutiny of particular cases, fragments of action and interaction, analysis is directed towards explicating the resources, the competencies, upon which people rely in participating in interaction. Interaction, the emergent and sequential character of conduct, provides unique opportunities to explicate these resources. We can examine subsequent action(s) and activities to examine how participants themselves are responding to each other's conduct, and in turn how participants respond to the responses of others. Each action displays an understanding of the prior, an understanding which is oriented to in subsequent action, and which may subject to elaboration, clarification or repair. Interaction provides us with the resources with which to begin to systematically examine the participants' relevancies; the ways in which they deal with the actions of others and co-participants respond to their own actions. In this way, the sequential organization of interaction is both a topic and resource in these investigations (see for example Sacks, Schegloff and Jefferson 1974 and Zimmerman and Pollner 1972).

Fieldwork and Video Data

Although the primary data for analysis are video recordings of naturally-occurring activities, it is critical that the researcher undertakes more conventional field work. For example, research on interaction in complex organizational environments requires the researcher to become familiar with the setting. It is necessary to understand the sorts of activities in which people engage, the events with which they deal, and the sorts of tools and technologies they rely upon to do their work. Therefore, to become familiar with the setting it is often necessary to undertake extensive participant and non-participant observation, and in many cases to have lengthy discussions with participants themselves.

Understanding the events and activities in medical settings for example, includes developing an understanding of the technical medical jargon that is used and how it is deployed. It is also important to become familiar with the tools and technologies used by participants and the ways in which the various systems operate and are used within the setting. So for example documents, records, manuals, log books and the like are a feature of many organizational environments and play a critical part in the ways in which participants organize and report activities and events. Without knowing how documents, such as the patient medical record, are organized, the categories of information they provide, and the purposes to which they are put, the field researcher may find it difficult to understand a range of potentially relevant activities that feature on the recordings. In many settings therefore it is critical that video recording is coupled with extensive field work in which the researcher becomes increasingly familiar with the characteristics of the environment unavailable through recordings alone.

In our own research, we conduct field work before recording, and ordinarily undertake successive periods of field work and recording over

some period of time. It is often necessary to undertake small amounts of field work prior to recording in order to be able to decide where to place the camera and microphone so that the most relevant (views on) activities are captured. In the case of the medical consultation that we will discuss in detail later, our placement of the recording equipment was directed by specific concerns. Most notably, given our interest in bodily as well as spoken conduct, we positioned the camera in order to capture as much of the face and bodies of both participants as possible. The fairly standard positioning of the doctor and patient around the desk facilitated a relatively constant position. Additionally, we attempted to select an angle that enabled us to clearly see the objects on the desk in between the doctor and patient.

Figure 1: Camera angle for the medical consultation

We routinely leave the camera[1] running and therefore choose a wide enough angle to accommodate basic shifts in orientation and movement by the participants. The main reasons for leaving the camera stationary in the setting are to allow the field worker to leave the consultation and to ensure

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that the participants are distracted as little as possible by the recording equipment. Goffman's powerful discussion of participation points to the inevitable significance of an individual within range of an event and in particular the persons contribution to the interaction (Goffman 1981). Both in undertaking field observation and video recording, we like other field researchers (see for example Goodwin 1981, Grimshaw 1982; Harper 1994; Prosser 1998) are sensitive to our part within, and influence on the scene. Therefore we attempt to take precautions to both reduce 'reactivity' and assess data for influence of the recording. Of course, the placement of the camera can help in this regard too. For ethical reasons, the patients are asked beforehand to participate in the study and thus they are aware that the camera is filming. However the field researcher is able assess where best to locate the camera so that participants are able to disregard the recording.

After an initial recording phase we often return to the setting for further field work. For example, over the past few years we have undertaken a number of projects concerned with the control rooms and operation centres of London Underground. Following preliminary analysis, we returned to the control rooms to undertake more focused field work and collect further videorecordings (sometimes choosing different angles to provide access to different viewpoints on activities). This iterative characteristic of field studies is well known, and provides a critical resource not only for sharpening one's understanding of the setting, but in developing and refining analytic observations and insights. In certain cases, where we were puzzled by particular events we returned to the field with a small 'video walkman' to play and discuss extracts from the video with the participants themselves; their observations not so much providing analytic resources but helping

clarify understanding of particular incidents, specialized language or technologies.

Analyzing Cases

Transcribing the Data

Analysis of the video recordings involves the detailed scrutiny of particular fragments and we will consider one such fragment, a brief extract from the beginning of a medical consultation in this section. However, we will first consider how we initially approach the analysis of any fragment of data. One of the critical ways in which we can become familiar with a fragment and begin to explicate the arrangement and organization of the participants' actions is through the transcription of aspects of the interaction. To do this we draw on conventional orthographies used for the transcription of talk which provide a vehicle to begin to come to grips with the details of the talk and the ways in which it emerges. It allows us to clarify what's said, by whom and in what way, and to begin to explore potential relations between aspects of the interaction. The orthography used within conversation analysis was primarily devised by Gail Jefferson and we have summarized some of the symbols in the Appendix (see also Jefferson 1984). Transcription does not replace the video recording as data, but rather provides a resource through which the researcher can begin to become more familiar with details of the participants' conduct.

It is perhaps worthwhile introducing our example at this point. The fragment is drawn from a project concerned with medical practice in primary health care. It involved extensive field work, discussions with practitioners and extensive video recording of actual consultations. The fragment involves the first few moments of a consultation. It gives a sense of how the

consultation begins and the relevance of the various material sources to the interaction between patient and doctor.

Fragment 1   Transcript 1

> *((P. enters the surgery))*

Dr: Do sit down::

         (5.5)

Dr: What's <u>up</u>?

         (4.8)

P: I've had a bad eye::: (.) ˚in there=

Dr: =Oh: yeah

Talk is laid out turn by turn, the length of silences and pauses measured in tenths of a second and captured in brackets for example "(4.8)". The colons, as in "down::" indicate that the prior sound is stretched, the number of colons indicating the length of the sound. The underlinings, as in "<u>up</u>", indicate that the word, or part of the word, is emphasized. "˚" indicates that the following word is said quietly, and "=" that the following utterance is latched to the prior. "(.)" indicates a mini-pause, a pause or silence of two tenths of a second or less. Double brackets, "((P. enters the surgery))"" house transcribers descriptions of actions or events.

There is no general orthography used for the transcription of visual and tactile conduct, but over the years researchers have developed *ad hoc* solutions to locating and characterizing action (see for example Kendon 1990, Goodwin 1981, Heath 1986). In our own studies we map fragments developing a characterization of at least the onset and completion of particular actions and their relations to each other. This is often involves the use of graph paper, laying talk and silence horizontally across the page, and

the then mapping the details of the conduct in relation to each other. We also include notes on the use of various artefacts and significant changes in information displayed or documented within the environment (for example in records, on screens and display boards and the like). Consider the following example. It is a version of one of the original 'maps' developed for the fragment under discussion. The transcript presents the participants' conduct horizontally, with a dashes capturing the length of silences and pauses, one tenth of a second indicated by one dash.
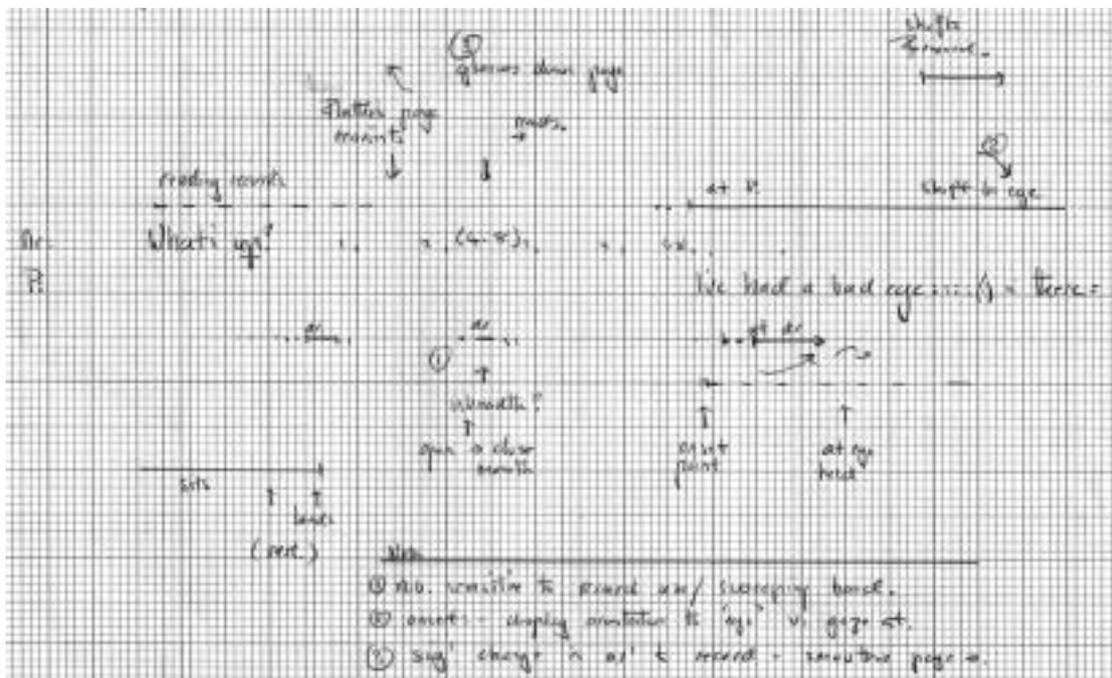

Figure 2: Original data map for Fragment 1

These more detailed transcriptions of a fragment are simply devices to enable the researcher to identify particular actions and to preserve a rough record of what has been found at some particular stage of the analysis. They are not designed to be read or used by others, or of course to provide a literal or true characterization of the events. However they do provide a critical

resource to help the researcher to establish the range and complexity of conduct within a particular fragment, and with which to begin to identify its character and location. Indeed, without logging the details of a fragment in this or a similar fashion, it is found that conduct is frequently mislocated, mischaracterized, and in some cases missed all together. Transcription provides vehicle for clarifying the location of actions and in exploring the potential relations between co-occurring and surrounding talk and bodily conduct. In particular, it is only through detailed investigation of the location and character of particular actions that we can begin to clarify their emergent and contingent relations between participants' conduct; the sequential character of action which is the pervasive organizational feature of human activity in social interaction.

The situated character of practical action, and the interest in the methodological resources used by the participants themselves, inevitably drives analytic attention towards the investigation of activities and events within the contexts in which they occur. Detailed and repeated inspection of the accomplishment of actual activities, coupled with the analytic orientations briefly discussed above, provide resources through which researchers can begin to identify the practices and reasoning through which particular events are produced and rendered intelligible.

In considering the fragment, for example, we would then want to develop a characterization of the activity which has evolved through our close looking in generating the transcript. To illustrate consider our description of this fragment.

Developing an Analysis

As the patient enters the consulting room and walks towards the chair alongside the desk, the doctor utters "What's <u>up</u>?". The utterance invites the patient to deliver his reason for seeking professional help. It projects a sequentially relevant action for the patient, and following a few seconds silence, the patient does indeed deliver the appropriate response, "I've had a bad eye::: (.)˙in there". The exchange involves the transition of the consultation from the 'preliminaries' to the 'business at hand', and the patient's response provides resources for subsequent enquiries, diagnosis and treatment. Progression into the business of the consultation is also dependent upon the bodily conduct of the participants and the use of particular tools and artefacts. It is worth noting at the outset for example that the patient's reply is delayed by four seconds or so, and is then accompanied by a gesture.

A second transcript, capturing particular aspects of the their visual conduct, may be helpful. In this case the detailed 'map' depicted earlier has been paired down to leave those aspects most critical to the analysis. The transcript is accompanied by descriptions of particular actions or events.

Fragment 1   Transcript 2

P. crosses   *sits*
room   *in chair*
 ↓   ↓
What's up?----------,----------,----------,---------,------*I've* **had a bad eye:::**
 ↑   ↑
Dr   *turns from*
reads records   *the records to P.*

The doctor produces the initiating utterance as the patient crosses the room. The patient sits down within a second or so, but remains silent. The doctor reads the medical records as the patient sits down. A few moments later, the doctor turns from the records to the patient. The patient immediately turns to the doctor and begins to reply. As he replies he gestures towards his eye, and the doctor moves forward and inspects the difficulty.

The patient's reply is sensitive to the doctor's use of the medical record. He withholds his reply, the sequentially relevant response, until the doctor turns from the record to the patient and thereby visually completes the activity in which he is engaged. The doctors lack of orientation to the patient is legitimized by virtue of his reading the patient's medical record, as information gleaned from the record may be relevant to the subsequent proceedings. It should be added that glancing through the last few entries of a patient's record is recurrent feature of the beginning of medical consultations at least in general practice. It provides information to enable the doctor to know, for example whether the patient is returning to discuss a particular complaint, or whether s/he is has suffered serious difficulties in the past which might be relevant to the presenting complaint.

There is further evidence to suggest that patient's conduct is sensitive to the doctor's use of the medical record, and indeed, may encourage the doctor to bring the activity to a quick conclusion.

The patient glances at the doctor as he sits down; a juncture within the developing course of his own activity at which it may be relevant to reply and set the proceedings in motion. The doctor is reading the record. A moment later, the doctor raises his right hand and smoothes the page of the record.

The gesture differentiates the doctor's activity. It displays a shift in alignment towards the document and potentially projects the possible completion of the reading activity by arranging the document as if in readiness for writing. As the hand presses the page, the patient turns to the doctor. He opens his mouth as if beginning to speak. As he opens his mouth, the doctor turns to another area of the page, whilst his hand moves forward to clasp a date stamp. The patient closes his mouth, turns away, and licks his lip.

Fragment 1   Transcript 3

P. sits in chair	*turns to Dr & takes in-breath*	*looks down*	*turns to Dr*
↓	↓	↓	↓

What's up?– – – – – – – – – , – – – – – – – – – , – – – – – – – – – , – – – – – – – – , – – – – –I've had a bad eye:::

↑   ↑   ↑   ↑

Dr reads records ... *flattens page & reorientates* ... *reads page* ... *turns from record to patient*

   The patient therefore is sensitive to the ways in which the doctor reads and manipulates the medical records. The very lack of orientation by the doctor, is accountable by virtue of his use of the record, and reading the record can be seen as relevant to the consultation and movement from the 'preliminaries' to the business at hand. Similarly, for the doctor, the patient's lack of immediate response, and his shifting orientation in the proceeding silence, is sensible by virtue of the patient's sensitivity to the use of the records. The medical records therefore are an integral feature of the

participants' activities, both in the ways in which they produce their conduct, and in how they make sense of each other's actions.

One can also gain a feel for the emergent and contingent character of the participants' conduct. The patient's actions are sensitive to the emerging use of the record, they differentiate the actions of the doctor moment by moment within the developing course of the reading. Where the doctor looks, how he scans the page, his raising of the hand, the pressing of the page, inform the ongoing production of the patient's actions, just as the doctor himself is sensitive to the patient's shifting orientation to the activity. We can see therefore how the 'situated' and contingent character of practical action is shaped and created through the moment by moment production of the participants' actions. Each action is sensitive to the actions of the other, and provides the basis for subsequent conduct, as they emerge within the developing course of the activity.

In this way therefore we can begin to disassemble aspects of the social and interactional organization which feature in the accomplishment of a particular event and provide for its character and uniqueness. Even this cursory glance at the fragment begins to reveal the complexity of the participants' activities and the resources which are brought to bear in the production and intelligibility of the beginning of the consultation. It reveals the emergent character of the participants' actions and the ways in which they are interactionally organized and accomplished. In the case at hand, it can be seen that whilst visual and tactile aspects of the participants conduct are not organized on the turn by turn basis characteristic of talk, nonetheless the sequential character of conduct is a critical property of the production of action and its intelligibility. For example, the elicitation of the doctor's gaze is sequentially responsive to an action by the patient, and doctors reorientation

forms the foundation to the beginning of the consultation. In turning to consider the methodological resources used by the participants in the activity's production and intelligibility therefore, attention inevitably turns to consider the ways in which actions are interactionally coordinated moment by moment, step by step. In this sense therefore context and intelligibility of the action is unavoidably and continuously emergent and assembled from within its production.

Re-Considering Interaction and Physical Settings

This analysis is designed to reveal how close looking at the details of interaction can be used to uncover critical resources used by participants in the organization of the medical encounter. As Hughes (1958) and many other ethnographers suggest, social interaction forms the foundation to the production of everyday activities, whether they involve a medical consultation, the operation of a control centre or a visit to museum or gallery (see for example Heath and Luff 2000, vom Lehn et al. 2001). Despite the recognition of the importance of interaction to everyday life and social organization within qualitative sociology, it has remained largely disregarded, 'noticed but not seen', remarked upon but to some extent unexplicated. It is not surprising however that ethnography, at least in sociology, has largely been unimpressed by the growing body of research concerned with language use and in particular talk in interaction. Such studies whilst providing impressive insight into the socially organized character of talk have seemed to disregard an array of considerations and concerns that form the focus of ethnographic inquiry. In this chapter, we wish to suggest that video based field studies coupled with an appropriate analytic orientation, namely ethnomethodology and conversation analysis, can

provide a vehicle with which to address one or two of the issues and substantive concerns that form part of more traditional ethnographic research, even though the phenomena of interest, the conceptual orientation and the ability to legitimize 'broader' contextual characteristics may seem somewhat over constrained.

Taking the example at hand, we can begin to examine the ways in which talk is inextricably embedded within the participants' visual and tactile conduct; their bodily conduct and the local ecology of objects and artefacts. Consider for example the patient's reply, his reason for seeking professional help. The response emerges in with regard to the doctor's bodily conduct and in particular the his visual realignment which enables him to see and look at the patient. The utterance is not only occasioned by the doctor's visual and vocal conduct, but is designed with regard to the accompanying bodily action, and in particular the ability of the doctor to see as well as hear about the source of the complaint. The patient's reply and gesture, renders the body relevant, in a particular way, then and there, and invites the doctor to both hear about and inspect the complaint. The utterance, this single turn at talk, gains its sense and significance by virtue of the ways in which it invokes an aspect of the body, just as the visibility of a blemish in the eye provides sense to the utterance. In this, and a myriad of others ways, talk-in-interaction, and its significance then and there within the interaction, is accomplished through, and constitutes the relevance then and there, of the body and its conduct.

The spoken and bodily conduct of the participants is inseparable from, and reflexively constitutes, material features of the local environment, objects, artefacts and like. For example, the initial delay in the patient's response, is produced and accountable with regard to the patient sitting, the chair and its particular use marking the completion of a relevant course of action. The

doctor's 'lack' of orientation towards the patient, is not simply 'withholding gaze', but rather is sensible by virtue of his reading of the patient record and his use of the date stamp. As we have seen, the patient's own conduct is sensitive to the ways in which these artefacts are used, and even how the particular use of an artefact can prospectively display what it will take for it to be complete, and thereby serve to mark a potential turning point in the beginning of the consultation. These objects and artefacts come into play within the developing course of action. The participants conduct is not only oriented to these objects and artefacts in particular ways at particular moments, but through the ways in which they are used, seen, noticed, disregarded and the like, the particular object gains a specific sense and relevance <u>from within the course of action</u>.

In undertaking video-based field studies of social interaction we have the opportunity of addressing characteristics of action and of settings which have formed a concern for more traditional ethnography. The physical environment, amongst other characteristics, is often treated as forming the framework for action and in various ways providing the resources including symbolic representations for organization and interpretation of action (see for example Blumer 1964). We too are keen to include the material environment, and of course bodily as well as spoken conduct, within the analytic scheme. Rather however than treating material realities as having an overarching influence on the field of conduct and thereby assuming that their sense and significance remains stable throughout the emerging course of events, such as a medical consultation, we need to examine the ways in which objects, artefacts and the like come to gain their particular significance at specific moments within courses of action. As we have seen, material features of the immediate setting are invoked, referred to, used, noticed, seen, at

particular moments, for particular purposes, and they gain their sense or meaning, at those moments from within the action in which they are momentarily rendered relevant. They feature both in the production of action and the ways in which the participants make sense of each others conduct. The immediate ecology of objects and artefacts provides resources for the production of action, and in the ways in which participants themselves recognize and make sense of each others' conduct. The sense and determination of the material environments is <u>reflexively</u> constituted, in and through, the participants' action and interaction (see also Goodwin 1995, Heath and Hindmarsh 2000, Hindmarsh and Heath 2000, Streeck 1996, Wootton 1994).

This concern with the ways in which the material environment features in practical action and interaction is reflected in the growing body of empirical research concerned with tools and technologies in complex organizational environments. This corpus of research, commonly known as 'workplace studies' (see for example Luff et al. 2000), consists of naturalistic studies of work, interaction and technology and provides programmatic examples of the ways in which video-based field studies of interaction can bear upon topic and concerns ordinarily associated with more traditional ethnography. These studies consist of analyses of work and interaction in settings such as control centres, news rooms, banks, and the like. They powerfully illustrate not just the importance of taking material features of the environment such as tools and artefacts seriously, but in addressing the ways in which such tools and the complex array of information they provide, feature in action and social interaction. In settings such as control rooms, there is a vast array of information provided in documents, on monitors, across diagrams at any one time, the critical issue is exploring and demonstrating what is relevant and

how it is constituted as relevant, within action and interaction (see for example Heath and Luff 2000). If you like, such settings provide a substantive demonstration of the issues raised throughout this chapter; our problem is not simply taking the material environment seriously (like other potentially relevant features such as the organizational setting, participants background and the like) but rather analytically demonstrating how such characteristics become relevant and reflexively constituted in action. Video recordings, often using multiple cameras, augmented by extensive field work, provides unprecedented access to such complex tasks, and ethnomethodology and conversation analysis provide resources through which we can begin to unpack the interactional organization of activities and events in these complex technological settings and demonstrate the relevance of environment to actual courses of action. Such studies are not only beginning to provide a distinctive contribution to our understanding of organizational activities, but also changing the ways in which the social and cognitive scientists conceive of the interaction between human beings and technologies such as computers.

Notes:

1. We are currently using both analogue and digital video equipment. The analogue cameras are Sony Hi8 TRV65E, and digital, Sony TRV900E. We primarily use Sony EVC 500 machines for analysis; they have stable still frame and reasonable slow motion. It is normally necessary to use separate microphones and we mainly use a multi-directional microphone PZM, but in certain settings with significant background noise a mono-directional microphone such as a Sennheiser MKE300 is more successful. We always make, and work , on copies of the original data, as the repeated replaying necessary during transcription and analysis can severely damage tapes.

Appendix: Conventions for Transcribing Talk

The *Identity* of the speaker is indicated in the margin, sometimes alongside a line number.

This example shows line 30 of a transcript, in which the patient is the speaker:

30   P: in fact I'll do it right now.

(0.6)	A pause timed in tenths of a second
(.)	A pause which is noticeable but too short to measure
=	No discernable interval between adjacent utterances
erm:::	Elongated utterances - the longer the elongation, the more colons are added to the utterance or section of the utterance
but-	An abrupt cut-off of an utterance or part of an utterance is marked by a dash
under	Louder stretches of talk are underlined
>right<	Faster stretches of talk
˚that˚	Quieter stretches talk:
.	A stopping fall in tone, not necessarily the end of a sentence
,	Continuing intonation, not necessarily between clauses of sentences
?	Rising inflection, not necessarily a question
^	Marked rising shift in intonation
ˇ	Marked falling shift in intonation
˚hhh	In-breath
hhh	Out-breath

Overlapping utterances are marked by parallel square brackets:

e.g.

30   P: in fa[ct I'll do it right now.

31   D: [oh right, okay

References

Atkinson, P. (1995) *Medical Talk and Medical Work: The liturgy of the clinic.* London: Sage.

Becker, H. (1963) *The Outsiders*. New York: Free Press.

Bergmann, J.R. (1992) 'Veiled morality: notes on discretion in psychiatry'. In: Drew, P., J. Heritage, eds. Talk at work: interaction in institutional settings. Cambridge: Cambridge University Press: 137-162

Boden, D. and D.H. Zimmerman (eds) (1991) *Talk and Social Structure*. Polity Press: Oxford

Davis, F. (1963) *Passage through Crisis: Polio victims and their families.* Indianapolis: Bob-Merrill.

Drew, P. and Heritage, J. (1992) *Talk at Work.* Cambrdge: Cambridge University Press.

Garfinkel, H. (1967).*Studies in Ethnomethodology.* Englewood Cliffs, NJ: Prentice-Hall.

Glaser, B. and Strauss, A. (1965) *Awareness of Dying.* Chicago: Aldine.

Goffman, E. (1961)*Asylums*. New York: Anchor Books.

Goffman, E. (1963). *Behaviour in Public Places: Notes on the Social Organization of Gatherings.* New York: Free Press.

Goffman, E. (1967). *Interaction Ritual.* Doubleday, New York.

Goffman, E. (1981). *Forms of Talk.* Oxford: Basil Blackwell.

Goffman, E. (1983) The Interaction Order: American Sociological Association, 1982 Presidential Address, *American Sociological Review*, **48 (1)**, 1-17.

Goodwin, C. (1981) *Conversational Organisation: Interaction between a Speaker and Hearer.* London: Academic Press.

Goodwin, C. (1995) Seeing in Depth. *Social Studies of Science*, 25 (2), pp.237-274.

Grimshaw, A.D. (1982) Sound-Image Data Records for Research on Social Interaction. *Sociological Methods & Research. Special Issue on Sound-Image Records in social Interaction Research.* 11(2): 121-144.

Harper, Douglas. 1994. "On the Authority of the Image: Visual Methods at the Crossroads." Pp.403-412. *Handbook of Qualitative Research.* edited by Norman K. Denzain and Yvonna S. Lincoln. Thousand Oaks, London and New Delhi: Sage Publications.

Have, P. ten (1991) 'Talk and institution: a reconsideration of the 'asymmetry' of doctor-patient interaction'. In: D. Boden, D.H. Zimmerman, eds. Talk and social structure: studies in ethnomethodology and conversation analysis. Cambridge: Polity Press: 138-63.

Heath, C. C. (1986). *Body Movement and Speech in Medical Interaction.* Cambridge: Cambridge University Press (Editions de la Maison des Science de l'Homme, Paris).

Heath, C. and J. Hindmarsh (2000) Configuring Action in Objects: From mutual spaces to media spaces. *Mind, Culture and Activity,* 7 (1/2): 81-104.

Heath, C. and P. Luff (2000) *Technology in Action.* Cambridge: Cambridge University Press.

Heritage, J. (1984) *Garfinkel and Ethnomethodology.* Cambridge: Polity Press.

Hill, R.J. and Crittenden, K.S. (eds.) (1968) *Proceedings of the Purdue Symposium on Ethnomethodology.* Institute Monograph Series No. 1, Institute for the Study of Social Change, Purdue University.

Hindmarsh, J. and C. Heath (2000) Sharing the Tools of the Trade: The interactional constitution of workplace objects. *Journal of Contemporary Ethnography,* **29(5): 517-556.**

Hughes, E. C. (1958) *Men and their Work.* The Free Press: Glencoe.

Hughes, E. C. (1971) *The Sociological Eye.* Chicago: Aldine.

Jefferson, G. (1984) Transcript Notation. In Atkinson, J.M. and Heritage, J. (eds.) *Structures of Social Action: Studies in Conversation Analysis.* Cambridge: Cambridge University Press. pp. ix-xvi.

Kendon, A. (1990). *Conducting Interaction: Patterns of Behaviour in Focussed Encounters.* Cambridge, England: Cambridge University Press.

Luff, P., Hindmarsh, J. and C. Heath (2000) *Workplace Studies: Recovering work practice and informing system design.* Cambridge: Cambridge University Press.

Maynard, D.W. (1992) 'On clinicians co-implicating recipients' perspective in the delivery of diagnostic news'. In: Drew, P., J. Heritage, eds. Talk at work: interaction in institutional settings. Cambridge: Cambridge University Press: 331-58

Peräkylä, A. (1998) 'Authority and intersubjectivity: the delivery of diagnosis in primary health care', *Social Psychology Quarterly* 61: 301-20

Pilnick, A. (1998) "Why didn't you just say that?": Dealing with issues of asymmetry, knowledge and competence in the pharmacist/client encounter, *Sociology of Health and Illness,* **20,** 1: 29-51.

Prosser, J. (ed.) (1998) *Image-based Research. A Sourcebook for Qualitative Researchers.* London: Falmer Press.

Roth, J. (1963) *Timetables: Structuring the passage of time in hospital treatment and other careers.* Indianapolis: Bob-Merrill.

Sacks, H. (1992) *Lectures in Conversation:Volumes I and II.* Oxford: Blackwell.

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

Schegloff, E.A. and Sacks, H. (1974) Opening Up Closings. In Turner, R. (ed.) *Ethnomethodology: Selected Readings*. Harmondsworth: Penguin. pp. 233-264.

Silverman, D. (1999) Chapter in Sarangi, S. And Roberts, C. (Eds*.) Talk, Work And Institutional Order : Discourse In Medical, Mediation, And Management Settings*. Berlin: Mouton De Gruyter.

Simmel, G. (1950) *The Sociology of George Simmel*, ed. K. Wolff. Glencoe, Ill.: Free Press.

Strauss, A.L. (1964) *Psychiatric Institutions and Ideologies*. Glencoe: The Free Press.

Streeck, J. (1996) How to do Things with Things: Objects Trovés and Symbolization. *Human Studies*, 19, 365-384.

Strong, P. M. (1979) *The Ceremonial Order of the Clinic.* London: Routledge and Kegan Paul.

vom Lehn, D., Heath, C. and J. Hindmarsh (2001) Exhibiting Interaction: Conduct and Collaboration in Museums and Galleries. *Symbolic Interaction*, 24, 2, 189-216.

Wootton, A.J. (1994) Object Transfer, Intersubjectivity and Third Position

> Repair: Early developmental observations of one child. *Journal of Child
> Language*, **21**, pp.543-564.

Zimmerman, D. H. and Pollner, M. (1971) The Everyday World as

> Phenomenon. In: Douglas, J. D. (ed.) Understanding Everyday Life.
> London: Routledge and Kegan Paul. 80-103.