

systematic examination of each and every aspect of everyday life in the setting in question.

The ethnographer who takes no account of such matters, on the other hand, ignores at his or her peril these features of a literate culture. There is nothing to be gained, and much to be lost, by representing such a culture as if it were an essentially oral tradition. In the scrutiny of documentary sources, the ethnographer thus recognizes and builds on his or her socialized competence as a member of a literate culture. Not only does the researcher read and write, but he or she also reflects on the very activities of reading and writing in social settings. Thus, such everyday activities are incorporated into the ethnographer's topics of inquiry as well as furnishing analytic and interpretative resources.

Chapter 7

Recording and organizing data

FIELDNOTES

Fieldnotes are the traditional means in ethnography for recording observational data. In accordance with the ethnographer's commitment to discovery, fieldnotes consist of relatively concrete descriptions of social processes and their contexts. The aim is to capture these in their integrity, noting their various features and properties, though what is recorded will clearly depend on some general sense of what is relevant to the foreshadowed research problems. While it is impossible to provide any description without some principle of selecting what is and is not important, there are advantages (as well as some disadvantages) in adopting a wide focus. At least prior to the closing stages of data collection, then, there is usually no attempt at the point of observation to code systematically what is observed in terms of existing analytical categories. Indeed, the main purpose is to *identify and develop* what seem to be the most appropriate categories.

The writing of fieldnotes is not something that is (or should be) shrouded in mystery. It is not an especially esoteric activity. On the other hand, it does constitute a central research activity, and it should be carried out with as much care and self-conscious awareness as possible. A research project can be as well organized and as theoretically sophisticated as you like, but with inadequate note-taking the exercise will be like using an expensive camera with poor-quality film. In both cases, the resolution will prove unsatisfactory, and the results will be poor. Only foggy pictures result.

The completion of fieldnotes is not an entirely straightforward matter, then. Like most aspects of intellectual craft, some care

and attention to detail are prerequisites: satisfactory note-taking needs to be worked at. It is a skill demanding repeated assessment of purposes and priorities, and of the costs and benefits of different strategies. Thus, the standard injunction, 'write down what you see and hear', glosses over a number of important issues. Among other things, the fieldworker will want to ask *what* to write down, *how* to write it down, and *when* to write it down.

The problems facing the novice ethnographer on this score stem in part from the relative invisibility of fieldnotes themselves. As is pointed out by various contributors to an edited collection on the topic (Sanjek 1990), anthropological fieldnotes have often been regarded as highly personal and private documents. Although fieldnotes are the basis of public-domain scholarship, their authors have rarely shared them with other scholars. For anthropologists, in particular, fieldnotes seem to be treated as almost 'sacred' objects (Jackson 1990). They certainly appear to be granted special – almost magical – potency. They have the power to evoke the times and places of the 'field', and call to mind the sights, sounds, and smells of 'elsewhere', when read and reread 'at home'.

At a mundane and practical level, the privacy of fieldnotes means that the novice rarely has models to follow, and there is remarkably little explicit advice available. The making of fieldnotes has been part of the invisible oral tradition of craft knowledge, and many who embark on their first project have to find their own way of doing things. So let us try to deal with some of the practical questions raised above. First, *when* to write notes? In principle, one should aim to make notes as soon as possible after the observed action. Most fieldworkers report that while they can train themselves to improve recall, the quality of their notes diminishes rapidly with the passage of time; the detail is quickly lost, and whole episodes can be forgotten or become irreparably muddled. The ideal would be to make notes during actual participant observation. But that is not always possible, and even when it is possible the opportunities may be very limited. There may be restrictions arising from the social characteristics of the research setting, as well as from the ethnographer's own social position(s).

If the research is covert, then note-taking in the course of participation will often be practically impossible. In most set-

tings, participants are not visibly engaged in a continual process of jotting down notes, seizing notebooks during conversations, and similar activities. In many circumstances, such activity would prove totally disruptive to any 'natural' participation. It is hard to think of Laud Humphreys (1970), for example, taking copious notes while acting as 'watchqueen' in public lavatories so as to observe casual homosexual encounters. In a few contexts, of course, writing may be such an unremarkable activity that covert note-taking is possible. In a covert study of students' time-wasting strategies in a university library, spasmodic writing on the part of the ethnographer would be possible, though care might have to be taken not to appear too diligent. Perhaps surprisingly, observers in a covert study of patient life in mental hospitals found that they could take notes, since staff simply took this as a further sign of their mental illness (Rosenhahn 1973)!

However, overt research does not solve the problem of note-taking. To some extent our comments concerning covert participation apply here as well. The conduct of note-taking must be broadly congruent with the social setting under scrutiny. In some contexts, however 'well socialized' the hosts, open and continuous note-taking will be perceived as inappropriate or threatening, and will prove disruptive. In other contexts fairly extensive notes can be recorded without undue disruption. Thus, for example, Whyte (1981) reports how he took on the role of secretary to the Italian Community Club because it enabled him to take notes unobtrusively in their meetings.

Even in situations where note-taking is a 'normal' kind of activity, such as in educational settings, however, care must be exercised if disruption is to be avoided. Olesen and Whittaker's research on student nurses is a case in point:

I feel it much easier to write when the students write, and listen when they do; I have noticed that when I attempt to write when the students are not, I attract [the tutor's] attention and on a few occasions she seems to falter in what she is saying . . . Similarly when all the students are writing and I am not, but rather looking at her, I again seem to 'put her off'. And so it is that I've become a student, sometimes slightly at the loss of my self-esteem when I find myself lazily inserting a pencil in my mouth. (Fieldnotes: February, third year.)

(Olesen and Whittaker 1968:28)

Many of the initial fieldnotes that ethnographers take, then, are jottings², snatched in the course of observed action. A common joke about ethnographers relates to their frequent trips to the lavatory where such hasty notes can be scribbled in private. Even the briefest of notes can be valuable aids in the construction of a more detailed account. As Schatzman and Strauss suggest: 'A single word, even one merely descriptive of the dress of a person, or a particular word uttered by someone usually is enough to "trip off" a string of images that afford substantial reconstruction of the observed scene' (Schatzman and Strauss 1973:95). Moreover, it is important to record even things that one does not immediately understand, because these might turn out to be important later.

Even if it proves possible to make fairly extensive notes in the field, they – like brief jottings – will need to be worked up, expanded on, and developed. Many social activities have a timetable of their own, and it may prove possible to match phases of observation with periods of writing up fieldnotes in accordance with such timetables. For instance, recent fieldwork by Atkinson on haematologists in American and British hospitals was structured round regular schedules of clinical 'rounds', 'grand rounds', 'conferences', 'mortality and morbidity reviews', and similar occasions for medical talk. The pattern of data collection was fitted into the rhythm of the hospital (cf. Zerubavel 1979), which allowed for periods of time in the canteen or the library, or back at the university, or at home, when detailed notes could be constructed.

In other settings, the phasing of observation and writing will be much less straightforward to organize, but there are usually times when participants are engaged in activities that are not relevant to the research. At the very least they sleep at regular times and at the risk of fatigue notes can be written up then. Carey (1972) reports a rare exception, that of 'speed freaks' (amphetamine users) who, under heavy doses, stay awake for several days in a hyperactive state:

The peculiar round of life wherein people stay up for three, four or five days at a time and then sleep for several days posed enormous practical difficulties for the research. Our conventional commitments (family, friends, teaching responsibilities) had to be put aside for a time so that we

could adapt ourselves more realistically to this youthful scene. As we became more familiar with this particular universe, we developed a crude sampling plan that called for observations at a number of different gathering spots, and this relieved us somewhat from a very exacting round of life. If we were interested, however, in what happened during the course of a run when a small group of people started shooting speed intravenously, it meant that one or two fieldworkers had to be present at the beginning and be relieved periodically by other members of the team until the run was over. Fatigue was a constant problem and suggests that more than one fieldworker is required in this type of research.

(Carey 1972:82)

Clearly, in such cases, finding time to write up fieldnotes poses particularly severe problems. The problem remains serious, however, even with less exhausting schedules. But some time for writing up fieldnotes must always be set aside. There is no advantage in observing social action over extended periods if inadequate time is allowed for the preparation of notes. The information will quickly trickle away, and the effort will be wasted. There is always the temptation to try to observe everything, and the consequent fear that in withdrawing from the field one will miss some vital incident. Understandable though such feelings are, they must, in most circumstances, be suppressed in the interests of producing good-quality notes. Nevertheless, the trade-off between data collection and data recording must be recognized and resolved, in accordance with the overall research strategy and purpose. Thus, for example, the organization of periods of observation, with alternating periods of writing and other work, must be done with a view to the systematic sampling of action and actors (see Chapter 2).

It is difficult to overemphasize the importance of meticulous note-taking³. The memory should never be relied on entirely, and a good maxim is 'if in doubt, write it down'. It is absolutely essential that one keep up to date in processing notes. Without the discipline of daily writing, the observations will fade from memory, and the ethnography will all too easily become incoherent and muddled.

What of the form and content of fieldnotes? One can never

record everything; social scenes are truly inexhaustible in this sense. Some selection has to be made. However, the nature of this is likely to change over time. During the early days of a research project, the scope of the notes is likely to be fairly wide, and one will probably be reluctant to emphasize any particular aspects. Indeed, one will probably not be in a position to make such a selection of topics. As the research progresses, and emergent issues are identified, the notes will become more restricted in subject matter. Moreover, features that previously seemed insignificant may come to take on new meaning, a point that Johnson illustrates from his research on social workers:

Gradually I began to 'hear different things said' in the setting. This happened through a shift in attention from *what* was said or done to how it was said or done. The following excerpts from the fieldnotes illustrate several instances of my changing awareness. From the notes near the end of the sixth month of the observations:

Another thing that happened today. I was standing by Bill's desk when Art passed by and asked Bill to cover the phone for a couple of minutes while he walked through a request for County Supp over to Bess Lanston, an EW supervisor. Now I don't know how many times I've heard a comment like that; so many times that it's not even problematic any more. In fact, it's so routine that I'm surprised that I even made a note to remember it. The striking feature about this is that in my first days at Metro [the social work agency] I would have wanted to know all about what kind of form he was taking over there, what County Supp was, why and how one used it, got it, didn't get it, or whatever, who and where Bess Lanston was, what she did and so on. But all the time I've missed what was crucial about such a comment, the fact that he was walking it through. Before I would have only heard what he was doing or why, but today, instead, I began to hear the how.

(Johnson 1975:197)

As analytical ideas develop and change, what is 'significant' and what must be included in the fieldnotes also changes. Over time, notes may also change in character, in particular becoming more concrete and detailed. Indeed, the preservation of concrete-

ness is an important consideration in fieldnote writing. For most analytic purposes, compressed summary accounts will prove inadequate for the detailed and systematic comparison or aggregation of information across contexts or across occasions. As far as possible, therefore, speech should be rendered in a manner that approximates to a verbatim report and represents non-verbal behaviour in relatively concrete terms; this minimizes the level of inference and thus facilitates the construction and reconstruction of the analysis.

Below we reproduce two extracts from notes that purport to recapture the same interaction, taken from a study of the staff-room talk of secondary school teachers (Hammersley 1980). They are recognizably 'about' the same people and the same events. Neither lays any claim to completeness. The first obviously compresses things to an extreme extent, and the second summarizes some things, and explicitly acknowledges that some parts of the conversation are missing altogether:

- 1 The teacher told his colleagues in the staffroom about the wonders of a progressive school he had been to visit the day before. He was attacked from all sides. As I walked up with him to his classroom he continued talking of how the behaviour of the pupils at X had been marvellous. We reached his room. I waited outside, having decided to watch what happened in the hall in the build-up to the morning assembly. He went into his classroom and immediately began shouting at his class. He was taking it out on them for not being like the pupils at X.
- 2 (Walker gives an enthusiastic account of X to his colleagues in the staffroom. There is an aggressive reaction.)

GREAVES: Projects are not education, just cutting out things.

WALKER: Oh no, they don't allow that, there's a strict check on progress.

HOLTON: The more I hear of this the more wishy washy it sounds.

...

WALKER: There's a craft resources area and pupils go and do some dress-making or woodwork when they want to, when it fits into their project.

HOLTON: You need six weeks' basic teaching in woodwork or metalwork.

...

HOLTON: How can an immature child of that age do a project?

WALKER: Those children were self-controlled and well-behaved.

...

HOLTON: Sounds like Utopia.

DIXON: Gimmicky.

...

WALKER: There's no vandalism. They've had the books four years and they've been used a lot and I could see the pupils were using them, but they looked new, the teacher told me that if they damaged the books she would have to replace them herself.

...

HOLTON: Sounds like those kids don't need teaching.

((Walker and I go up to his room: he continues his praise for X. When we reach his room I wait outside to watch the hall as the build up for the morning assembly begins. He enters his room and immediately begins shouting. The thought crosses my mind that the contrast between the pupils at X he has been describing and defending to his colleagues and the 'behaviour' of his own pupils may be a reason for his shouting at the class, but, of course, I don't know what was going on in the classroom.))

(()) = observer descriptions

... = omission of parts of conversation in record.

The second version is much more concrete in its treatment of the events; indeed, much of the speech of the actors is preserved. We can inspect the notes with a fair assurance that we are gaining information on how the participants themselves described things, who said what to whom, and so on. When we compress and summarize we not only lose 'interesting' detail and 'local colour', we can lose vital information.

The actual words people use can be of considerable analytic importance. The 'situated vocabularies' employed provide us with valuable information about the ways in which members of

a particular culture organize their perceptions of the world, and so engage in the 'social construction of reality'. Situated vocabularies and folk taxonomies incorporate the typifications and recipes for action that constitute the stock-of-knowledge and practical reasoning of the members. Arensberg and Kimball provide an example from their study of interpersonal relations among family members in rural Ireland:

The relations of the members of the farm family are best described in terms of the patterns which uniformity of habit and association build up. They are built up within the life of the farm household and its daily and yearly work. The relations of the fathers to sons and mothers to sons fall repeatedly into regular and expectable patterns of this kind that differ very little from farm to farm.

If we are to understand them, then, we must trace them out of this setting and see in what manner they offer us explanation of Irish rural behaviour. In terms of a formal sociology, such as Simmel might give us, the position of the parents is one of extreme superordination, that of the children of extreme subordination. The retention of the names 'boy' and 'girl' reflects the latter position. Sociological adulthood has little to do with physiological adulthood. Age brings little change of modes of address and ways of treating and regarding one another in the relationships within the farm family.

(Arensberg and Kimball 1968:59)

The potential significance and detail of the connotations of such members' terms apply equally to the use of argot. American hospital speech includes the term 'gomer', which is part of the rich and colourful vocabulary characteristic of most medical settings. George and Dundes summarize its use:

What precisely is a 'gomer'? He is typically an older man who is both dirty and debilitated. He has extremely poor personal hygiene and he is often a chronic alcoholic. A derelict or down-and-outer, the gomer is normally on welfare. He has an extensive listing of multiple admissions to the hospital. From the gomer's standpoint, life inside the hospital is so much better than the miserable existence he endures outside that he exerts every effort to gain admission, or rather readmission to the hospital. Moreover, once admitted, the

gomer attempts to remain there as long as possible. Because of the gomer's desire to stay in the hospital he frequently pretends to be ill or he lacks interest in getting well on those occasions when he is really sick.

(George and Dundes 1978:570)

Of course, this brief account glosses over a wide range of uses and connotations associated with this one folk term. In practice, the research worker will not be content to generate such a composite or summary definition. The important task is to be able to document and retrieve the actual contexts of use for such folk terms.

Kondo's ethnography of the production of identities in Japan provides an exemplary documentation of the terms and idioms of identity in various social contexts (Kondo 1990). She examines, for instance, the idiomatic use of *Shitamachi* and *Yamanote*: literally, different parts of Tokyo, used to convey different orientations, life-styles and identities. Likewise, she explores the subtle usages and connotations of *ie* and *uchi*. Both terms have flexible, context-dependent meanings. The former refers to the inter-generational continuity of the group, the latter to the 'in-group' as defined on any particular occasion: 'Depending on the context, it can be any in-group: i.e. company, school, club, or nation...' (Kondo 1990:141). The ability to trace the social contexts of such idioms is dependent on the delicacy of one's ethnographic data: usage and social context must be identified with precision.

Making fieldnotes as concrete and descriptive as possible is not without its cost, however. Generally, the more closely this ideal is approximated, the more restricted the scope of the notes. Unless the focus of the research is extremely narrow, some concreteness and detail will have to be sacrificed for increased scope. Whatever the level of concreteness of fieldnotes, however, it is essential that direct quotations are clearly distinguished from summaries in the researcher's words, and that gaps and uncertainties in the record are clearly indicated. If speakers' original words cannot be reconstructed adequately, then indirect speech may be used to indicate the style and content. When we refer back to the notes there should be no ambiguity concerning the 'voices' that are represented. One should not have to puzzle

over 'Is that what they themselves said?' The observer's own descriptive glosses should be kept clearly distinct.

It is equally important that records of speech and action should be located in relation to *who* was present, *where*, at what *time*, and under what *circumstances*. When it comes to the analysis stage, when one will be gathering together, categorizing, comparing, and contrasting instances, it may be crucial that 'context' (participants, audience, setting, etc.) can be identified. Spradley suggests one elementary checklist that can be used to guide the making of field records, adherence to which would preserve the sense of context:

- 1 *Space*: the physical place or places.
- 2 *Actor*: the people involved.
- 3 *Activity*: a set of related acts people do.
- 4 *Object*: the physical things that are present.
- 5 *Act*: single actions that people do.
- 6 *Event*: a set of related activities that people carry out.
- 7 *Time*: the sequencing that takes place over time.
- 8 *Goal*: the things people are trying to accomplish.
- 9 *Feeling*: the emotions felt and expressed.

(Spradley 1980:78)

Such lists are very crude and rest on arbitrary classifications. Nevertheless, they indicate a range of relevant features of context that might be noted.

Fieldnotes cannot possibly provide a comprehensive record of the research setting. The ethnographer acquires a great deal more tacit knowledge than is ever contained in the written record. The writer of ethnography uses 'head notes' or memory to fill in and recontextualize recorded events and utterances. One should not become totally wedded to the fieldnotes, as if they were the sum total of available information. Despite the scepticism of some commentators (for example, Agar 1980), however, the collection and maintenance of fieldnotes remain a major method of ethnographic recording.

Up to now, we have discussed fieldnotes in relation to observation, but they may also be used to record data from interviews. Sometimes, interviewees will refuse to allow the discussion to be audio-recorded; sometimes the ethnographer may judge that such recording will dissuade frankness or increase nervousness to an unacceptable level. Where fieldnotes

are relied on in interviews, much the same considerations apply as in observation: decisions must be made about what is to be noted, when, and how. Once again reliance will most likely have to be placed on jotted notes, and the dilemma of summarizing versus verbatim reporting is just as acute. Similarly, note-taking in interviews can prove disruptive, much as in the tutorial cited by Olesen and Whittaker (1968), with the interviewee becoming self-conscious about what is being written down. Furthermore, the need to take notes makes very difficult the kind of interviewing we advocated in Chapter 5. Much of the interviewer's attention will be taken up with *recording* what has been said rather than thinking about it, especially as one should be recording not just the informant's responses but also the interviewer's questions.

Given these problems, the advantages of audio-recording of interviews are considerable. While interviewees will sometimes not give permission (because, for example, 'you can't argue with a tape'), agreement is normally forthcoming once it is explained that the purpose is simply to aid note-taking and that confidentiality will be maintained. Moreover, using a portable cassette-recorder may actually reduce reactivity rather than increase it. When the recorder is not in the informant's immediate line of sight, he or she is more likely to forget that the recording is being made than when the interviewer is hastily scribbling throughout the conversation. However, while the tape-recording provides a more complete, concrete, and detailed record than fieldnotes, non-verbal aspects and features of the physical setting go unrecorded, of course. For this reason it is usually advisable to supplement the tape-recording with jotted notes covering these matters.

PERMANENT RECORDINGS

We have already acknowledged that the 'pen-and-notebook' approach to fieldwork inevitably means the loss of much detailed information. The fine grain of speech and non-verbal communication is not easily reconstructed. It is very easy to demonstrate the major differences – in volume and detail – between a permanent recording and an observer's reconstruction of a strip of spoken action, for example. Since the technology of permanent recording is now readily available, in small

and reliable formats, there are many possibilities. The uses of video or film, still photography, and audio-recording offer various options for data collection and storage.

For the reasons we have suggested, if at all possible the ethnographer will wish to audio-record interviews. However, the availability of portable cassette-recorders allows us to collect data in an enormous variety of other social settings as well. And whether recordings are derived from interviews or from 'naturally occurring' social interaction, many of the same issues of data preparation and storage apply.

It must be noted, though, that audio-recording does not provide a perfect and comprehensive record. In some cases background noise may make the recording virtually unintelligible. Also, recording is highly selective. Not only is non-verbal behaviour not captured but even such matters as who is being addressed are not always preserved. The availability of tape-recording facilities in the field does not remove the necessity for observation and the construction of fieldnotes, then. Indeed, an overemphasis on audio-recordings can distort one's sense of 'the field', by focusing data collection on what can be recorded, and concentrating attention on the analysis of spoken action. Further, there are considerable costs involved in the preparation of recorded materials. They must be transcribed. There are no hard-and-fast rules here, but the ratio of transcribing time to recorded time is always high (often in the range of five to one, or more).

We do not intend to provide detailed instructions as to the preparation of transcripts, but a number of general precepts can be noted. In the first place, a decision needs to be made about whether full transcription is necessary. An alternative is to treat the audio-tape as a document, indexing (by means of the revolution counter) and summarizing much of it, transcribing only what seems essential. This may save considerable time, though it risks relevant material being overlooked – especially since what is relevant changes over time.

Where transcription is to be carried out, a decision must be made about how detailed this should be. There are well-established conventions for the preparation of transcripts. These have been developed for the purposes of conversation analysis or discourse analysis. They use the typographical characters of the standard keyboard/printer to represent some basic features of

speech (such as pauses, overlaps, and interruptions). They can be used to show when the speaker speeds up or slows down, where emphasis is placed, and when utterances are louder than others. These will be essential for some research purposes, less important for others; and obviously the more detailed the transcription, the more time it will take. The planning and conduct of research using audio-recorded data must therefore involve strategic decisions about the kind of data to be collected, and the degree of detail to be preserved in the transcription. (For further discussion of considerations involved in transcription, see Atkinson 1992b.)

The collection and use of visual materials are a large and specialized area. There has been a well-established tradition in social anthropology of ethnographic film – often made by professional film-makers, with the anthropologist acting as consultant or co-director. The ethnography, in the form of a monograph, is thus paralleled by one or more documentary films (cf. Crawford and Turton 1992). These ethnographic films have their own narrative conventions, and their distinctive genres (Loizos 1993). Despite the immediacy of the visual medium, the ethnographic film is not a direct or neutral representation of social reality. It is as dependent as any other medium on conventions of representation and readership (MacDougall 1992; Martinez 1992).

Much the same is true of the use of video-recording. The availability of relatively cheap and small portable camcorders has made this an attractive means of data recording. At the same time, the selectivity of video-records must be remembered, especially when used indoors. Decisions have to be made about whether the camera should be fixed or mobile, whether a single focus is to be adopted or whether the focus should shift – and if so where and on what basis. Where the position and focus are not fixed, operation of the camera is likely to be full-time – it will be difficult if not impossible to observe and take notes at the same time. Yet complementary observation and note-taking will almost certainly be necessary. Here too contextual features will need to be documented, since by no means everything will be 'in shot'. A team approach is advisable in such circumstances. Also, like audio-recordings, video-records are difficult to handle as data, and it may well be necessary to produce a transcript and/or index. And, especially where the transcript includes

non-verbal behaviour, this will be even more time-consuming than the transcription of audio-tapes.

The use of photography is well established in anthropology (Collier and Collier 1986; Ball and Smith 1992), and to a much lesser extent in sociological research (Becker 1981). The use of visual data for more than illustrative purposes (and they are never without analytic import) requires considerable investment in detailed and specialized analysis of images. In other words, the collection of visual data does not remove the problems of selection and representation. We are used to thinking of film and photography as producing faithful, realistic images of the world about us; such habits of our own culture should not blind us to the fact that they are partial, interested, and conventional.

We still tend to think of written language as the privileged medium of scholarly communication. There are, therefore, some tensions in the use of visual materials in 'a discipline of words' (Ball and Smith 1992:5ff). In the near future, the use of 'hypermedia' software for the authoring and presentation of ethnographic (and other) information may change our notions of storing, analysing, and distributing data. As Seaman and Williams (1992) propose:

The increasing availability of interactive multimedia and hypermedia database systems on personal computers will transform ethnographic methodologies. Gathering data in many different media has already been made possible by cheap, efficient technologies of electronic recording. Textual and audiovisual information made interactive will be able to provide the scholarly apparatus of referencing and contextualization necessary to create new forms of academic publication and knowledge dissemination. Ethnographers must therefore learn not only how to collect information in the different media formats but how to process, analyze and integrate it into forms that convey meaningful understanding.

(Seaman and Williams 1992:300)

Hypertext and hypermedia will probably start to have an impact in the very near future. In the meantime, most ethnographers will remain committed to textual data for most practical purposes. Nevertheless, the use of visual recordings is an important, and often under-exploited, aspect of ethnographic fieldwork.

DOCUMENTS

We often need to collect and use documentary evidence from the research setting (see Chapter 6). Some documents are freely available and can be retained for later use. This is often true, for example, of such items as promotional material, guides, and circulars. Other documents can be bought or otherwise acquired. Even when documentary sources are not produced in large numbers, the researcher may be able to produce copies for retention. Photocopiers are available in some settings, of course, and the ethnographer may be allowed access to them. Alternatively, it may be possible to transcribe sections of documentary sources. Copying documents *in toto* is not necessarily the most effective recording strategy. While it avoids the dangers of omitting something important or losing the context, those advantages have to be set against the costs in time and money.

Frequently, there is no alternative to note-taking. Here too, though, there are different strategies that are available. One can index a document so that the relevant sections can be consulted as appropriate at later stages of the research. This can be done relatively quickly, but it requires easy and repeated access to the documentary sources. One may also summarize relevant sections or copy them out by hand. The choice between summarizing and copying revolves around a dilemma that we have met already in recording observational and interview data. By summarizing one can cover much more material in the same time, thus releasing scarce time for work of other kinds. On the other hand, summarizing involves some loss of information and introduces interpretation.

These three modes of note-taking – indexing, copying by hand, and summarizing – are not mutually exclusive, of course, and each should be used according to the accessibility of the documents and the anticipated use to which the notes will be put. Both these considerations may vary across different documents or even sections of documents. Where access to the documents is difficult and the precise wording used is likely to be important, there is little alternative to painstaking copying. Where the need is for background information, summaries might be sufficient. It should also be remembered that notes need not necessarily be made on the spot: where access is restricted it may be more efficient to read the indexes, sum-

maries, or relevant sections into a portable tape-recorder, the recording being transcribed later.

ANALYTIC NOTES AND MEMOS, AND FIELDWORK JOURNALS

While reading documents, making fieldnotes, or transcribing audiovisual materials, promising analytic ideas often arise. It is important to make notes of these, as they may prove useful in analysing the data. It is important, though, to distinguish analytic notes from accounts provided by participants and from observer descriptions.

Equally important are the regular review and development of analytic ideas in the form of analytic memos. These are not fully developed working papers but occasional written notes whereby progress is assessed, emergent ideas are identified, research strategy is sketched out, and so on. It is all too easy to let one's fieldnotes and other types of data pile up day by day and week by week. The very accumulation of material usually imparts a satisfying sense of progress, which can be measured in physical terms as notebooks are filled, interviews completed, periods of observation ticked off, or different research settings investigated. But it is a grave error to let this work accumulate without regular reflection and review. Under such circumstances the sense of progress may prove illusory, and a good deal of the data collection could be unnecessarily aimless.

As we have emphasized, the formulation of precise problems, hypotheses, and an appropriate research strategy is an emergent feature of ethnography. This process of progressive focusing means that the collection of data must be guided by the unfolding but explicit identification of topics for inquiry. The regular production of research memoranda will force the ethnographer to go through such a process of explication. Ideally, every period of observation should result in processed notes and the reflexive monitoring of the research process. As such memoranda accumulate, they will constitute preliminary analyses, providing the researcher with guidance through the corpus of data. If this is done there is no danger of being confronted at the end of the fieldwork with an undifferentiated collection of material, with only one's memory to guide analysis.

The construction of analytic notes and memos therefore

constitutes precisely the sort of internal dialogue, or thinking aloud, that is the essence of reflexive ethnography. Such activity should help one avoid lapsing into the 'natural attitude' and 'thinking as usual' in the field. Rather than coming to take one's understanding on trust, one is forced to question *what* one knows, *how* such knowledge has been acquired, the *degree of certainty* of such knowledge, and what further lines of inquiry are implied.

These analytic notes may be appended to the daily fieldnotes, or they may be incorporated into yet another form of written account, the fieldwork journal. Such a journal or diary provides a running account of the conduct of the research. This includes a record not only of the fieldwork, but also of the ethnographer's own personal feelings and involvement. The latter are not simply the basis for gratuitous introspection or narcissistic self-absorption. As we point out elsewhere in this book, feelings of personal comfort, anxiety, surprise, shock, or revulsion are of analytic significance. In the first place, our feelings enter into and colour the social relationships we engage in during fieldwork. Second, such personal and subjective responses will inevitably influence one's choice of what is noteworthy, what is regarded as strange and problematic, and what appears to be mundane and obvious. One often relies implicitly on such feelings; their existence and possible influence must be acknowledged and, if possible, explicated in written form. Similarly, feelings of anxiety can pose limitations on data collection, leading to a restricting tunnel vision. One of us (Atkinson 1992a) has reflected on how his personal feelings about general medicine and surgery clearly influenced the nature and balance of his published research on medical education.

There is a constant interplay between the personal and emotional on the one hand, and the intellectual on the other. Private response should be transformed, by reflection and analysis, into potential public knowledge. The fieldwork journal is the vehicle for such transformation. At a more mundane level, perhaps, the carefully made fieldwork journal will enable the conscientious ethnographer painstakingly to retrace and explicate the development of the research design, the emergence of analytic themes, and the systematic collection of data. The provision of such a 'natural history' of the research is a crucial component of the complete ethnography.

DATA STORAGE AND RETRIEVAL

It has always been common for ethnographers to keep written data records chronologically, as a running record in which the data are stored at the time of collection. Likewise, interview transcripts and the like are normally kept as complete records of the individual interview. Once analysis begins, however, reconceptualization – sometimes the physical reorganization – of the data into themes and categories generally becomes necessary. This involves the categorization of the data – often breaking the texts up into discrete chunks or segments and identifying them in accordance with an indexing or 'coding' system. (This is less common in conversation and discourse analysis, where the focus is often on local patterns.)

For many years ethnographers and researchers like them have manipulated their data by means of the physical indexing and sorting of precious manuscript and typescript texts. Recently, as we shall see, the functions of the computer – mainframe and microcomputer – have been used to facilitate the storage and retrieval of textual data for ethnographic purposes. To a considerable extent the computer software for ethnographic data storage and retrieval recapitulates the procedures associated with earlier, manual approaches. We shall comment on manual techniques before going on to discuss computer-based applications. It is important not to assume that all ethnographic data must now be stored and searched on computer. For many researchers there will still be a place for simple manual procedures.

The reorganization of the data into categories provides an important infrastructure for later searching and retrieval. It can also play an active role in the process of discovery, as the Webbs noted:

It enables the scientific worker to break up his subject-matter, so as to isolate and examine at his leisure its various component parts, and to recombine the facts when they have been thus released from all accustomed categories, in new and experimental groupings.

(Webb and Webb 1932:83)

Moreover the selection of categories is of some significance:

As I gathered my early research data, I had to decide how I

was to organize the written notes. In the very early stage of exploration, I simply put all the notes, in chronological order, in a single folder. As I was to go on to study a number of different groups and problems, it was obvious that this was no solution at all.

I had to subdivide the notes. There seemed to be two main possibilities. I could organize the notes topically, with folders for politics, rackets, the church, the family, and so on. Or I could organize the notes in terms of the groups on which they were based, which would mean having folders on the Nortons, the Italian Community Club, and so on. Without really thinking the problem through, I began filing material on the group basis, reasoning that I could later redivide it on a topical basis when I had a better knowledge of what the relevant topics should be.

As the material in the folders piled up, I came to realize that the organization of notes by social groups fitted in with the way in which my study was developing. For example, we have a college-boy member of the Italian Community Club saying: 'These racketeers give our district a bad name. They should really be cleaned out of here.' And we have a member of the Nortons saying: 'These racketeers are really all right. When you need help, they'll give it to you. The legitimate businessman - he won't even give you the time of day.' Should these notes be filed under 'Racketeers, attitudes toward'? If so, they would only show that there are conflicting attitudes toward racketeers in Cornerville. Only a questionnaire (which is hardly feasible for such a topic) would show the distribution of attitudes in the district. Furthermore, how important would it be to know how many people felt one way or another on this topic? It seemed to me of much greater scientific interest to be able to relate the attitude to the group in which the individual participated. This shows why two individuals could be expected to have quite different attitudes on a given topic.

(Whyte 1981:309)

Whyte's comments here emphasize the importance of context. No system of filing or coding and retrieval can ever remove the necessity to remain sensitive to the social context of speech and action.

The allocation of data to categories in ethnography has usually differed from the kind of coding typical in quantitative research, including content analysis (Krippendorff 1980). Here there is no requirement that items of data be assigned to one and only one category, or that there be explicit rules for assigning them:

We code [the fieldnotes] inclusively, that is to say if we have any reason to think that anything might go under the heading, we will put it in. We do not lose anything. We also code them in multiple categories, under anything that might be felt to be cogent. As a general rule, we want to get back anything that could conceivably bear on a given interest. . . . It is a search procedure for getting all of the material that is pertinent.

(Becker 1968:245)

Indeed, Lofland (1971) argues that in the case of analytic categories it pays to be 'wild', to include anything, however long a shot.

The identification of categories is central to the process of analysis (although it should not be confused with analysis *per se*). As a result, the list of categories in terms of which the data are organized generally undergoes considerable change over the course of the research. In particular, there is typically a shift towards more analytic categories as the work develops (see Chapter 8).

Organizing and reorganizing the data in terms of categories can be done in a number of ways. The simplest is 'coding the record'. Here data are coded, that is, assigned to categories, on the running record itself (or a copy of it). Comments relating the data to descriptive or analytic categories are written in the margin, on the reverse, or on interleaved pages, depending on the format of the data themselves. This is quick, and preserves the sense of 'reading' the data. It is not, however, well adapted to subsequent procedures of searching and retrieving data segments. In a more sophisticated version of this strategy, an analytic index is produced. Here each data segment is indexed under a developing set of headings, stored on index cards or in a simple 'cardbox' microcomputer database. Identically or similarly coded segments can thus be found in the original hard copy of the data relatively easily.

An alternative method of data organization, used by many

ethnographers, is physical sorting. Multiple copies of the data are made, and each segment of the data is stored under all the categories to which it is deemed relevant. With this approach, ethnographers can find all the data collected together when they come to analyse and write up a particular theme. At the same time, the physical storage of multiple copies has limitations: not least the time taken to produce copies and the sheer space requirements of a large and complex data set. These methods, and others that have been used, such as punch cards with data extracts attached, reflect the same underlying approach. That is, they depend on the ethnographer segmenting and disaggregating the original data. The terminology of 'indexing' and 'coding' captures the essence of the tasks. They have been carried forward into the use of computer software for the storage, searching, and retrieval of ethnographic data. Only very recently have there been sustained attempts to use the intrinsic capacities of microcomputing to go beyond the manual techniques.

It is now perfectly commonplace for ethnographers and others to store textual data in microcomputer files. It is probably taken for granted in most academic settings that any textual data – such as fieldnotes, interview transcripts, diaries, and the like – can, and perhaps should, be prepared and stored via wordprocessing software on a microcomputer. The diskette and the hard disk are now the preferred storage media for many types of data. Where once the ethnographer relied on the scribbled note and the typescript, he or she is now likely to regard the microcomputer as a natural tool. There are, of course, constraints that may mean the ethnographer will in practice continue to rely on handwritten materials and other hard copy. Where fieldwork is conducted in remote settings, then the original data collection may remain in notebooks, and the time and cost of transferring them to wordprocessor may be too great once the data collection period is over. On the other hand, the existence of tiny pocket computers and the widespread use of laptops and other portable devices also mean that it becomes possible to envisage an environment in which data collection, storage, and retrieval are all conducted through microcomputing. Furthermore, the networking of workstations in most academic settings will permit the sharing of ethnographic data among members of research teams, graduate seminars, and the like.

Given our contemporary reliance on microcomputing environ-

ments, then, it often makes sense to go beyond the use of a wordprocessor and to employ available software to facilitate basic tasks of storage and retrieval. We do not equate such tasks with 'analysis', although the software and procedures are often referred to a 'Computer Assisted Qualitative Data Analysis'. They must be conducted in conjunction with the kinds of analytic processes we outline in the following chapter. There is a direct continuity between the systematic searching of data and the development of the analysis. The microcomputer may be used to store qualitative, textual data, to search them, and to retrieve specified items. Such basic procedures are common to most of the 'CAQDAS' software.

It is important to recognize at the outset, however, that many useful functions can be performed by generic wordprocessing software. The ethnographer who is familiar with an advanced, powerful wordprocessing package, and whose data retrieval needs are straightforward, may well find little or no need to look beyond the wordprocessor. The basic tasks of finding, marking, and relocating stretches of text (fieldnotes or interview transcript extracts, for example) may be performed by the functions of the wordprocessor (such as the insertion of 'bookmarks' and the capacity to 'copy' or 'cut and paste'). It is possible that such wordprocessing functions will actually serve all the needs of a particular user for a simple project. There is certainly no need to seek out more complex and more expensive solutions if the need does not arise. There is never any merit in using specialized software if its more sophisticated features are not in fact used and if generic applications will do the trick.

The majority of ethnographers who wish to use microcomputing software, however, will now turn to one or more applications that have been developed either for handling ethnographic data, or for more general textual work that is readily adapted to the ethnographer's needs. Those software packages can be used for a variety of data handling tasks. In outlining them here we do not intend to review all the available software, nor to make systematic comparisons between their respective strengths and weaknesses. There are other sources to which the reader may be referred for such treatment, most notably the systematic review by Tesch (1990), which is an excellent account of the field. (See also Lee and Fielding 1991; and Dey 1993.) Tesch outlines a number of strategies for qualitative

research and summarizes a wide range of software packages. Hers is as comprehensive a review as one could reasonably hope to achieve. Inevitably there are developments in such a field as this that quickly render all contributions obsolescent. Yet Tesch's book will remain a major source, and the reader is recommended to consult it for detailed guidance.

The most commonly advocated strategy is based on the *coding* of segments of text. There are several packages that reproduce this strategy which may be referred to as a 'code-and-retrieve' approach. There are some differences between them, but most of their basic functions are similar or identical. Currently available software includes *Ethnograph*, *Text Analysis Package*, *Textbase Alpha*, and *Qualpro*: some important variants that do other things as well will be commented on below. These computing strategies draw on and develop those of a previous era. They recapitulate the elementary approach whereby the text is classified and sorted according to thematic dimensions.

The element common to this family of software packages is the capacity – indeed the requirement – to attach 'codes' to specified segments of the notes or transcripts. There is nothing mechanical about this process. The software provides no automatic coding process. It always remains the task of the ethnographer to exercise his or her intellectual imagination to decide upon the analytically relevant codes to be used. Conceptually speaking, therefore, the task of coding for microcomputing applications is no different from 'manual' techniques for identifying and retrieving chunks of data. The data were once physically disaggregated or marked and indexed as part of a continuous record. The logic of code-and-retrieve remains the same. It is what Tesch (1990) calls 'decontextualizing' data segments, and 'recontextualizing' them into thematic files.

The microcomputing versions of this process have a number of practical advantages. While the coding process itself is no advance on previous approaches, the use of the software permits greater flexibility and sensitivity. The software allows the researcher to retrieve identically coded segments of text with considerable speed. All segments so coded are found. Any search is therefore comprehensive (provided only that the coding is equally so). There is, therefore, reduced danger of the ethnographer selecting only the most easily remembered instance, or the one that first comes to hand from the notebooks.

Furthermore the delicacy of the searching and retrieval process is enhanced, given the opportunity to combine codes in multiple searches. A package such as *Ethnograph* facilitates the multiple coding of segments; codes may overlap and be nested within one another. Segments may be retrieved using single or multiple code searches. Codes can be specified to be virtual synonyms, and others can be excluded. The procedures thus allow codes to be combined in an approximation of Boolean algebra – exploiting the opportunities of searching, for example, for 'X' and 'Y' or 'X' and not 'Y'.

Coding in these contexts is not a straightforward process. The ethnographer needs, of course, to decide on what codings are relevant to the emergent themes of the work and to the preliminary analyses that accompany data collection. They may index people, places, or things, and they may refer to relevant types of social encounter or event. The resulting coding system may need to become very complex and dense.

Ethnographers using software of this sort need to spend a considerable amount of time and effort devising and experimenting with codes relevant to their own data. The coding approach calls for some investment of time in preliminary analyses if codes are not to be devised and attached to data in an *ad hoc* fashion. Useful searches of the data can only be facilitated if the coding scheme itself is adequate in the first place. Software like *Ethnograph*, of course, permits the constant refinement and revision of coding schemes. In principle, the processes of coding and recoding may follow the emergence of ideas grounded in the data. They are never fixed. In practice, however, the tasks of entering and deleting codes are tedious. One strongly suspects that in many projects the codes themselves will rapidly become 'frozen' once data have been coded for the first time. There may readily develop an inertia that militates against progressive refinement and revision.

Furthermore, in themselves, the pure coding software applications are poor at the representation of analytic issues. *Ethnograph*, for instance, is poor at representing relationships between codes. In essence the coding strategy is a 'flat' one. Thus, the software cannot recognize some codes as being general categories that include more specific ones. Such software emulates manual searching quite efficiently and comprehensively. But its version of coding recapitulates what has been called 'the culture

of fragmentation' (Atkinson 1992a) as a general approach to qualitative data. That is, it reflects a general assumption that data reduction and aggregation lie at the heart of data management. This is not necessarily faithful to all versions of ethnographic and other qualitative inquiry, particularly those concerned with detailed sequential analysis of social interaction.

The code-and-retrieve strategy may be complemented by an alternative strategy used to search text by means of 'indigenous' terms – that is, the identification of words and phrases actually used in the fieldnotes or interviews. This strategy of data retrieval may be especially useful when verbatim transcripts permit the identification of actors' own language. There are many microcomputing applications that can facilitate such data searching. They do not need to have been designed especially for ethnographic research purposes; there are many programs that have been developed for more general purposes, such as content analysis, indexing, and similar functions. All software of this sort allows the ethnographer to search for the occurrence of particular terms and to identify their location in the data texts. Among the many programs that have been described and used for this kind of data analysis are *FYI3000Plus*, *Golden Retriever*, and *IZE*. The systematic searching of the lexicon of transcripts and fieldnotes can aid important analytic tasks. Actors' and informants' own vocabularies may be inspected and chunks of data retrieved that contain specified terms. Some of this software allows for highly flexible and sensitive searching. Any word in the text may be used as a keyword without further marking. And a full Boolean logic allows words to be treated as synonyms (X or Y) as well as multiple searches (X and Y). The ethnographer may thus build up quite complex search strategies.

There are a number of microcomputer software packages that attempt to go beyond the simple code-and-retrieve function of the *Ethnograph* and cognate applications. They attempt to represent key features of analysis itself. The program *KWALITAN*, developed originally in The Netherlands, is an attempt to include aspects of 'grounded theory' building that go beyond coding the data. Hence the software supports not just keywords, but also analytic and methodological memoranda that may be attached to specific segments of data ('scenes' as they are called in this strategy). The intention is to provide a more faithful

representation of the analytic process (not just storage and retrieval) in the microcomputing environment.

In a similar vein, *NUDIST*, originally developed in Australia for mainframe computers and now transferred to microcomputers, goes beyond the 'flat' coding of *Ethnograph* and similar basic code-and-retrieve applications. In the *NUDIST* system relations are established between codes themselves. As the coding scheme develops, semantic relationships are established, so that large numbers of codings may be arranged in a series of hierarchically ordered trees. More specific codings may thus be related to superordinate themes and categories. The specification of logical or sociological relationships between categories is an advance on other methods that simply map the occurrence or co-occurrence of coded segments. Approaches such as that supported by *NUDIST* may provide a genuine link between coding, retrieving, and *analysing* data. It is difficult to tell the actual benefits of the *NUDIST* approach over 'flat' coding methods. By no means all ethnographic projects in practice employ so many codewords, so delicately specified, that their taxonomic arrangement is a necessary advance in methodology: the analytic 'value-added' of such an approach may not be relevant for all researchers.

Even so, software like *KWALITAN* or *NUDIST* remains grounded in the basic approach of 'coding' or otherwise segmenting data. A more radically alternative approach to microcomputing relies on the strategy known as 'hypertext'. This approach to the searching of qualitative data is entirely dependent on the capacities of the computer, and may be thought of as a genuine alternative strategy for the exploration of data. Here, indeed, the distinction between data retrieval and analysis becomes totally blurred. Rather than fragmenting the text into discrete segments, hypertext software allows the analyst to construct complex pathways and relationships within the database. Rather than thinking of 'finding' and 'retrieving' chunks of data, one should think rather of 'navigating' through the database. Elements of data can also be linked to annotations and commentary. The most widely implemented hypertext application is *Hyperqual*, based on the hypercard facility of the Macintosh computer. A similar application, based on the same computing environment, is *Hypersoft* (Dey 1993). A generic hypertext system that may be used for qualitative data in a PC environ-

ment is *Guide* (Weaver and Atkinson 1994). The possibilities of hypertext – and, more generally, hypermedia applications that link information of different sorts – are being explored by scholars in many disciplines.

With a fully realized hypertext application there is no real distinction between 'data' and other materials such as analytic memoranda, annotations, and the like. Equally 'data' such as interview transcripts or fieldnotes can be linked directly to other information, such as graphics, extracts of relevant literature, maps, even sounds. This high degree of integration and consequent flexibility may facilitate an analytic approach that is ultimately more faithful to the cognitive tasks and intellectual presuppositions of 'classic' ethnographic inquiry. They may also accommodate individual differences between researchers or research groups more readily than more conventional prestructured applications. The opportunity to create multiple links and trails may encourage the analyst to pursue dense networks of association and meaning. As Thomas (1993) suggests of future ethnographers:

Using hypertext, a researcher could include not only a conventional description of the method of a study, but also graphics (photos or video segments) and sound to illustrate or clarify procedures. Qualitative researchers may find hypertext especially helpful, since they would be able to include, on a palm-sized disk, the anecdotes illustrating concepts, as well as the actual interview segments from which data were drawn.

And he goes on to comment:

Imagine the richness of data if Becker's study of marijuana users, Manning's accounts of narcotics agents, or Irwin's analysis of prison culture included 3-D visuals and sound. This kind of communication would not only infuse ethnographic texts with richer detail, it would add a new level of accountability by giving the reader a view of the context from which the data and analysis is derived.

(J. Thomas 1993:1)

Weaver and Atkinson did not go so far as to include sound and video in their use of *Guide*. They do, however, indicate how the ethnographer can create complex relationships within his or her data, and can also establish links 'out' to other sources and

types of information. Moreover, as Thomas indicates, it is possible for 'the ethnography' itself to be presented in a hypertext format, so that the 'reader' is not confined to a linear hard-copy text. Rather, he or she may also choose alternative trails through the available data and other information. The 'reading' of the ethnography thus becomes more clearly interactive, and also recapitulates the kinds of 'analyses' traced out by the ethnographer.

Whatever merits are to be found in computer applications, however, we must recognize that they only provide adjuncts to the sociological or anthropological imagination. They certainly do not provide 'automatic' solutions to problems of representation and analysis. Understanding and interpretation are the outcome of interactions between the ethnographer and the data, which are themselves constructs. There is no mechanistic substitute for those complex processes of reading and interpretation. ®

CONCLUSION

While it is probably impossible to render explicit all the data acquired in fieldwork, every effort must be made to record it. Memory is an inadequate basis for subsequent analysis. Of course, data recording is necessarily selective and always involves some interpretation, however minimal. There is no set of basic, indubitable data available from which all else may be deduced. What is recorded, and how, will depend in large part on the purposes and priorities of the research, and the conditions in which it is carried out. Moreover, in using various recording techniques we must remain aware of the effects their use may be having on participants and be prepared to modify the strategy accordingly. Similarly, there is no finally correct way to store information or to retrieve it for analysis. The various systems – including currently available computing strategies – differ in appropriateness according to one's purposes, the nature of the data collected, the facilities and finance available, the size and scope of the research project, as well as personal convenience.

As with other aspects of ethnographic research, then, recording, storing, and retrieving data must be viewed as part of the reflexive process. Decisions are to be made, monitored, and – if necessary – remade in the light of methodological, practical,

and ethical considerations. At the same time, however, these techniques play an important role in promoting the quality of ethnographic research. They provide a crucial resource in assessing typicality of examples, checking construct-indicator linkages, searching for negative cases, triangulating across different data sources and stages of the fieldwork, and assessing the role of the researcher in shaping the nature of the data and the findings. In short, they facilitate – but should not determine – the process of analysis, a topic to which we turn in the next chapter.

Chapter 8

The process of analysis

In ethnography the analysis of data is not a distinct stage of the research. In many ways, it begins in the pre-fieldwork phase, in the formulation and clarification of research problems, and continues through to the process of writing reports, articles, and books. Formally, it starts to take shape in analytic notes and memoranda; informally, it is embodied in the ethnographer's ideas and hunches. And in these ways, to one degree or another, the analysis of data feeds into research design and data collection. This iterative process is central to the 'grounded theorizing' promoted by Glaser and Strauss, in which theory is developed out of data analysis, and subsequent data collection is guided strategically by the emergent theory (Glaser and Strauss 1967; Glaser 1978; Strauss 1987; Strauss and Corbin 1990). However, much the same interactive process is also involved in other kinds of ethnographic research, including those which are directed not towards the generation of theory but to other research products, such as descriptions and explanations.

This commitment to a dialectical interaction between data collection and data analysis is not easy to sustain in practice, however; and much ethnographic research suffers from a lack of reflexivity in this respect. The data required to check a particular interpretation are often missing; the typicality of crucial items of data cannot be checked; or some of the comparative cases necessary for developing and testing an emerging set of analytic ideas have not been investigated. One reason for this is the influence of naturalism, with its emphasis on 'capturing' the social world in description (Hammersley 1992:ch.1). Naturalism reinforces what Lacey (1976:71) calls 'the it's all happening elsewhere syndrome', a common ailment in fieldwork where the