

### SUMMARY

- ✦ The selection of statistical tests should be made at the design stage of the research and not as an afterthought.
- ✦ Data can be classified into categorical data (which includes nominal and ordinal) and quantifiable data (which includes interval and ratio). The types of data yielded by a study will determine the kinds of analysis and statistical tests applied to them.
- ✦ Data may be presented descriptively through the use of pie charts, bar charts and histograms or through the use of descriptive statistics. The latter focus on themes such as the distribution of the data and its dispersion.
- ✦ Inferential statistics are used to draw conclusions from the data and involve the specification of a hypothesis and the selection of appropriate statistical tests.
- ✦ Some of the inherent danger in hypothesis testing is in making Type I errors (rejecting a hypothesis when it is, in fact, true) and Type II errors (accepting a hypothesis when it is false).
- ✦ For categorical data, non-parametric statistical tests can be used, but for quantifiable data, more powerful parametric tests need to be applied. Parametric tests usually require that the data are normally distributed.

### Further reading

- Black, T. (2001) *Evaluating Social Science Research*, 2nd edn. London: Sage.
- Provides an clearly written introduction to evaluating research projects. The last chapter (in the second edition) contains a very useful introduction to using Excel as a data analysis tool.
- Fielding, J. and Gilbert, N. (2000) *Understanding Social Statistics*. London: Sage. Comprehensive and clearly articulated. Illustrates how to perform statistical calculations using SPSS, one of the most popular statistical programs.
- Hosker, I. (2002) *Social Statistics: Data Analysis in Social Science Explained*. Taunton: Studymates. A very short and simple text for those truly terrified by statistics!

# 13

## Collecting and analysing qualitative data

### Chapter objectives

After reading this chapter you will be able to:

- Distinguish between the aims and methods used in qualitative and quantitative research.
- Select appropriate qualitative methods, including content analysis and grounded theory approaches.
- Apply qualitative methods to produce valid, reliable and trustworthy data.

We saw in Chapter 2 that while some research methodologies tend to utilize either quantitative or qualitative methods, very often both are used. This is because qualitative data can provide rich descriptions and explanations that demonstrate the chronological flow of events as well as often leading to serendipitous (chance) findings. According to Miles and Huberman (1994) qualitative studies have a quality of 'undeniability' because words have a more concrete and vivid flavour that is more convincing to the reader than pages of numbers. However, qualitative analysis has been criticized for being lacking in methodological rigour; prone to researcher subjectivity and based on small cases or limited evidence. We will explore how qualitative analysis addresses such problems later in this chapter.

Qualitative analysis is (or should be) a rigorous and logical process through which data are given meaning. Through analysis, we can progress through an initial description of the data then, through a process of disaggregating the data into smaller parts, see how these connect into new concepts, providing the basis for a fresh description. As we saw in Chapter 2, there are different approaches to qualitative research, including grounded theory, ethnography and phenomenology; researchers often using a combination of approaches in one research project. One of the major issues in qualitative research is the extent to which data should be analysed. As Strauss and Corbin (1998) point out, some researchers believe that the data should not be analysed at all, but should merely be presented. This allows the data to 'speak for themselves', untrammelled by the potential subjective interpretations

of the researcher. Other qualitative researchers are concerned, however, with accurate selection, synthesis and description of the data, but in as detached and objective a way as possible. Other researchers are more concerned with theory building, interpreting the data to build concepts and categories that can be brought together into theoretical frameworks. In contrast, some researchers see qualitative research as primarily being about storytelling and description (Wolcott, 1994).

In this chapter we will look at the possible sources of qualitative data and approaches to how data can be analysed, looking particularly at content analysis and grounded theory methods and also including some increasingly influential approaches such as the use of narratives, conversational analysis and discourse analysis. The important issues of reliability and validity will also be addressed, but more from the stance of those who favour interpretivist and naturalistic approaches.

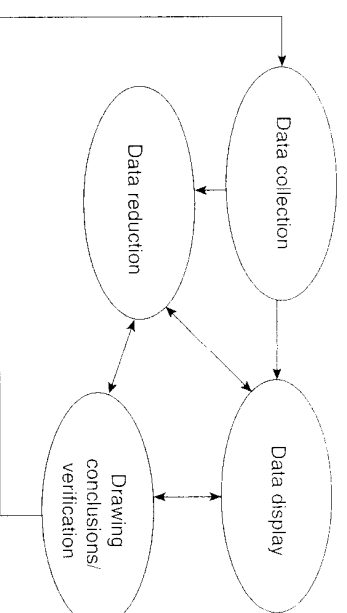
## CHARACTERISTICS OF QUALITATIVE RESEARCH

Qualitative research can take many forms and results from the use of data gathering instruments such as observations, interviews, questionnaires and document analysis. While, even today, qualitative research is often regarded in some quarters as less valid and reliable as its quantitative cousin, qualitative data can be a powerful source of analysis. First, qualitative research is highly contextual, being collected in a natural 'real life' setting, often over long periods of time. Hence, it goes beyond giving a mere snapshot of events and can show how and why things happen – also incorporating people's own motivation, emotions, prejudices and incidents of interpersonal cooperation and conflict (Charmaz, 1995). Far from lacking scientific rigour, qualitative research can even be used for testing hypotheses to see if theoretical propositions can be supported by the evidence.

As Miles and Huberman (1994) show, most qualitative research involves a number of characteristics:

- It is conducted through intense contact within a 'field' or real life setting.
- The researcher's role is to gain a 'holistic' or integrated overview of the study, including the perceptions of participants.
- Themes that emerge from the data are often reviewed with informants for verification.
- The main focus of research is to understand the ways in which people act and account for these actions.
- Qualitative data are open to multiple interpretations (but some are more compelling than others either on theoretical grounds or because of internal consistency).

Unlike more quantitative data, qualitative data are rarely accessible for immediate analysis, but require a processing stage often involving the editing of notes and transcribing of tape recordings. An important first step is to codify notes that

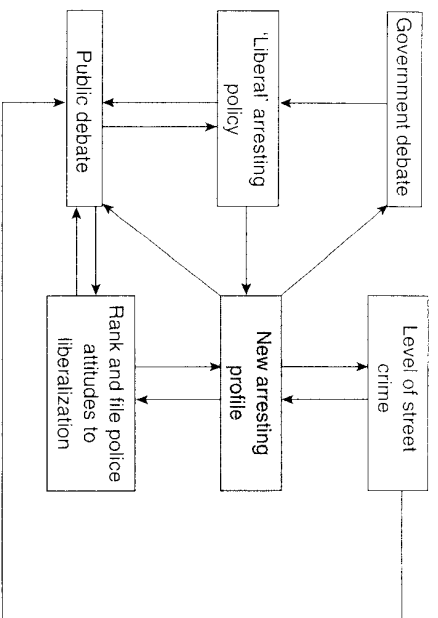


**FIGURE 13.1** AN INTERACTIVE MODEL OF QUALITATIVE DATA ANALYSIS  
(ADAPTED FROM MILES AND HUBERMAN, 1994)

are taken in the field (recall Chapter 10 and the taking of field notes as part of observation). Such field notes may also often contain remarks or reflections of the researcher, taken whilst in the field. Analysis does not necessarily occur sequentially after data collection, but simultaneously with it and involves the teasing out of patterns, themes and groupings in the data. This is part of the process of *data reduction* through which the sheer volume of data is reduced and made not only more manageable but more coherent. Further data gathering may then ensue where more evidence of these patterns and themes is sought. Finally, in drawing conclusions, attempts are made to find consistencies in these themes and patterns so that generalizations can be drawn and compared with the relevant body of constructs and theories for verification. The relationships between data collection, data reduction, data display and the drawing of conclusions and the verifying of data are illustrated in Figure 13.1. Presented here is not so much a sequential process but an interactive one, where, even at the final stage of writing up, gaps or inconsistencies may trigger the need for further data collection.

## QUALITATIVE RESEARCH DESIGN

We saw in Chapter 1 that qualitative research is often associated with inductive research designs. But it would be wrong to assume that qualitative researchers always enter a field of study with no prior theoretical assumptions or research questions. For highly ethnographic studies this may be the case. But often, qualitative researchers will wish to impose at least some structure on the study in terms of the kinds of questions that are being asked, the focus of the research and the selection of field sites. The amount of structure required will depend on factors such as the time available and how much is already known about the phenomenon. Other decisions then have to be made about what is going to be researched (including the units of analysis and the sampling frame).



**FIGURE 13.2** CONCEPTUAL FRAMEWORK FOR A RESEARCH PROJECT ON DRUG LIBERALIZATION AND POLICING

**Conceptual frameworks**

Miles and Huberman (1994) talk about the structure of research being formulated as a *conceptual framework* that describes in narrative, but often in graphical format, the key factors, constructs and variables being studied – and the presumed relationship between them. Of course, whether this relationship really exists is one of the elements of the study. Miles and Huberman conceive of this conceptual framework as a series of intellectual ‘bins’ containing key events and behaviours. Hence, Figure 13.2 shows a study of new ‘liberal’ policing policies which have de-criminalized possession of ‘soft’ drugs, and a hypothesized conceptual framework containing inter-related bins. For example, it is believed that the new policy will change the profile of arrests, with fewer people being arrested for possession of soft drugs (that is, the policy is being effectively implemented by officers on the street) and that this will reduce the level of street crime. Producing a conceptual framework forces the researcher to specify what it is that is going to be studied and what is going to be omitted, and hypothesized relationships between key variables. This, of course, is not a hypothesis in the positivistic sense, but a way of alerting the researcher to the possible relationships that exist and which can be explored.

**Activity 13.1**

Examine Figure 13.2. Do you agree with its hypotheses? Draw an alternative conceptual framework adding new bins and relationships.

**TABLE 13.1** ORIENTATION OF RESEARCH QUESTIONS

Orientation	Resulting questions
States	Which type of object, event or behaviour is this? How often does this event occur? What caused it? How is it maintained?
Processes	How is the object, event or behaviour changing over time? What are the consequences of this process? What strategies are being used?

**Research questions**

Of course, if the research design is entirely inductive, there may be no formulation of a priori questions for study. With most qualitative designs, however, there will be, at least, a set of tentative issues that require addressing. As Flick (1998) notes, the less clearly research questions are formulated, the greater the chance that researchers will find themselves confronted with mountains of data. If issues are formulated as a conceptual framework, this in turn leads naturally to the design of research questions. Again using Figure 13.2 as an illustration, we might ask about the actual impact of policy changes on practice (the number and profile of drug-related arrests), and how rank and file police attitudes have mediated between policy and practice. Like the conceptual framework, research questions allow the researcher to see where the boundaries of the study lie.

Of course, having established the research questions, the researcher still has to remain open to new and perhaps unexpected results (Flick, 1998). Research questions can be orientated towards describing states or describing processes, as Table 13.1 shows.

**Units of analysis**

As in any research approach, in qualitative research decisions have to be taken at the design stage on the unit of analysis to be used. Typically, this might include: individuals, groups, organizations or communities. Using health care as an example, the research might focus on individuals (patients, doctors, nurses and other health care professionals), groups (the hospital management board), organizations (hospitals or professional bodies) and communities (a town and its hospitals and local surgeries).

**Sampling**

We saw in Chapter 4 that experimental and quasi-experimental research designs are concerned to use samples that are as representative as possible of the population under study – hence the use of random probability sampling. In qualitative research this approach is usually impractical or rejected by researchers on epistemological grounds. Qualitative research, then, often works with small samples of people,

cases or phenomena nested in particular contexts. Hence, samples tend to be more *purposive* than random. Again, in contrast to more quantitative approaches, samples may not always be pre-planned in advance, but may evolve once fieldwork has begun. So an initial choice of informants may lead to a decision to select a more contrasting set of deviant subjects (cases) as a comparison (Lincoln and Guba, 1985). A wide range of qualitative sampling strategies suggested by Patton (1990) is presented in Table 13.2.

### Activity 13.2

Examine the sampling strategies in Table 13.2. Which of them can be most easily defended for potentially yielding valid results? Which are most susceptible to accusations of invalidity?

*Suggested answers are provided at the end of the chapter.*

Very often it is not a case of selecting between the various approaches illustrated in Table 13.2 but combining some of them into *multiple case sampling*. By using a number of cases that yield similar findings we can show replication (recall Figure 6.4 in Chapter 6) hence strengthening claims for the validity of findings and the grounds for their generalizability. What is needed, however, is an explicit *sampling frame* where, between them, the cases cover the various issues and variables detailed in the study's research questions. Miles and Huberman (1994) advise that the best strategy is to initially target those cases that are most likely to yield the richest data, leaving more peripheral cases until later. But peripheral sampling is still important because it may often yield negative or exceptional cases (those that contradict the initial case findings).

### COLLECTING QUALITATIVE DATA

We have seen in a number of previous chapters that qualitative data emerge from a wide spectrum of sources. One of the most common is field studies where the researcher enters a selected setting to gather data, often through the use of observations or interviews. While observation is likely to elicit qualitative data (such as field notes and analysis) interviews may be used to collect both qualitative and quantitative information. Similarly, case studies might involve the use of research instruments such as questionnaires, interview schedules and observations, all of which might yield data that is qualitative in nature.

### Field notes

As we saw in Chapter 10, field notes remain one of the mainstays of qualitative data collection methods. They can be supplemented by diaries written by

TABLE 13.2 SAMPLING STRATEGIES IN QUALITATIVE RESEARCH

Sampling strategy	Description
Comprehensive sampling	Examines every case or instance in a given population (e.g. suicides amongst insurance salespeople)
Intensity sampling	Looks for information-rich cases, and ones that are more typical than those at the extremes
Deviant case sampling	Selects at two extremes (e.g., punctual and unpunctual staff) and tries to identify factors that influence these predispositions. Can yield focused information but poses dangers in generalizing from extreme cases
Maximum variation sampling	Seeks to look for a wide range of variations and patterns across the sample. Includes examining outlier cases to see if the main pattern still holds
Homogenous sampling	The opposite of maximum variation, seeks homogenous groups of people to be studied in depth. Focus group interviews are typically conducted with such homogenous groups
Typical case sampling	Highlights what is 'normal' or average in order to illuminate the whole population. Since generalizing is involved, it becomes important to substantiate that the sample is typical, using other sources (e.g. statistical data or other findings)
Stratified purposive sampling	Selecting a strata (e.g. infant schools, secondary schools and colleges) and purposefully choosing cases (schools/colleges) within each
Critical case sampling	Similar to intensity sampling, but the focus is on one case or site that is deemed to be critical or crucial
Snowball sampling	A first group of participants is used to nominate subsequent individuals or groups for study
Criterion sampling	The sample is selected on the basis of the prime focus of the study (e.g. early retirement); hence, all cases would be chosen to meet this criterion
Theory-based sampling	A more formal type of criterion sampling, cases are chosen on the basis that they represent a theoretical construct
Confirming and disconfirming cases	Often a second-stage sampling strategy, where cases are chosen on the basis that they can confirm or disconfirm emerging patterns from the first stage
Purposive random sampling	From a large possible set of choices, a limited number are selected randomly
Comparable case selection	Individuals, sites and groups representing the same relevant characteristic are chosen over a time period
Politically important cases	A focus on key, politically important cases because these are more likely to be noticed by policy makers and the results of the study more likely to be implemented

Source: Adapted from Patton, 1990

Interviewee data summary	
Date of interview	.....
Place of interview	.....
Duration of interview	.....
Interviewer	.....
Identifier number for interviewee	.....
Gender of interviewee	.....
Age of interviewee	.....
Job role of interviewee	.....
Qualifications of interviewee	.....
Professional training of interviewee undertaken in the past 3 years	.....

FIGURE 13.3 EXAMPLE OF A DOCUMENTATION SHEET

researchers, and also by participants, so that triangulation can be performed. Photographs, drawings, maps and other visual material can also be added (see next section). Lofland and Lofland (1984) recommend that if field notes are supplemented by tape recordings, these should be transcribed as quickly as possible, and that at least as much time should be spent studying and analysing the materials as spent in the interview itself. Flick (1998) also recommends the use of documentation sheets that provide useful summary information on the context within which the data were collected (see Figure 13.3).

Document sheets allow for an overview of the data and can provide a guide as to which files and transcripts to consult at the analysis stage.

### Photographs and other sources

In addition to text, photographs or other visual data such as video or film recordings are also sources of qualitative data. Photographs in particular have a long history in ethnography and anthropology (Flick, 1998). Photographs allow the detailed recording of facts, including the presentation of lifestyles and living and working conditions. They can also capture processes that are too rapid for the human eye. Sometimes, the subjects of research can be encouraged to take on the

role of the photographer, documenting either a subject of their choice, or a theme that the researcher wants them to record. If desired, these photographs can subsequently be used to stimulate an interview or encourage a participant to produce a narrative to accompany and expand upon the photographic evidence. This can be seen as a concretization of the focused interview (Flick, 1998).

But do photographs tell the truth? Of course, what the camera focuses on, and what it leaves out, is selective. There may also be problems of reactivity, with the subjects altering their behaviour in the presence of the photographer. Hence, there are always dangers of bias, and questions about the extent to which photographs help in the social construction of reality.

### Unobtrusive data

As we saw in Chapter 11, organizations also contain a rich array of unobtrusive data in the form of documents such as company reports, business plans, written statements by members of staff, accounts and contracts. Most medium and large organizations also have dedicated websites that present a 'public' image to the world. Analysis of such a site may reveal not only the organization's perception of itself and the image it wants to present to the world, but also what it does *not* wish to reveal. The organization's intranet site and evidence from e-mail interactions may also prove of interest.

Atkinson and Coffey (1997) warn that it is not only the content of documents that should be of concern to researchers, but also the way in which they are produced, circulated, read, stored and used for a variety of purposes. This means that they are not necessarily a description of 'reality' nor are they necessarily 'transparent representations of organizational routines, decision-making processes or professional diagnoses' (Atkinson and Coffey, 1997: 47). Although they should be treated seriously, documents should not be taken as factual evidence of what they report. Rather, they should be examined for their place within the organizational setting, and the cultural values attached to them. But conversely, the temptation should be avoided to use only observational or oral data as the primary source and downgrade documentary evidence to a validating role. Atkinson and Coffey (1997) urge that documents should be regarded as valid sources in their own right.

### ANALYSING DATA: CONTENT ANALYSIS

Analysis involves the process of breaking data down into smaller units to reveal their characteristic elements and structure (Dey, 1993: 30). Descriptions can lay the basis for analysis, but we need to go beyond description: we want to interpret, to understand and to explain. Through analysis, however, we can also gain new insights into our data. Data can be broken down into their constituent parts, and connections made between these concepts, providing the basis for new descriptions (see Figure 13.4).

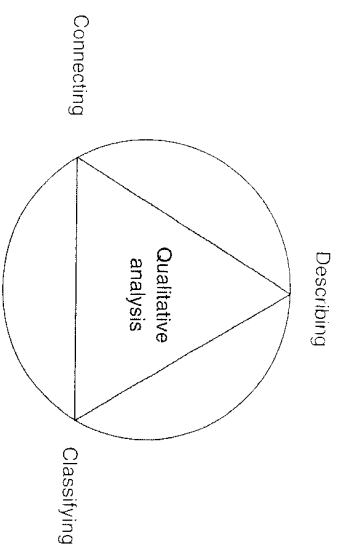


FIGURE 13.4 QUALITATIVE ANALYSIS AS A CIRCULAR PROCESS (DEY, 1993)

One of the most common approaches to analysing qualitative data is through content analysis. Essentially, this involves the making of inferences about data (usually text) by systematically and objectively identifying special characteristics (classes or categories) within them. The attempt to achieve a measure of objectivity in this process is addressed by the creation of specific rules called *criteria of selection* which have to be established before the data can be analysed. In contrast to this, through grounded theory (see next section) no a priori criteria are assumed, these emerging through the process of data collection and analysis itself. Hence, at the risk of over-simplification, grounded theory is more inductive in character, and content analysis more deductive.

In using content analysis, there are three procedures for identifying classes and categories. First, *common classes*, comprising categories in everyday thinking such as age, gender, boss, worker are identified. These common classes can be useful in linking or finding associations between the data and important demographic characteristics. Secondly, *special classes* are identified, comprising the kind of labels particular groups or communities use to distinguish amongst things, persons or events. This can include specialist types of language (including slang, the use of acronyms, specialist professional terms, etc.). Thirdly, *theoretical classes*, or those classes that arise in the process of analysing the data, providing the key link-ages and patterns. As Fleck (1998) points out, however, these categories are themselves often derived from theoretical models. So categories are brought to the empirical data, and not necessarily derived from them. Of course, they will be repeatedly evaluated against the data and modified if necessary.

Having identified categories within the text, the next step is the analysis itself. The key here is to *reduce* the volume of textual material. Using the work of Mayring (1983), Fleck (1998) distinguishes three steps in the analysis process:

- *Summarizing content analysis*, where the material is paraphrased with similar paraphrases bundled together and less relevant passages eliminated.
- *Explicating content analysis*, which clarifies ambiguous or contradictory passages by introducing context material in the analysis. This could include dictionary

definitions of terms, statements from the text or outside the text (for example, contextual information, theoretical propositions) that illustrate the passages being analysed. Through this process a clarifying paraphrase is formulated and tested.

- *Structuring content analysis* seeks to identify types of formal structures in the materials. Hence, the analysis might extricate key features in the material and describe them in more detail. Alternatively, the material might be rated according to dimensions on a scale. So, in a passage dealing with, say, 'motivation', the concept could be given a rating scale from 'Highly motivated' to 'Completely demotivated'. The passage is then searched for examples of motivation, against the scale, resulting in a frequency count for each of the motivational levels.

Berg (1995) argues that content analysis can also be used with hypothesis testing, that is, a more experimental or quasi-experimental design. With hypothesis testing, he suggests going through the following stages:

- Make a rough hypothesis based upon observations from the data.
- Search the data to find cases that do not fit with the hypothesis.
- If negative cases are found, discard or reformulate the hypothesis to account for the negative cases.

Hence, it is necessary to develop research questions in advance that are linked to previous research (Mayring, 1983 in Fleck, 1998). It is because of this insistence on measurement and hypothesis testing that Locke (2001) places content analysis within the modernist, objectivist paradigm.

Content analysis is potentially a very important weapon in the researcher's armoury because it can be highly cost-effective. There may be no need to design and issue costly questionnaires – existing documentation such as company reports, memoranda or e-mails may provide the basis for the data. This, however, could also be construed as a disadvantage since the approach has to rely on 'old' data, rather than gathering fresh information. Another weakness, is that it is incapable of exploring associations and causal relationships between variables. As Fleck (1998) also point out, the very conceptual structures that content analysis imposes on the data may obscure some of the interpretations that may have emerged inductively from within it.

#### ANALYSING DATA: GROUNDED THEORY

One of the most influential qualitative approaches is that of grounded theory, defined as a theory that is 'discovered, developed and provisionally verified through systematic data collection and analysis of data pertaining to that phenomenon' (Strauss and Corbin, 1998: 23). Locke (2001) suggests that locating grounded theory in a particular research paradigm is difficult, because it has been used in both modernist (objectivist) and interpretivist approaches. There is, however,

a clear influence of symbolic interactionism, and this interpretivist paradigm's commitment to studying the social world and the rejection of a priori theorizing. Grounded theory methods have been extensively used in education, evaluation research, nursing and organizational studies (Charmaz, 1995). Unlike the deductive approach, grounded theory does not begin with prior assumptions about hypotheses, research questions or what literature should underpin the study. This is not to say that grounded theorists embark on a study with no theoretical position. They will have a competent level of knowledge about the area. But, as Strauss and Corbin (1998) warn, grounded researchers should not be so steeped in the literature that their creative efforts become impeded or constrained. The research should commence with a defined purpose, but also with the realization that this purpose may become modified or even radically altered during the research process itself. Through data analysis new theoretical positions or understandings may emerge.

The grounded theory researcher works with his or her participants to actively construct the data, to get beyond static analysis to multiple layers of meaning. According to Charmaz (1995), these layers could include the participants:

- Stated explanations of her or his actions.
- Unstated assumptions about these actions.
- Intentions and motivation for engaging in the actions.
- The effects of the actions on others.
- The consequences of these actions for interpersonal relations and for further individual actions.

What about the data analysis process itself? Strauss and Corbin (1998) lay down a structured process and one that has become a highly influential way of analysing data comprising:

- *Open coding*: the disaggregation of the data into units.
- *Axial coding*: recognizing relationships between categories.
- *Selective coding*: the integration of categories to produce a theory.

These are pulled together into a framework that is called a *conditional matrix*, a 'complex web of interrelated conditions, action/interaction, and consequences pertaining to a particular phenomenon' (Strauss and Corbin, 1998: 181). These coding processes, however, are not necessarily completely distinct, and do not need to take place in sequence. In a single coding session, the researcher might move quickly from one coding method to another, particularly from open to axial coding. Another point to stress is that data collection and analysis should be an interwoven process with analysis, prompting the sampling of new data. Charmaz (1995) provides advice on the timing of the analysis, also suggesting that the data should be studied as they emerge, making it easier to identify respondents' implicit meanings and taken-for-granted assumptions. Hence, for the novice grounded researcher, it is best to transcribe your own tapes as this gets you into contact with the data at an early stage.

TABLE 13.3 OPEN CODING: DEFINITION OF TERMS

Term	Definition
Concept	Conceptual labels placed on discrete happenings, events and other instances of phenomena
Category	A classification of concepts
Coding	The process of analysing data
Code notes	The products of coding
Open coding	The process of breaking down, examining, comparing, conceptualizing and categorizing data
Properties	Attributes or characteristics pertaining to a category
Dimensions	Location of properties along a continuum
Dimensionalization	The process of breaking a property down into its dimensions

Source: Adapted from Strauss and Corbin, 1998

Before we begin to look at these coding categories in detail, a word of warning. As Dey (1999) discusses, not all advocates of grounded theory agree with Strauss and Corbin's approach. Glaser (1992), for example, accuses their later work of abandoning their earlier, influential, ideas, suggesting that it has evolved into a quite different methodology (the coding paradigm, dealt with next). For Glaser, this smacks too much of rules and structure being imposed upon the data. However, despite these criticisms, the Strauss and Corbin approach is widely used and recognized as a valuable methodology. Given that the methodological advice coming from the grounded theory literature can be 'bewilderingly complex' (Partington, 2002: 138), an attempt is made here to supplement procedural descriptions with illustrative graphics. It must be stressed that this is just one interpretation of how grounded theory can be applied in practice.

### Open coding

Open coding is defined as 'the naming and categorizing of phenomena through close examination of the data' (Strauss and Corbin, 1998: 62). Two analytical procedures are involved in the open coding process: the *making of comparisons* and the *asking of questions*, both of which help towards the labelling of phenomena in terms of concepts or categories (see Table 13.3).

According to Strauss (1987), there are four essential guidelines to follow in the data analysis process:

- Ask the data a specific and consistent set of questions, keeping in mind the original objectives of the research study. The intention here is to uncover whether the data fit with these objectives. There may be occasions when new or unanticipated results emerge from the data, an outcome that is entirely valid.

- Analyse the data minutely, but also include as many categories, examples and incidents as possible.
- Frequently interrupt the coding to write a theoretical account. As the data are being coded, ideas or theoretical perspectives may arise. It is essential that these are noted immediately otherwise they may well be forgotten.
- Do not assume the analytical relevance of any traditional variable such as age, gender, social class, etc. until its relevance emerges from the data. This is particularly so if the impact of an expected variable does not emerge – this result must be accepted.

Open coding works through a process of making *constant comparisons*. Each time an instance of a category is found, it is compared with previous instances. If the new instance does not fit the original definition, then either the definition must be modified, or a new category created.

Case Study 13.1 provides a practical example of how the process of asking questions and making comparisons can lead to the generation of concepts and categories.

**Case Study 13.1 Developing grounded theory – open coding**

A researcher is asked to observe customer behaviour in a large department store. She positions herself in an unobtrusive way where she can see customers entering and leaving the store, walking down the aisles, looking at merchandise and buying goods, etc. Although the store is very busy and the activity at first appears chaotic, some tentative patterns begin to emerge which she begins to label. Some customers, for example, seem content with examining goods (picking them up, looking at them, putting them down) but then just moving on. She asks herself why are they doing this? This behaviour she labels *exploring*. Other customers approach counter staff or supervisors walking around and ask them questions. This she labels *questioning*. Still other customers approach the busy tills and seem content to stand in line to be served. The label attached to this is simply *queuing*. Once at the till, they are, of course, *buying*. It is clear, however, that a minority of customers queue for a short time and grow impatient. They can be observed to put the merchandise down on a counter or shelf before leaving the store. This behaviour is labelled as *deserting*. One customer, however, is seen to be arguing with a supervisor. This behaviour is called *noncompliance*.

Later she notices that some customers not only pick up and look at goods they even rub them between their fingers and in some cases smell them! Hence under the category of exploring, she is able to identify three sub-categories: looking, feeling and smelling.

After the observation session our researcher begins the process of *categorising* the data. In doing this, she is careful to choose categories that are more abstract in nature than the concepts they describe. Hence, she groups exploring and questioning to form the category *information seeking* while queuing and buying are grouped together as *intentional purchasing*.

**Activity 13.3**

Conduct a detailed observation of an event or phenomenon within a field setting. Analyse your data using open coding, providing your own set of descriptive labels.

Note that the labels given in Case Study 13.1 are original and specific to the researcher. This is important because if she had taken already existing and borrowed categories, these can come with pre-existing meanings that can bias the research. Once categories are produced they still have to be developed so that they can be used in further data collection and analysis. Categories are developed in two ways: by their *properties* and by their *dimensions*. Using Case Study 13.1, we could take the category 'information seeking' and examine it for its properties and dimensions. Table 13.4 illustrates the results, showing that properties are the characteristics or attributes of a category. Dimensions represent the location of a property along a continuum. The development of properties and dimensions is crucially important because they are central in making relationships between categories and sub-categories and later between major categories. They thus provide the basis of the analytical processes of grounded theory.

**TABLE 13.4 THE PROPERTIES AND DIMENSIONS OF THE CATEGORY 'INFORMATION SEEKING'**

Category	Property	Dimensional range
Information-seeking	Questioning Looking Smelling Feeling	Often Up close Repeatedly Vigorously Never From a distance Once Gently

Source: Adapted from Strauss and Corbin, 1998

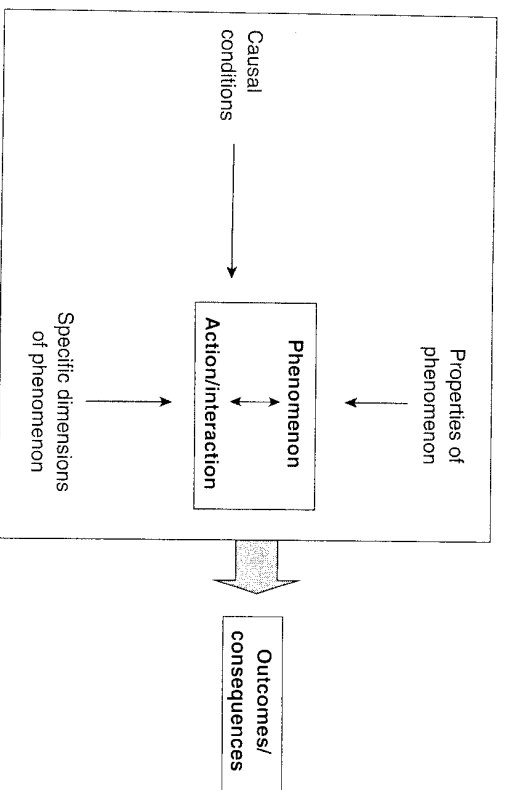
**Axial coding**

As we saw in the previous section, open coding disaggregates data so that categories can be located. Axial coding then takes these categories and tries to make connections between categories and sub-categories. Essentially, this means specifying:

- A *category* (phenomenon) in terms of the conditions that helped to give rise to it.
- The *context* in which it arises.
- The *actions* and *interactions* that stem from it.
- Its *consequences*.

We are also interested in what caused the phenomenon. Figure 13.5 provides a highly simplified illustration of the relationships between a phenomenon

## CONTEXT



**FIGURE 13.5** MAKING CONNECTIONS BETWEEN CATEGORIES AND SUB-CATEGORIES BY EXAMINING A PHENOMENON IN TERMS OF ITS PROPERTIES, DIMENSIONS AND CAUSAL CONDITIONS

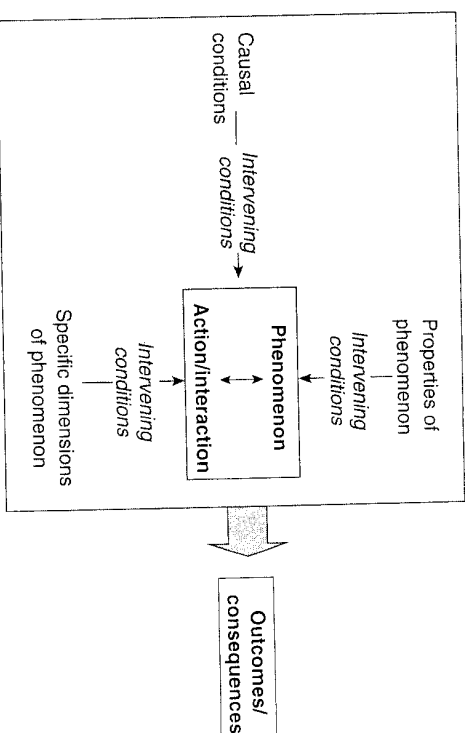
and its causes, context, actions and consequences. Note that Strauss and Corbin (1998), referring to the work of Devey, caution that an initial condition rarely leads to an action/interaction and then a consequence in a direct manner.

*Rather, action/interaction may be taken in response to multiple conditions, some of which occurred in the past, some of which are happening in the present, and/or some of which are anticipated in the future.* (Strauss and Corbin, 1998: 184)

Hence, in Figure 13.5, causal conditions may occur in a variety of different temporal states.

To illustrate the process of linking sub-categories to categories, let us take the example of our retail store in the previous Case Study. We have seen a customer remonstrating (phenomenon) with a supervisor. We observe that the reason (causal condition) for this is the fact that the queues for the tills were very long and that she could not get served. But the description of this phenomenon, 'remonstration', does little to fully describe the event. We need more detail. So we are also interested in the specific dimensions of the phenomenon, and discover that this was an angry remonstration (in terms of volume/language) that lasted 10 minutes (time) in the middle of the store (location). But we also need to know something about the properties of the causal condition (the queuing) and discover that the customer queued for 8 minutes at a till that was shut seconds before she was about to be served. Next, we take a look at the context in which the phenomenon occurred, examining issues such as when, how and the type of cause. We discover that some

## CONTEXT



**FIGURE 13.6** MAKING CONNECTIONS BETWEEN CATEGORIES AND SUB-CATEGORIES: THE IMPACT OF INTERVENING CONDITIONS

tills are not operational due to staff shortages and that the till closure happened suddenly because the member of staff was due her lunchbreak.

Yet, there are also *intervening conditions*, or what could be called a broader structural context' (Strauss and Corbin, 1998: 103), which act either to constrain or facilitate the actions being taken. For example, again using our illustration, we find that during the angry remonstration, the store manager happens to be passing and intervenes to help. She uses her cellphone to call for more staff and opens a till herself and serves the irate customer. But in general terms, intervening conditions within a context can include a wide range of conditions, including the influence of culture, time, economic status, hierarchical position in an organization, technological status, individual biography, etc. For example, the remonstration is a long one, not just because of the scale of the inconvenience, but because only the previous week the company that owns the store had announced record profits so the customer may be reasoning 'Why haven't they employed more staff?'

We can see from the above analysis that grounded theory is an action-interaction method of theory building which is concerned with the ways in which people manage and respond to phenomena, existing within a specific context or conditions. Recalling the discussion of symbolic interactionism in Chapter 2, people assign meaning to phenomena and then act upon these interpretations, these actions bringing forth fresh interpretations and actions amongst participants. But this action and interaction also has *consequences* that may be predictable or unanticipated. Indeed, the failure to take action also has its consequences. Yet, while axial coding can help us to identify relationships between categories, we still

TABLE 13.5 SELECTIVE CODING: DEFINITION OF TERMS

Term	Definition
Story	A descriptive narrative about the central phenomenon of the study
Story line	The conceptualization of the story around the core category
Selective coding	The process of selecting the core category, systematically relating it to other categories, and validating these relationships
Core category	The central phenomenon around which all the other categories are integrated

Source: Adapted from Strauss and Corbin, 1998

need to see how these categories or classes can be integrated to build theories.

This is achieved through selective coding.

### Selective coding

This is the process of selecting *core categories* from the data in order to form the grounded theory. In terms of processes, this is not too different to axial coding, the main difference being that it is completed at a much higher level of abstraction. Through axial coding you will have derived a set of phenomena or categories that have been defined in terms of their properties, dimensions, etc. Through selective coding, core categories are sought through which a 'story' can be told. The selective coding process involves a number of stages that illuminate the social processes going on unconsciously among a group of people comprising:

- Finding a story line formulated around core categories.
- Relating sub-categories to the core categories.
- Validating these relationships against the data.
- Filling in categories that need further refinement.

Table 13.5 provides a brief summary of some of these terms, after which we will discuss them in more detail.

One of the key features of grounded theory is *theoretical sampling*, which helps to make the emerging theory more generalizable. This is achieved by seeking to minimize and maximize the selected differences and similarities between core categories and the relationships between them across cases. Hence, finding strong similarities across cases (and minimum differences) helps to build confidence in the validity of the emerging theory. Attempting to find cases that contradict the theory may help to locate unexpected data and perhaps the emergence of new perspectives.

### Identifying the story

The best way to start is to describe in a few short sentences the essence of the story to produce a general, descriptive overview. What are the most salient

features? What are the main problems being scrutinized? It might be useful to return to the axial coding stage and find an abstract category that in some way summarizes the story. If such a category does not exist, then one will have to formulate that encapsulates the categories in the study. If more than one category exists, it is necessary to make a choice between them so that only one core category is used. Taking our example of the observation in the retail store, the main story here could be construed as *intentional shopping behaviour*. Whether customers are asking questions, examining goods, leaving the store impatiently or patiently queuing, they behave, or attempt to behave, intentionally — that is, with a specific aim.

### Relating sub-categories to the core categories

This involves relating subsidiary categories around the core category by means of the paradigm so that they fit and provide an analytical version of the story. This may mean writing or re-writing the story and rearranging categories until they achieve a better fit with the story. Within these conceptual categories there will be relationships and networks of patterns. Strauss and Corbin (1994) stress how important it is to identify these patterns because it is these that give the theory specificity. Hence, it becomes possible to say that under one set of conditions *this* happens, whereas under another set of conditions *that* happens. Case Study 13.2 takes our retailing research a little further.

#### Case Study 13.2 Developing grounded theory — selective coding

Although the store is crowded and presents the appearance of chaos, in fact, thanks to the highly intentional behaviour of most customers, there are distinctive patterns of behaviour that become predictable. People do not simply rush into the store, grab the first item they see and then run out with it! They look around (gourning) the shelves, sometimes leaving this department, but returning later. Our researcher notices that those who examine merchandise closely tend to be with someone else rather than being alone — hence, exploratory behaviour is usually collaborative. Opinions are being shared (the 'second opinion'). People queue, because the alternative, pushing and shoving one's way to the counter, will lead to even more stress. Queuing is a time-consuming activity that is undertaken to save time. Customers who approach store staff for information are also attempting to save themselves time by gaining quicker access to information.

#### Activity 13.4

Returning to your data in Activity 13.3, take your open coding categories through the axial coding process, making connections between categories. Then, using selective coding, identify core categories and formulate a story line.

### Validating these relationships against the data

Having found a story and related various categories to it, the relationships uncovered can be validated (grounding the theory) by returning to the data and asking whether the story fits for all those observed in the study. We may find, for example, that a minority of customers do not appear to behave intentionally at all. We noted in Case Study 13.2 that some customers spent some time queuing before losing patience and leaving the store. If their intention was to buy goods, they failed. Yet their behaviour may perhaps still be construed as intentional because leaving the store in this way has saved them time from queuing. They valued their time more highly than the satisfaction to be gained from the purchased commodities. However, for instances that cannot be analysed as intentional, we need to fill in more detail. The researcher needs to trace back to the data to uncover the conditions that might be causing this variation.

### Filling in categories that need further refinement

This is necessary to give 'conceptual density' to the theory as well as developing more conceptual specificity. This filling in phase may continue even up to the process of writing up the project, since report writing itself may reveal gaps and inconsistencies that require attention. If this occurs, the researcher may have to return to the field to collect more data (for example, by interviewing some of the shoppers). This illustrates that the task of data collection and analysis is not necessarily sequential but can be an iterative process.

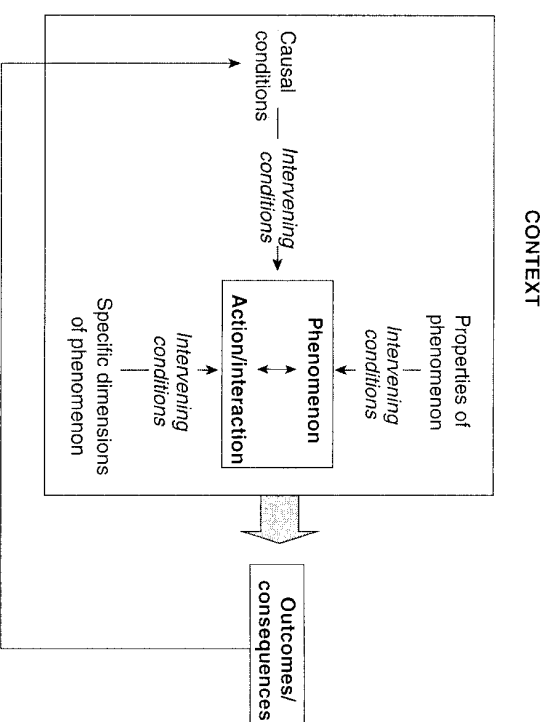
The grounded theory approach just described should be a dynamic one when *process* is built into the analysis. Process means showing the evolving nature of events by noting why and how action/interaction (in the form of events, doings, or happenings) will change, stay the same, or regress (Strauss and Corbin, 1998). In other words, it is a case of not only noticing changes in phenomena but also of explaining *why* they occur. As Strauss and Corbin (1998) concede, however, explanations may not always be obvious, even after additional data have been collected. They suggest, therefore, that a more deductive approach is adopted, in terms of a hypothesis, after which the researcher should return to the data to see if this hypothesis can be supported, modified or rejected.

But how and where do changes occur? There are three potential sources:

- Changes can occur in the causal conditions that led to the phenomenon.
- There may be a change in the intervening conditions.
- The outcomes or consequences of the action/interaction may in turn feed back into new causal conditions (see Figure 13.7).

### Theoretical sensitivity

Strauss and Corbin (1998) argue that theoretical sensitivity, keeping an awareness of the subtleties of meaning in data, is an important element of grounded theory. Accordingly, they argue that theoretical sensitivity implies:



**FIGURE 13.7** THE IMPACT OF OUTCOMES AND CONSEQUENCES ON THE ORIGINAL CAUSAL CONDITIONS

*the ability to give meaning to data, the capacity to understand, and capability to separate the pertinent from that which isn't.* (Strauss and Corbin, 1998: 42)

Glaser (1992) links this sensitivity more overtly with theory building, arguing that it is the ability to generate concepts from the data and to relate them, according to normal models of theory. This sensitivity stems from a number of sources.

- The literature, which helps highlight issues and what might be important and unimportant.
- The professional experience of the researcher, showing what is important in the field of research chosen, and how things work, allowing events to be more clearly understood and interpreted.
- Personal experience, including experience in research, which can facilitate the making of comparisons.
- The analytical process itself, which can provide insights into the meaning of the data.

Theoretical sensitivity is a way of ensuring that the creativity invoked in qualitative research is harnessed in such a way that the interests of science are not impeded. The process of scientific inquiry is further facilitated if the researcher is willing to 'step back from the data' and ask basic questions such as: do the data really fit the hypothesis? This is part of the process of maintaining a healthy scepticism and realizing that all elements of a study – hypotheses, concepts, questions,

theories, etc. – are provisional. Strauss and Corbin (1998) advise that a sound approach is to alternate between collecting and analysing data. Through this approach, analysis can allow for further questions to emerge, for sample selection and data collection, and the verification of hypotheses as they are being developed.

### Concluding grounded research

As we have seen, grounded theory research can involve a fairly continuous iteration between data collection and analysis and between the different levels of coding. So, when is the research completed? When is it time to stop? Glaser and Strauss (1967) suggest that this is when the level of ‘theoretical saturation’ is reached. By this they mean the non-emergence of new properties, classes, categories or relationships from the data. Knowing when this point is reached, of course, is a matter of experience and judgement. This decision is helped if the research has moved towards the clear identification of core categories (around which the main story line is woven) and peripheral categories of less central significance. Hence, once the analysis has been integrated around the core categories and an adequate theory has emerged, the research could be said to be complete. Note that Bryman (1988) cautions that grounded theory may be effective in the generation of concepts, but he questions whether it actually produces theory itself.

Before finishing this section, it might be useful to look at grounded theory in relation to other research approaches. Locke (2001), for example, suggests that grounded theory has much in common with:

- Ethnography; in that data collection and theory building are woven together as the researcher progresses (although grounded theorists are less interested in the cultural aspects of contexts).
- Case studies, in that grounded theory may be incorporated into a case study as a means of handling and interpreting data.
- Action research (see Chapter 15), in that both seek to develop theoretical elements that are useful to practitioners within the research setting (although grounded theorists are less concerned with organizational transformation).

### APPROACHES TO ANALYSING DATA

In a sense, having discussed two of the main analytical approaches, content analysis and grounded theory, we are left with the category of ‘other’ in which there are a considerable number of competing approaches. Three of the most significant, the use of narratives, conversational analysis and discourse analysis, are discussed, briefly, here.

#### Narratives

One of the criticisms of content analysis, and particularly of grounded theory approaches, is that they lead to the fragmentation and decontextualization of data

away from the social processes they are meant to represent. However, research that encourages the use of oral or life histories, or uses unstructured interviews, often elicits qualitative data in the form of narratives or stories that lead to more holistic data right from the start. Using narratives is an ideal way of capturing the lived experiences of participants and has been used extensively in settings such as research into medical illness, the study of traumatic events, in education, and studies in the life of organizations. Musson (1998), for example, shows how people’s narratives can be used to explain the contradictions, confusions and complexities of working within a modern organization, and how this can illuminate how both individuals and their organization’s function.

While different approaches to the analysis of narratives have been put forward, all have a number of common characteristics. First, the text is viewed in the *Gestalt*, that is, within the context and social situation in which it is created. Next comes the formal analysis of the text, including making distinctions between text that constitute narrative passages, and other forms of text. Where researchers generally differ is in their attitude to the status of the text itself. While some take the ‘truth’ of the narrative at face value, others see narratives as a special way of constructing events, that is, they are ‘social constructions located within power structures and social milieux’ (Punch, 1998: 223).

#### Conversational analysis

Conversational analysis is interested in the formal analysis of everyday conversations (Flick, 1998). Primarily, this includes the analysis of natural texts (often the results of transcribed tape recordings) and seeks to specify the formal principles and mechanisms with which participants express themselves in social interactions, or what Hutchby and Woolfit (1998) term *talk-in-interaction*. Research in conversational analysis was originally limited to the study of everyday conversations such as telephone calls or family conversations, but has been extended to institutional-based conversations such as courtrooms, meetings and various kinds of interviews.

Conversational analysis is less concerned with the formal analysis of language *per se*, than with elements of social interaction such as ‘turn taking’ or ‘opening up closings’, interruptions and the distribution of speaking rights, often in relation to various aspects of an institution’s functions (Haver, 1999). Hence, conversational analysis is very much focused on the issue of context. Meaning or order in conversation can only be understood within the context of local practices and are embedded within concrete contexts. Through turn by turn analysis and the description of conversations, the researcher is able to sense how social order among participants is accomplished (Samra-Fredericks, 1998).

#### Discourse analysis

The focus of discourse analysis is on how both spoken and written language is used in social contexts. Attention is given to the structure and organization of

language with an emphasis on how participants' versions of events are constructed. In contrast to content analysis, discourse analysis rejects the view that language is a transparent medium which merely reflects reality'. Analysis becomes focused on recognizing the regularities in language in terms of patterns and repertoires. These repertoires (constructs) do not emanate from the individual as such, but are embedded in culturally and socially constructed situations.

## QUALITY IN QUALITATIVE ANALYSIS

In discussing the issue of quality in qualitative research, some commentators resist the temptation to even address such matters as validity and reliability; because, they argue, these concepts were originally developed in a quantitative tradition (Bryman, 1988). Lincoln (1985) also asserts that naturalistic researchers, for example, tend anyway to be more modest and reluctant about making generalizations from their findings. Issues of external validity, then, are not high on their agendas. However, as we shall see, even some of the most enthusiastic adherents of the qualitative approach see the need to address validity and reliability as inescapable, although some do suggest additional quality criteria, some of which they see as of more importance.

## Validity

The issue of validity revolves around the question of how far the constructions of the researcher are grounded in the constructions of those being researched (Flick, 1998). Hall and Gallery (2001) criticize grounded theory in particular for assuming that the data collected reflect reality, and are independent of, and not influenced by, the subjective interpretations of researchers. What is needed, they argue, is for researchers to adopt a *reflexive* stance, through which they critically reflect on their influence on the research process. Self-reflective criticality is strengthened through repetitive checks of the researcher's interpretations (Whitemore et al., 2001). Of course, another approach is to involve those being researched in checking the data for accuracy, and in the analysis for the faithfulness of interpretation.

Data can be fabricated, discounted or misinterpreted. One way of avoiding such problems is where research can be validated through replication, but as Day (1993) cautions, qualitative research is notoriously difficult to replicate. In place of external validation, 'internal' replication may be adopted, whereby other researchers can inspect the procedures through which the research has been conducted. This is much easier, of course, where two researchers collaborate on the same project. Another approach might be to split the data and analyse them in two stages to see if the results are similar.

Establishing principles for validity is all very well, but how do researchers achieve them in practice? Whitemore et al. (2001) present a useful checklist (see Table 13.6) but warn that selection depends upon contextual factors and the purpose of the research.

TABLE 13.6 TECHNIQUES FOR DEMONSTRATING VALIDITY

Type of technique	Technique
Design considerations	Developing a self-conscious research design Sampling decisions (i.e. sampling adequacy) Employing triangulation Giving voice
Data generating	Demonstrating prolonged engagement Demonstrating persistent observation Providing verbatim transcriptions Demonstrating saturation
Analytic	Member checking Expert checking Testing hypotheses in data analysis Exploring rival explanations Performing a literature review Analysing negative cases Memoing
Presentation	Providing an audit trail Providing evidence that supports interpretations Acknowledging the researcher perspective Providing thick descriptions

Source: Adapted from Whitemore et al., 2001

### Activity 13.5

Examine the list in Table 13.6. Which of them would you find useful to implement to aid the validity of your own qualitative research?

Another important feature here is that of external validity, that is, generalizing from the data to other cases or situations. Generalizations can be defined as assertions of enduring value that are context-free (Lincoln and Gubba, 1985: 110). Since sampling in qualitative research tends to be purposive rather than random, and data gathered from a limited number of cases (sometimes one), can we generalize? Lincoln and Gubba (1985) distinguish between two kinds of generalization. The first is nontheoretic, based upon a rationalistic, law-like stance, as in the positivist paradigm. The second they term 'naturalistic generalization', which is a more intuitive, ideographic but none the less, empirical approach based upon personal, direct experience. The authors then dismiss the notion of nontheoretic generalizations that are truly universal to all times and situations. Local conditions, they contend, make it impossible to generalize. 'If there is a "true" generalization, it is that there can be no generalization' (Lincoln and Gubba, 1985: 124).

At best, the results from individual cases allow us to build working hypotheses that can be tested in subsequent cases. As Miles and Huberman (1994) point out, through the use of multiple case studies, attempts are made to match on the basis of underlying theories. As more similar or contrasting cases are used, we can

justify, through *replication*, the stability of the findings. Even then, as Dey (1993) asserts, as a basis for generalization, qualitative analysis is more likely to be suggestive than conclusive. At best, rather than generalize, we can see if the findings from Context A can be transferred to Context B.

### Reliability

Reliability refers to the stability of findings. A reliable observation, for example, is one that could have been made by any similarly situated observer (Denzin, 1978). For most qualitative approaches, reliability is improved, if not guaranteed, by triangulation, gathering information, for example, from multiple sources or by using multiple data gathering tools. Denzin (1989) offers four kinds of triangulation:

- **Data triangulation**, where data are gathered using multiple sampling strategies. This can include: *time triangulation*, when data are collected on the same phenomenon over a period of time; *space triangulation*, when data are collected from multiple sites; *person triangulation*, where data are collected at three levels in an organization – for example, individuals, groups and departments.
- **Investigator triangulation**, using more than one observer in field situations so that observer bias can be reduced (and inter-judge reliability improved). Thus, a training programme would teach observers to keep an ‘open mind’ and not to become obsessed with their hypothesis (if they start with one). They should not jump towards ‘solutions’ to a problem as this will tend to make them ignore facts that do not confirm their expectations. In making a study, they are trained to notice *all* aspects of a situation and to deliberately search for unexpected facts, and to seek alternative interpretations. The data will then be checked by other trained colleagues (and even informants) who will, if possible, repeat the observation to see if they get the same results.
- **Multiple triangulation**, in which a combination of multiple methods, data types, observers and theories are combined in the same investigation. While it is often a practical difficulty to achieve a combination of all of these, it is more common to at least use multiple data levels and methods.
- **Methodological triangulation**, of which there are two kinds: *within-method*, where the researcher employs varieties of data gathering techniques within the same method, and *between method*, where a variety of different methods are used – for example, quantitative data from a survey with qualitative data from observations.

It should be noted, however, that the significance of reliability is not universally accepted. Glaser (1992), for example, asserts that verification has no place in grounded theory; the task of which is to generate hypotheses, not to test them. This is in sharp contrast to the views of Strauss and Corbin (1994), who suggest that within the data collection and analysis process there is an in-built mandate to strive towards the verification of any resulting hypotheses. For interview data, reliability can be increased through the training of interviewers and through the use

of standardized interview schedules. For observations, researchers also need to be trained before they enter the field.

One element of qualitative analysis, conversational analysis, brings with it some different reliability issues. Since conversational analysis is often based on tapes and transcripts of conversations, in terms of reliability, it is fairly obvious that taped conversations will tend to present more reliable evidence than hastily written field notes. But as Petäkyä (1997) warns, video- or audio-recording of events may lose some important aspects of social interaction. These reliability problems include:

- **Time**: A single recording of events taking place in an organization may be either unenlightening or completely misleading if those events do not represent what typically happens most of the time. Hence, reliability will be improved with a more longitudinal research design, with multiple visits and recordings.
- **Ambulatory events**: that is, the movements of people that simply do not show up on video or audio recordings. One solution is the setting up of multiple cameras to catch these movements.
- **Documentary realities**. Some conversations (for example, professional people such as doctors or lawyers talking to their clients) may be influenced by the documents (such as forms) they are discussing. Researchers must have access to these documents and include them in the analysis process.

### Trustworthiness

Some researchers, particularly those from the naturalistic tradition, argue that trustworthiness is more important than concerns over the validity or reliability that have just been outlined. Skrine (1985), for example, suggests that this is addressed through a focus on:

- **Transferability** with purposive sampling to illustrate pertinent issues and factors when comparing two contexts for similarity; and thick descriptions to provide evidence for making judgements about similarities between cases.
- **Dependability** through the use of audit trails through the data.
- **Confirmability**, with the audit showing the connections between data and the researcher’s interpretations.
- **Credibility**, the use of persistent observations; triangulation (of data, methods, theories and investigations); member checks (where data and interpretations are tested with research participants).

Lincoln and Gubba (1985) argue that credibility can be strengthened through the researcher making a conscious effort to establish confidence in the accuracy of interpretation, and the fit between description and explanation.

To these we can add *authenticity*, which relates analysis and interpretation to the meanings and experiences that are lived and perceived by the subjects of the

research. This means the research being aware of the multiple voices contained within the data, and the subtle, sometimes conflicting realities within it. Do the interpretations ring true? Have rival explanations been considered? Davies and Dodd (2002) also suggest that just as important are practices that are honest, open, empathetic, sensitive, respectful and engaging. Perhaps these concepts should also be seen as essential ingredients of research quality.

However, as Johnson and Harris (2002) comment, one problem with qualitative research is that a standard practice for achieving validity, reliability or any other quality indicator has yet to be established. This is because of the variable nature of qualitative research and the relative novelty of many research studies.

### Activity 13.6

Evaluate the wide range of software packages for qualitative analysis at the following websites:

<http://caqdas.soc.surrey.ac.uk/index.htm>  
<http://www.scolari.co.uk/>

### SUMMARY

Qualitative data can have a quality of 'undeniability' because they are rooted in the natural context of field settings.

The main focus of qualitative research is to understand the ways in which people act and the accounts that people give for these actions.

In all but the most inductive qualitative approaches, research questions are written, but *when* they are written is one of the features that distinguishes qualitative from quantitative research. In qualitative research, questions are not always written at the start of the study. Data are collected using a wide variety of methods, including field research (the most common) but also the use of unobtrusive data, photographs, film, video and other sources.

The main approaches to qualitative data analysis comprise content analysis and grounded theory. Content analysis involves locating classes or categories within the data. These categories are usually derived from theoretical models. In contrast, grounded theory uses a process of open, axial and selective coding to develop categories and theories inductively from the data.

Due to the lack of non-probability sampling methods, qualitative analysis is open to accusations of invalidity. However, claims for the validity of results can be strengthened, for example, by eliciting the views of research participants.

The reliability of qualitative research can be strengthened by using multiple cases, or by supporting assertions using numerous examples, or by verifying the analysis using other researchers. Concepts such as credibility, authenticity, honesty and openness are also important in qualitative research.

(Continued)

### SUMMARY OF WEB LINKS

<http://caqdas.soc.surrey.ac.uk/index.htm>  
<http://www.scolari.co.uk/>

### Further reading

Miles, M.B. and Huberman, A.M. (1994) *Qualitative Data Analysis*, 2nd edn. Thousand Oaks, CA: Sage. Still an outstanding source of many and varied qualitative analysis methods.

Flick, U. (1998) *An Introduction to Qualitative Research*. London: Sage. Deals with all the major theories and methods of qualitative research design, including some less well-known approaches such as the use of personal narratives.

Symon, G. and Cassell, C. (1998) (eds) *Qualitative Methods and Analysis in Organisational Research*. London: Sage. Presents a refreshing array of qualitative techniques that are dealt with only sparingly by many of the standard texts. Subjects include: life histories, critical incident techniques, qualitative research diaries and pictorial representation.

Locke, K. (2001) *Grounded Theory in Management Research*. London: Sage. Provides a detailed summary of the evolution of grounded theory, and illustrates how it can be applied in a management and organizational context.

Fielding, N. and Lee, R.M. (1998) *Computer Analysis and Qualitative Research*. London: Sage. A valuable introduction to some of the principles of using computers in qualitative research as well as a practical guide to managing data and coding categories.

### Suggested answers for Activity 13.2 (selected examples)

There might tend to be more confidence in the validity of results from a comprehensive sample since this covers every case in a given population. Similarly, intensity samples focus on cases that are typical of the population rather than outliers or atypical examples. Deviant case sampling, which looks at extreme cases, may be accused of producing invalid results, but may, in fact, yield illuminating and unexpected data that allow new avenues of exploration. Critical case sampling, with its focus on one case or site, can only provide a strong case for validity if evidence is provided that the case is, indeed, typical of the trait, characteristic or phenomenon under investigation.