Analysing and Presenting Qualitative Data

CHAPTER OBJECTIVES

After reading this chapter you will be able to:

- Describe some of the principles of qualitative data analysis.
- Select appropriate qualitative analytical methods, including grounded theory approaches.
- Apply qualitative methods to produce valid, reliable and trustworthy data.
- Make use of the ‘voice’ of the researcher.

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 a research project. One of the challenges of qualitative research is that there are no widely accepted rules about how qualitative data should be analysed, other than that the approach is generally inductive and involves the coding of data.

Another major issue 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', untainted 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 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, particularly from the stance of those who favour interpretivist and naturalistic approaches.

**TOP TIP 18.1**

Many people who are new to qualitative research collect their data and then wonder how to analyse it. This is too late in the day! Plan for the qualitative data analysis method you intend to use at the design phase of the research process. This is essential, because some approaches to data analysis will influence the ways in which data are collected and the phases in which they are analysed.

**ELEMENTS OF QUALITATIVE DATA ANALYSIS**

There is what may seem at first sight, a quite bewildering number of approaches to the analysis of qualitative data (some of which will be discussed in this chapter) and no clear rules on which approach to adopt in different circumstances. Thankfully, however, there are a few general principles to qualitative data analysis that should be understood and applied, whatever the qualitative data analysis approach being adopted. These include analytic induction, the principles and practices of coding, the place of secondary data analysis and the reflexivity of the researcher. We will look at each of these in turn.
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Figure 18.1
The process of
alytic induction
(adapted from
ryman and Bell,
07)

Draft research questions
Hypothetical explanation of
esearch question

Exploration of cases

Deviant case found
Reformulate
ypothesis

Hypothesis
edefined to exclude
iant case

No deviant cases
ypothesis confirmed

End of examination of cases

ANALYTIC INDUCTION

As we saw in Chapters 2 and 3, induction involves the collection and analysis of
data from a range of individual cases in order to identify patterns from them for
the development of conceptual categories. As Figure 18.1 illustrates, the process
of analytic induction involves a number of defined stages. Essentially, starting
from at least an approximate definition of a research question, cases are exam-
ined to see if they are consistent with a hypothetical explanation of the research
question. If no deviant cases are found, then the hypothesis can be confirmed. If,
however, cases emerge that are inconsistent with the hypothesis, then either the
hypothesis has to be rewritten (and new cases examined), or the hypothesis itself
is redefined to exclude the deviant case.

As Bryman and Bell (2007) contend, analytical induction is an extremely
rigorous method of data analysis because if a single case is inconsistent with
the hypothesis, then either further data have to be collected, or the hypothesis
has to be reformulated. The selection of cases also needs to be sufficiently
diverse for the theory that emerges to be adequately tested. So while theoreti-
cal sampling makes use of cases that add weight to the development of a
concept, analytical induction deliberately chooses negative or deviant cases to
disconfirm a hypothesis (Flick, 2006).

STEPS IN THE CODING PROCESS

Unlike quantitative data analysis where the statistical tools are well understood,
in qualitative analysis there are no hard and fast rules for how data should be
coded. There are, however, a number of useful principles that should be applied, irrespective of whether you are using grounded theory, content analysis or any other method.

**Transcribe the data:** Field notes from observations or reflective diaries should be written up into a format that can be easily read. Hastily written field notes, for example, should be typed into a document. Assuming that interviews have been tape recorded, these should be transcribed. Whether you do this yourself, or pay for the service, may partly be determined by your budget. While typing up the transcript yourself may be time-consuming and laborious, it does develop a familiarization with the data at an early stage.

**Collect/code/collect:** Avoid waiting until all data are collected before starting the coding process, start as soon as possible. Coding allows you to become familiar at an early stage with the issues emerging from the data. Identifying these themes also helps with theoretical sampling (selecting new cases on the basis of theories and concepts emerging from the analysis).

**Familiarization:** Read through all field notes, documents and transcripts but suspend the temptation to interpret. Get a general flavour of what is happening. Perhaps at this point make some general notes as an aide-mémoire in your research diary on what seemed interesting, unusual or perhaps significant.

**Focused reading:** Next comes a more focused reading of the data, this time underlining key words or phrases and making notes in the margins. The underlined words/phrases are the beginning of the coding process. You might also allot a word or phrase (code) that summarizes or seems pertinent to a particular passage. Notes might include reminders to yourself or reflective thoughts on puzzles or passages that throw up the unexpected.

**Review/amend codes:** On the second reading, begin to modify your codes. If two or more codes seem to apply to the same phenomenon, then remove one of them. If a code relates to a concept in the literature, then make use of the literature category or description. Are some of the codes hierarchical? In other words, is one concept a sub-category of another? Generate as many codes as seem logical. These can always be amended or rationalized at a later stage.

**Generating theory:** Look for connections between categories and concepts that are emerging from the data. Do they amount to a set of theoretical principles? Do they relate to any theoretical models in the literature? Develop hypotheses about some of these connections and return to the literature to see if they can be confirmed by the evidence. Some of the principles outlined here will be demonstrated when we look at the use of grounded theory in qualitative data analysis.

However, even when these principles are applied consistently and with care, a common accusation levelled at qualitative data analysis is that the coding tends to fragment the data, losing the connection between the text and its context. For example, in presenting a quote from a respondent, the reader loses the context within which it appeared. The narrative flow of what people say is lost. This is one of the reasons why narrative analysis as a form of qualitative data analysis has gained in popularity in recent years.
TOP TIP 18.2

In analysing qualitative data, make sure that you don’t end up merely using isolated quotations from a number of respondents as if they contained some significant meaning. You have to move beyond description to include an analysis and interpretation of the data. Any verbatim quotations should be used as a way of supporting this analysis.

SECONDARY DATA ANALYSIS

While most of this chapter is concerned with the analysis of primary data gathered in field settings (for example, through observations or interviews) it is important to also recognize that researchers can have access to data in the form of documents and other resources where the data has been collected (and in some cases analysed) by others. For quantitative researchers, secondary analysis can involve the use of both documents and official statistics. For qualitative researchers, secondary data analysis primarily involves the analysis of another researcher’s qualitative data or documents. While the re-analysis of quantitative data sets has been common in policy analysis and in the interpretation of key business decisions, its use in qualitative analysis has been much more modest (Fielding, 2004). The purpose, however, remains similar – to perform additional, in-depth analysis of a sub-set of the original data; or to apply a new perspective or conceptual focus to the data.

Bryman and Bell (2007) suggest a checklist that researchers should use when making use of documents (for both quantitative and qualitative secondary analysis). The criteria include:

- Who produced the document?
- Why was it produced?
- Is the material genuine and produced by someone who could write authoritatively and objectively on the subject?
- Can the events or accounts presented in the document be corroborated by other evidence?

To these we can add a concern about ethics. Are safeguards in place to honour any commitments made by the original researchers to the research subject? Whatever promises were made about confidentiality need to be followed during the secondary data analysis.

Secondary data analysis offers the researcher a number of advantages, particularly in terms of saving cost and time. Furthermore, where a subject is particularly sensitive, researchers can make use of previously gathered secondary data,
rather than having to re-interview participants. Secondary analysis is not, however, without its detractors. One major criticism is epistemological, arguing that the context in which the data were collected cannot be replicated. Mauthner et al. (1998) contend that since qualitative data are the result of a reflexive relationship between the researcher and the researched (see the following section), the conditions under which the data were collected are inescapable. This means that secondary data analysis can only be valid if limited to methodological exploration. Attempts to go beyond this by attempting, say, to establish new analytical themes from the data are inappropriate. Fielding (2004), however, sees this as less of an epistemological than a practical problem since qualitative researchers have always had to monitor the effects of contextual features whether performing primary or secondary analysis. Vital evidence for judging the validity of an analytical point may well be sometimes missing from archived data – but the same can be said of primary data too.

REFLEXIVITY – THE VOICE OF THE RESEARCHER

Reflexivity is a concept used to describe the relationship between the researcher and the object of research (Brannick and Coghlan, 2007), and has been discussed by social scientists for over 30 years, influenced in the main by feminist researchers and those from hermeneutic and critical theory traditions. It has mainly been applied to the collection of qualitative data, usually through interviewing (Ryan and Golden, 2006). Reflexivity involves the realization that the researcher is not a neutral observer, and is implicated in the construction of knowledge. Far from being a disinterested bystander, the researcher is seen as someone whose observations are by their very nature, selective, and whose interpretations of results are partial. Coffey (1999), for example, argues that researchers need to be aware of how fieldwork data gathering and ethnographic writing construct, reproduce and implicate selves, relationships and personal identities. The problem is that many researchers fail to recognize this. In the words of Mauthner and Doucet, in many research accounts, the researcher is ‘rendered invisible as are the interpersonal, social and institutional contexts’ (2003: 415). This process, they contend, has been made even worse by the growth in the use of computer-assisted qualitative data analysis programs which have given an air of scientific objectivity to what remains a fundamentally subjective and interpretive process.

There are, essentially, at least two forms of reflexivity. Through epistemological reflexivity the researchers reflect on their assumptions about the world and about the nature of knowledge. So they will ask themselves questions such as: how has the research question limited or distorted what was found? How could the study have been conducted differently? Then there is personal reflexivity, where the researcher reflects upon how their personal values, attitudes, beliefs and aims have served to shape the research. This might also involve a personal reflection on how the research process impacted and changed the stance taken
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by the researcher. It involves honesty and openness and locates the researcher firmly within the dynamic of the research process, or in the words of Dupuis (1999) a continuous, intentional and systematic self-introspection.

Mauthner and Doucet (2003) note that, while reflexivity has been increasingly seen as important, the research methods literature has been relatively silent on practical steps for achieving it. However, some practical approaches could include:

- Designing research that involves multiple investigators. This can encourage dialogue and the critical interchanges of ideas – pushing researchers to make transparent their epistemological positions and personally held beliefs.

- Writing a reflexive journal. Lincoln and Guba (1994) recommend that this should include writing: (1) a daily schedule describing the logistics of the study; (2) a log of methodological decisions and changes; and (3) a personal diary recording reflections with particular reference to one's values and interests.

- Reporting research perspectives, values and beliefs in any research report. Dupuis (1999) recommends that this is done pre and post data collection so that changes in personal feelings can be made explicit.

Weber (2003), however, notes some of the potential dangers of reflexivity. One is narcissism. We become so wrapped up in self-introspection, that it becomes the actual focus of the study. Another is self-righteousness. We start to denigrate the work of other researchers who, for whatever reason, do not engage in reflexivity. Next, there is the danger of nihilism. We see that our research is limited in more and more ways. We become so conscious of the constraints on our research, the indeterminacy of theory, the limitations of research methods and the assumptions and biases that underlie our work that we become paralysed. Finally, there is the arrogance that dismisses any work that can be generalised, arguing that every research context (including, or even particularly, our own) is unique. While opposite, these warnings are perhaps aimed at those researchers at the more extreme wings of the reflexivity movement. For the rest of us, we should embrace reflexivity to the extent that it is in line with our attitudes towards epistemology and our principles of research design and practice.

ANALYSING QUALITATIVE DATA

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 18.2).
As we have seen, there are a wide range of approaches to qualitative analysis, some being more deductive in approach (such as content analysis) and others heavily inductive. Inevitably, the various approaches also differ in the mechanics of data analysis, including the attitude taken to the fragmentation of data.

CONTENT ANALYSIS

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, with grounded theory (see the following section) no a priori criteria are assumed, with 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, are identified, providing the key linkages and patterns. As Flick (2006) 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), Flick (2006) 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 into 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 motivational feelings against the scale, resulting in a frequency count for each of the motivational levels.

Berg (2006) 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 (recall the process of analytical induction, above).

Hence, it is necessary to develop research questions in advance that are linked to previous research (Mayring, 1983 in Flick, 2006). 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 emails may provide the basis for the data (as in secondary data analysis, above). 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 Flick (2006) also points 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.
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 participant’s:

- 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
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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 18.1). 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 of 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 18.1 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 18.1 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 queueing. 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 desiring. One customer, however, is seen to be arguing with a supervisor. This behaviour is called remonstrating.

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 categorizing 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 queueing and buying are grouped together as intentional purchasing.

Activity 18.1

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 18.1 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 18.1, we could take the category ‘information seeking’ and examine it for its properties and dimensions. Table 18.2 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.
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 18.3 provides a highly simplified illustration of the relationships between a phenomenon and its causes, context, actions and consequences. Note that Strauss and Corbin (1998),
referring to the work of Dewey, 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 18.3, 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 eight 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 tills are not operational due to staff shortages and that the till closure happened suddenly because the member of staff was due her lunchbreak.

Figure 18.4
Making connections between categories and sub-categories: the impact of intervening conditions
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 (see Figure 18.4). 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 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 18.3 provides a brief summary of some of these terms, after which we will discuss them in more detail.
Table 18.3
Selective coding: definition of terms
Source: Adapted from Strauss and Corbin. 1998

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Story</td>
<td>A descriptive narrative about the central phenomenon of the study</td>
</tr>
<tr>
<td>Sub-category</td>
<td>The conceptualization of the story around the core category</td>
</tr>
<tr>
<td>Coding process</td>
<td>The process of selecting the core category, systematically relating it to other categories, and validating these relationships.</td>
</tr>
<tr>
<td>Core category</td>
<td>The central phenomenon around which all the other categories are integrated</td>
</tr>
</tbody>
</table>

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 be formulated 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 happen. Case Study 18.2 takes our retailing research a little further.

**CASE STUDY 18.2 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 (touring) the isles, 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 18.2**

Returning to your data in Activity 18.1, 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 18.1 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 not 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 18.5).

**Maintaining 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:

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)