Analysing qualitative data

Introduction

In this chapter we look at ways of analysing and making sense of qualitative data, converting a mass of raw data – notes, taped interviews, group discussions or workshops, transcriptions of interviews – into meaningful findings.

Topics covered

➤ What is qualitative data analysis?
➤ Planning the analysis
➤ Doing the analysis
➤ Using computers in data analysis

Relationship to MRS Advanced Certificate Syllabus

The material covered in this chapter relates to Unit 9 – Analysing information and data.

Learning outcomes

At the end of this chapter you should be able to:

➤ understand how to approach qualitative data analysis;
➤ understand and evaluate the findings from qualitative research;
➤ undertake and manage the qualitative analysis process.

What is qualitative data analysis?

Qualitative data analysis is part mechanical – handling and sorting the data – and part intellectual – thinking about and with the data. In the same way that we look for patterns and relationships in quantitative and numeric data, we examine qualitative data for patterns, themes and relationships. The process of analysis is not a discrete phase undertaken once fieldwork is completed, rather it is ongoing from the very start of the research and a lot of the ideas about what you think is going on in the data will occur to you during fieldwork. It is once fieldwork is over, however, that you get the chance to organise the data, sort through them, think about them and with them, and pull together 'the findings'.

Case study 12.1 Introduction to analysis

In 1993 an MRS Working Party (called the A to B Group) investigated the way in which clients and researchers see analysis. Here Sue Robson and Alan Hedges describe some of the key findings and conclusions. It serves as a useful introduction to qualitative analysis.

Key words: analysis, professional standards, memory, fallible, limited, reliability, validity; brief; objectives, systematic, structured, mental activity, insight, distilling the essence, resources, deadlines, expensive, subcontracting, delegated, different approaches, ideas, creativity, fast feedback, evidence, accountability, written reports, top-line debriefs, data handling, thinking, interpreting, data, processing, organising, structuring, make sense, draw inferences, conclusions, hypotheses, reflecting, confusion, good practice, re-visiting, listening, reading, transcripts, tapes, notes, analysis sheets.

The client view

On the whole analysis is taken for granted – most clients generally *assume* researchers do what is necessary; and assume it is competently done. They see it largely as a matter to be left to the researcher's professional standards (insofar as they have a definite view, which is not always the case).

Is analysis important? Some think analysis *is* important. They argue that:

(a) relying on memory can be fallible and limited;
(b) thorough analysis is necessary for reliability and validity;
(c) working over the material maximises productivity and avoids waste;
(d) it is important to go back and re-interpret earlier sessions [findings from fieldwork] in the light of what has been learned since they were done.

Some think analysis is *not* particularly important. *However,* after they had spent time discussing the issue during the group sessions [organised by the Working Party] many clients felt that on closer inspection analysis seems more important than they had assumed.

Case study 12.1 continued

Some ideas about analysis

The following were among the more positive ideas sometimes suggested by individual participants:

(1) Analysis ought to begin with the brief.
(2) It needs clear objectives.
(3) It needs to be systematic and structured.
(4) But on the other hand it shouldn't be mechanistic.
(5) It is not to do with numbers and percentages – not just counting heads.
(6) It is primarily a mental activity – brains and not just processes are important.
(7) Insight is important – it should not just be 'paper shuffling'.
(8) The main skill is distilling the essence of a lot of material.
(9) Many are doubtful about the role of computers (actual or potential).
(10) Ideally analysis should be done between [fieldwork] sessions, so that it steers the development of fieldwork.

A problem of resources

Many clients pointed out that analysis takes time, whereas real-world deadlines are often short. The timing of a tight top-line debrief often prevents serious analysis. Analysis is also sometimes seen as expensive, and the economics may work against it. Some feel that researchers should *say* if they need more time/money to do the job properly – and the view was that they do *not* usually say, they accept the given constraints.

Different clients, different approaches

Different types of client tend to take different approaches. At one extreme are often the advertising agency planners, who tend to look for ideas rather than evidence; creativity rather than reliability; and very fast feedback. At the other extreme some public sector clients usually seem to put a premium on thoroughly digested evidence; reliability and accountability; and full written reports. Other clients tend to fall somewhere between these extremes – and of course requirements may vary from job to job.

The researchers' view

Despite the broad experience of the 'sample', there was in fact much common ground. The analysis process was described as two interlocking, interacting processes: data handling and 'thinking' (or interpreting). The use of the word 'data' makes qualitative researchers uncomfortable at times but no one could identify a better shorthand description to cover all the interviewing experiences collected when running groups or interviewing individuals.

Data handling covers the processing, organising and structuring of the evidence collected in order to make sense of it, and draws inferences and conclusions from it. Data processing can start before any physical handling occurs, since the way the data are processed will relate to the research objectives, the method of interviewing, the questions asked, the order of exploring topics in the discussions and so on.

Case study 12.1 continued

Thinking is, obviously, the important mental process whereby the researchers draw conclusions from all they have experienced from the moment they were briefed on the project. Sometimes qualitative researchers find that this process does not stop at the verbal presentation stage (or even after the report has been written!). At every stage of the project, the researcher is creating hypotheses about the research, perhaps on the basis of thinking about what respondents have said and incorporating interim conclusions into the next group or interview, or on the basis of reflecting about whether or not what respondents have said is really credible, or whether to approach the next discussion group or interview differently – change the order, ask different questions, change the stimulus material, etc.

So, whereas the data handling process is really a means to an end, the thinking process encompasses the end goal of the project. Nevertheless, the two go hand in hand. The qualitative practitioners agreed that, whatever form of data handling is chosen, it is the best means available of structuring the buzz of confusion that typifies human interaction and articulation. Without the discipline of this process, there is a danger that there will be insufficient to think about and so valuable insights and connections will be lost. There is also the danger that the result – the presentation and report – will be thin, will lack substance. A thorough approach to data handling makes the project outcome richer, more substantive, altogether more productive.

To sum up

Some of the key conclusions the majority of qualitative researchers came to were:

- analysis is important
- analysis requires more than just memory alone
- analysis involves revisiting the data with one's brain engaged
- analysis is a thoughtful and creative process
- analysis involves the need for judgements about the data
- (thorough) analysis is the interaction of 'brain and material'.

Our conclusions

The points below cover the main issues that should be in a Good Practice Guide and give suggestions of the standards that should be adhered to:

(1) The need for analysis will vary with the problem set, the size and type of project. The analysis method adopted will also vary with the personal style of the researcher(s) working on the project.

(2) Nevertheless there is a need for an analysis stage and this should be handled professionally, just as should be every other stage of the project.

(3) Analysis should include: recording all groups/interviews with good quality equipment; going back over those recordings ('re-visiting'), by listening and/or by reading transcripts done by self/other; spending time re-evaluating the tapes/transcripts by writing notes, or by restructuring the data onto analysis sheets – small or large, with or without coloured pens; spending time thinking on what it all means, i.e. interpreting the findings and making judgements.

Case study 12.1 continued

(4) Whilst it is not possible to give an exact definition of the time required, again certain guidelines can be offered: it commonly takes three times fieldwork time to revisit the data thoroughly, resulting in the requirement of a good amount of time being allowed between the end of fieldwork and the verbal debrief. Project size and complexity varies and so does the opportunity to listen to tapes whilst finishing off the rest of the fieldwork. But based on the experience and judgement of a good many qualitative researchers, one can expect one week minimum between end of fieldwork and debrief on small to medium projects, with obviously more time being needed for large or complex projects.

(5) When debriefs are required immediately or very shortly after fieldwork, clients and researchers should carefully weigh up the pros (mainly speed of decision-making) and the cons (a loss of quality, productivity, richness and reliability).

(6) More discussion generally between clients and researchers on the importance/relevance of an analysis stage would be beneficial.

Approaches to analysis

Analysis of qualitative data is difficult and time consuming. There are no standard techniques or clearly defined procedures – there are many different approaches. Most researchers have their own way of doing it – and since little has been written about how it is done, particularly in commercial market research, there are no common guidelines. Denzin and Lincoln (1994) refer to qualitative research as *bricolage*, the art of adapting and using a variety of materials and tools, and to the qualitative researcher as a *bricoleur*, someone who is skilled in the use and adaptation of the tools. Qualitative data analysis is one area of qualitative research where this *bricolage* approach is very much in evidence. Techniques for conducting qualitative research and analysing qualitative data have been drawn from a range of disciplines within the social sciences, in particular from social anthropology and sociology. The approach you might take in analysing qualitative data depends on a range of factors and their interaction. These include your background and training, for example in science, social science or humanities; in psychology, sociology or anthropology; in the rational or emotional schools of qualitative research; in a particular paradigm or method such as semiology, hermeneutics, symbolic interactionism, ethnomethodology or discourse analysis. The approach may also depend on the following:

- the way your mind works to sort and think about things (influenced by your learning style, your training and perhaps the left brain/right brain split);
- your level of experience;
- your level of knowledge in the area under investigation;
- the availability of relevant theories or models;

- the type of project (groups, depths, workshops; face to face, online)
- the nature of the research enquiry – exploratory, descriptive, explanatory or a combination of these;
- the subject matter and how respondents approach it;
- the end use of the research;
- the resources available – time and number of people.

With so many factors having a potential influence it is not surprising that qualitative data analysis is idiosyncratic – there are almost as many approaches to it as there are researchers.

Inductive and deductive reasoning

There are, however, some common principles based on deductive and inductive reasoning. In a deductive approach we speculate up front, in advance of fieldwork, about what it is we think we will find and we set out in the research to test this theory or hypothesis or idea. We design the research and approach the analysis in a way that allows us to do this. We move from the general to the specific in deductive reasoning – from an idea or general hypothesis or theory about what might be happening to specific observations to see if what we expect is actually happening. This approach is common in quantitative research and among some qualitative researchers (Katz, 1983) who refer to it as 'analytic induction'.

Box 12.1 Analytic induction

The approach known as analytic induction (AI) works something like this. You have defined the research problem and have some ideas about what you are looking for. From this, and using your understanding of the issues and the background to the problem (what you know from other research as well as gut feeling and intuition) you develop working hypotheses about the matter under investigation. You start fieldwork and throughout it you are thinking about how what respondents are telling you fits with your initial ideas and hypotheses. You keep questioning this, asking whether you need to amend or expand the hypotheses, modify your ideas about what is happening, explore some issues in greater depth, get more examples of things that fit with and do not fit with your hypotheses and so on.

In qualitative research the tendency is to use induction rather than deduction. Using this approach means that we do not go into the fieldwork to test out assumptions or existing theories or ideas. Data are collected and from the data we identify general principles that apply to the subject under study – we move from the specific to the general – theory building rather than theory testing. One such well-documented approach, grounded theory, is outlined in Box 12.2.

As you might imagine, it is difficult to use a purely inductive approach in practice. It is difficult to keep out all other ideas and to have a completely open mind when tackling a problem. It is likely that you will have some knowledge of the product field or area under

Box 12.2 Grounded theory

Grounded theory is the approach to analysis of qualitative data described by Glaser and Strauss (1967) and later by Strauss and Corbin (1998). In the grounded theory approach data are examined using the 'constant comparative method' in order to identify themes and patterns; concepts and codes are developed in order to summarise what is in the data. These concepts and codes are used to build propositions, or general statements, about relationships within the data. The codes and propositions are tested out in the data to make sure that they hold up, to make sure that they fit the categories to which they were assigned and that the propositions help to explain what is being studied. 'Theoretical sampling' is used to select new 'cases' (respondents) that might help develop the emerging concepts, propositions and theory.

Although grounded theory is often cited, particularly in academic research, as the approach taken in analysis, there is evidence (Bryman and Burgess, 1994) that few use it in its entirety in the way that Glaser and Strauss and Strauss and Corbin describe. Citing the grounded theory approach is more likely to mean that the analysis is data driven rather than meaning that the specific approach, for example the coding procedures, the use of the constant comparative method or theoretical sampling, is followed exactly.

investigation, or at least some understanding of general patterns of behaviour and attitudes (from previous research or the literature). Thus in real-world research analysis it is an iterative process involving both inductive and deductive reasoning. Ideas and hypotheses emerge from the data and are tested out within the data; you might revise or change them, collect more data in which to test and develop ideas and so on.

A word of caution is appropriate here. We all have biases – ways of thinking, opinions and attitudes, ideas about the research and what we might find before we start. These might come from our life experience and general knowledge as well as from work on projects in the same area, from briefing documents and background reading and so on. It is important that these are not allowed to skew the analysis and interpretation of the data or limit it in any way. Your own thinking about the issue may mean that you see only what you want to see, or only what fits with your view of the problem. It is important in qualitative research and in analysis to think about alternative hypotheses, to be open to different ways of looking at and interpreting the evidence, and to question and challenge what we see or think we see in the data. At the outset of a project, therefore, it is important to examine what you 'know' or assume, what preconceptions you might be bringing to the fieldwork and analysis. Before going into the field think through how you feel about the topic. Ask yourself: What do I think about the advertising? What attitudes do I have about this issue? Make these explicit, articulate them, challenge them and then leave them to one side as much as possible.

This approach, however, does not rule out the use of existing theories or models. A good theory or model can be an invaluable aid to analysis – it can be used to help develop and expand your thinking; it can speed the analysis process by giving it a framework and thus a coherence; it can suggest questions to ask and lines of enquiry to follow; and it can provide ideas for developing typologies. Used alongside a systematic

testing out of ideas in the data – looking for evidence that supports them and evidence that refutes them – a model or theory can help produce a more robust analysis (see Case study 12.2). In choosing a model or theory you need to examine how well founded it is – use those that are well researched and empirically based.

In analysing qualitative data remember the following:

- keep an open mind;
- do not jump to conclusions too early;
- separate how you see the issue from how respondents see it (to avoid imposing your views and ways of thinking on the data);
- do not force the data to fit with what a theory or model suggests.

The aim of analysis

Regardless of the approach, however, the aim of analysis is the same – to extract meaningful insights from the data and to produce valid and reliable findings that help to answer the research problem. To achieve this, analysis should be disciplined and rigorous. This does not mean that it should be entirely mechanical or prescriptive. It does mean that it should be thorough, consistent and comprehensive, systematic without being rigid, and open to the possibilities and insights that emerge as a result – intuition and creativity are a vital part of it.

The aim of this chapter is to set out some general guidelines for analysing data in a way that leads to valid and reliable findings. For ease of description the process is broken up into stages:

- Planning the analysis and developing a strategy.
- Doing the analysis:
  - organising the data;
  - getting to know the data;
  - getting to grips with what is going on;
  - making links, looking for relationships;
  - pulling together the findings.

In the real-life, untidy world of qualitative analysis, however, these activities often do not always exist as distinct phases – parts of each phase may be taking place at any one time. Rather than moving from one stage to the next in a neat progression it is more likely that bits of each stage will be repeated over and over again as you move through the data. What is presented here is not a prescription for qualitative data analysis but a guideline or set of techniques that you may find useful in getting to grips with your data and discovering your own approach to analysis.

Planning the analysis

In this section we look at what needs to be done before the main stage of analysis – post-fieldwork – begins. In other words, what do you need to be thinking about during the early stages of the project?

▓ At the research design stage

Although the main phase of analysis happens at the tail end of fieldwork, that is not where it begins. Analysis really does start from the moment you get the brief and start thinking about the problem. Box 12.3 is a checklist designed to help you think through what implications each bit of the research process and each decision has for the analysis. There is no substitute for clear, thorough thinking at this early stage. The process of analysis will be less painful and the outcome of much better quality if you spend time at the front end – understanding the research problem and its implications for analysis. This may involve reviewing any relevant literature on the research topic, or reviewing the findings of other research projects on the same or similar topics. The aims and objectives of the research drive the research design and the choice of sample, method and questions, and all of this will determine the analysis strategy. Thinking about these things at an early stage will often give you a way into the analysis, a way of tackling it, helping you to develop both a strategy and a framework for interrogating the data and presenting the findings.

Box 12.3 Thinking forward to the analysis

The problem

➤ Are you clear about the issues involved? Is the problem clearly defined?
➤ Is your task to explore, describe, explain or evaluate?
➤ What output is expected? How will the findings be used?
➤ What, if any, are your working hypotheses or ideas?
➤ Is there any previous research or relevant literature that might be helpful?

The sample

➤ Whom do you need to interview? How many?
➤ Have you identified different types of respondent?
➤ What implications will this have for your analysis? Do you expect to see different responses from different types of respondent? Will it be useful to compare responses among similar groups of respondents and between different groups?

The method

➤ What method have you chosen? Observation? Depth interviews? Group discussions?
➤ How will this affect the analysis process?

The questions

➤ What topics are to be covered in the interview or discussion?
➤ What questioning techniques will you use? Will you use projective or enabling techniques?
➤ What implications do these questions have for the analysis?

🕸 At the fieldwork stage

There is a huge overlap between fieldwork and analysis in qualitative research. You collect data, think about them all the while and collect more – perhaps using a slightly amended discussion guide or reworked stimulus material as fieldwork sheds light on the issues. The whole time your thinking about the issues is developing: ideas, hunches and insights will pop up, hypotheses will emerge that you might want to test out or explore further.

Fieldnotes

For this reason it is worth keeping a fairly detailed log of thoughts and insights as they occur to you during fieldwork. Write them down as soon as possible – you may not remember them when it comes to the main phase of analysis. Sit down as soon as possible after an interview or group or workshop is over and 'braindump' all your thoughts, feelings, ideas, impressions and insights in as much detail as possible. If you are working with a colleague review the fieldwork session together in detail as soon as possible after it is over and make detailed notes. If you have client observers talk to them – ask them what they thought and note down what they say. Write down what you think are the key themes, relevant quotations, things that you might want to explore or think about in more detail later, anything that was said that you did not expect, for example. In other words make a note of anything that occurs to you that you think might be useful when the analysis process is in full swing. Make sure to clarify what are impressions and inferences and what are facts or more concrete observations (Boulton and Hammersley, 1996).

It is also useful at the end of an interview or group to write up a summary of the main points made by the respondent or by the group under each of the topics or questions on the interview guide or on a 'contact summary' form (Miles and Huberman, 1994). Another useful approach is to 'mind map®' them (Buzan and Buzan, 2003). Use whichever approach you think will help settle and fix things in your memory and

Box 12.4 Summary so far

➤ Think about and plan how you are going to tackle the analysis when you plan the research.

➤ Think about and evaluate what is going on while you are doing the fieldwork – what you are hearing and seeing and sensing.

➤ Braindump all your thoughts as soon as possible afterwards.

➤ Make detailed notes or maps about what is emerging, what picture is beginning to build up; write down any particularly relevant or interesting quotations.

➤ Ask yourself what was unexpected or surprising; examine and challenge your own assumptions.

➤ Think of questions to ask of the data, comparisons that might be useful.

➤ Consider what issues need to be explored in greater depth, what new areas you need to probe.

➤ Consider what implications these early findings have for further fieldwork, and for analysis and interpretation, and make changes if necessary.

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will be useful later in the analysis. Having a summary record of some sort will help you think about and develop ideas about the data and decide on an analysis strategy. It may also be a useful reference source or guide when it comes to writing up the findings in detail. These notes, summaries and/or maps can be particularly useful if more than one person is involved in the fieldwork, and if more than one person is to be involved in the analysis. Other members of the team can read them in order to get to grips with data across the whole sample.

▓ Developing an analysis strategy

Having thought through the research problem and completed some of the fieldwork you will have in your head – and in your notes – the basis of an analysis strategy, or plan for tackling the analysis. It is worth formalising this plan, making it explicit, especially if you are relatively new to qualitative research. It is easy to feel overwhelmed by the amount of data you have collected, and by the thought of having to find a way through them. The possible lines of enquiry in most qualitative studies are numerous, and time and resources are limited. The analysis strategy should set out a way of approaching the data, and in doing so calm your fears about the size and complexity of the task and ensure that you tackle it in a systematic and rigorous way. A strategy that has been developed to suit the aims and requirements of the research should help you make the most of the time and resources available by prioritising your lines of enquiry. But having a strategy in place does not mean that you have to stick rigidly to it, whatever the data throws up – it can and should be adapted and modified to fit the circumstances.

In putting together your analysis strategy it is useful to think about the following:

- ⤙ What are the practical considerations?
    - ⤙ How many are going to be involved in the analysis?
    - ⤙ Is the client or sponsor to be involved in the analysis process?
    - ⤙ How long do you have for analysis?
    - ⤙ Are you going to work from transcriptions, tapes or notes or a combination?
    - ⤙ Will you be using a computer analysis package?

- ⤙ What are the research considerations?
    - ⤙ What decisions are to be taken on the basis of the research findings?
    - ⤙ How detailed does the analysis need to be?
    - ⤙ What outputs are required? Presentation, summary report, full report?
    - ⤙ Are the findings to be published?

- ⤙ How are you going to tackle the task?
    - ⤙ By country?
    - ⤙ Interview by interview or group by group?
    - ⤙ Question by question?
    - ⤙ By respondent type?

There is no one way of developing a strategy – one approach is to use the research brief or the research proposal (if there is one). Start by writing down the big research questions that you have set out to answer – the objectives of the research. List the questions and the types of respondents that might help throw light on each of these and write

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down what it is you will be looking for in the data generated by the questions and the respondents that will help you address the research objectives. This is your analysis strategy.

As your analysis and your ideas develop you might find (through a search of secondary data sources) that there is a body of knowledge that supports them or that will give you ideas and alternative ways of looking at the data. You might find this knowledge in previous reports of research on your topic or in the literature about the substantive topic you are investigating – for example there may be well-developed models and theories from management science, marketing science, psychology, consumer behaviour, sociology or anthropology, for example. It can often be worthwhile to make use of these models and theories – they can help you to structure the analysis, suggesting lines of enquiry, and will help you to develop your thinking. They should not be overlooked as a source of inspiration and help but neither should they be used uncritically.

Case study 12.2 Marrying theory and data to get a clearer view

Here Diarmaid O'Sullivan describes how he used theory to help him develop his analysis.

Key words: strategy, data, interview guide, question by question, story, emerging, tapes, transcripts, summary, notes, key topics, literature, culture, theory, culture shock, acculturation, framework, coherent, added layer.

Introduction

My initial strategy in analysing my data (from 12 in-depth interviews with overseas social workers working in Ireland) was to follow the structure of my interview guide, question by question. There was a beginning, middle and end, taking respondents from thinking about working in Ireland, their first experiences of working here to their future plans. It made sense to look at the data in this way, too. I had divided the 'story' emerging from the data into two areas: (1) all the processes that went on before making the move to Ireland; and (2) experiences of working in Ireland: first impressions, the induction period, supervision, colleagues, clients, future plans.

Analysis

I listened to the tapes of the interviews and before preparing full transcripts, I wrote up a summary of each interview, building in the notes I had made at the time of the interview. These interview summaries served as a very useful guide to the whole interview and enabled me to pull out a number of key topics related to the working environment in which respondents found themselves. These included:

- The lack of structure in Irish social work
- Induction into social work in Ireland
- Supervision
- Interaction with colleagues
- Interaction with clients

While I now had a set or list of topics, I had no way of drawing the experiences of all respondents together, as not all respondents had the same experiences or unanimous views on these topics.

Case study 12.2 continued

Following a suggestion by my research supervisor I began reviewing the literature on culture and its effects. It soon became apparent to me that what many of the respondents had experienced when coming to work in Ireland initially was culture shock. It was clear that the idea of culture shock and the process of acculturation as described by Hofstede (1984, 1991) would help me understand and explain what was going on in the data I had collected – it would help me tie all the respondents' stories together within a framework.

In particular, Hofstede's dimensions of culture, in particular the values of power distance and uncertainty avoidance, helped me to question the data and understand the experiences and feelings respondents were describing in a more coherent way. The notion of culture shock and the theory or process of acculturation gave me a framework within which I could explore and explain how non-Irish social workers felt when they came to work in Ireland.

Comparing the power distance and uncertainty avoidance scores for Ireland with those for the country of origin of each respondent helped me understand more fully, for example, the uneasy or unfamiliar nature of the boss/subordinate relationship many respondents described. Power distance informs us, among other things, about the relationship between subordinate and boss. In large power distance cultures, from which most respondents came, there is a considerable gap between boss and subordinate with a culture of direction-giving from the boss. In small power distance cultures like Ireland there is a limited dependence of subordinates on bosses and a preference for consultation between the two, that is, interdependence between the boss and the subordinate. Not surprisingly, perhaps, some respondents felt that their supervisors in Ireland were too young and inexperienced to offer them adequate supervision and that they did not give them the sort of support they expected: many reported a lack of regular supervision and some commented that it lacked structure.

The notion of uncertainty avoidance informs us about a culture's tolerance for the unpredictable. Ireland has a lower score on the uncertainty avoidance index than the countries of origin of many of the respondents, indicating a more comfortable relationship with the unpredictable. In describing their experiences, many respondents appeared to note this – commenting on, for example, the lack of structure and lack of clear guidelines which they felt characterised social work in Ireland.

Conclusion

Hofstede's theory helped me to transform a list of 'complaints' and issues in relation to work practices in Ireland into a coherent story about culture shock and the process of acculturation among foreign social workers working in Ireland. The theory allowed me to question the data in ways I had not thought of. It enabled me to infuse my analysis with an added layer of understanding and explanation, mindful at all times to avoid 'explaining away' respondents' experiences. Without it I just had respondents' perceptions about a list of issues.

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Doing the analysis

The main stage of analysis usually begins when fieldwork is more or less completed. There are five main steps in this part of the process:

➤ organising the data;
➤ getting to know the data;
➤ getting to grips with what is going on in the data;
➤ making links, looking for relationships;
➤ pulling together the findings.

▓ Organising the data

Organising the data involves sorting out all the materials you need in order to get on with the analysis. Depending on the size and complexity of the project, and the way in which you like to work, you may well have accumulated a lot of 'raw materials' – a pile of tapes or recordings from interviews or group discussions; fieldnotes; transcriptions of the taped interviews; and notes about respondents' interpretations of enabling and projective exercises and copies of the output of these exercises.

It may help you to declutter your mind in readiness for the in-depth analysis process if you spend some time sorting this material into files or folders, labelling it, and generally making it easy to retrieve. It is particularly useful at this stage to make several copies of transcripts – an unadulterated master copy, a copy for cutting and pasting (if that is how you like to work), and a copy on which to make notes. Once this sorting and filing is complete you can review your field notes, listen to (or watch) your tapes or recordings, read through the transcripts and prepare how you plan to tackle the analysis.

Common reactions of novice researchers at this stage are panic and anxiety – about the mass of data and how to get started. In all likelihood you will have more thinking done than you realise, and sorting and organising your data, reviewing your notes, reading transcripts and talking to colleagues about the data will help sort things out in your mind. Do not put off getting started – look back at your analysis strategy and get stuck in. It can be a laborious process – and you must approach it in a systematic way – but you will soon find that when you engage your brain with the data that things fall into place, and a story will start to emerge.

Box 12.5 The analysis audit – part 1

Introduction: Making the process explicit

People approach the analysis of qualitative data in many different ways. Over the past few years I have worked with around 150 trainee researchers on 50 or so different projects. Below, and at relevant points throughout this chapter, are what I have found to be the most common tasks in analysing data. You might find them useful in helping you move through your analysis or you might find them useful in auditing or reviewing what you have done as you approach the end of your analysis. I have broken the tasks up into stages but since the process of analysis is not always linear or sequential – it is usually iterative

Box 12.5 continued

and sometimes sort of circular – you may find yourself working back and forth between tasks and stages, repeating some of them as you go. You may not do all of them all of the time – and some of them you may never do. It will depend on you, your previous experience or training and how you like to work, on the type of project and on the analysis or reporting needs. I've used 'interview' throughout to refer to any data gathering method.

Taking it in – Part 1 During and shortly after fieldwork

➤ You do the interview – you hear and/or see and/or feel some of the data
➤ You make notes at the time of the interview and/or shortly afterwards
➤ You discuss the interview with the client/observer
➤ You prepare a full written summary of what went on in the interview
➤ You think about what went on in the interview – thoughts/ideas occur to you
➤ You listen to or watch the tape of the interview – you hear/see/remember more data
➤ You prepare a transcript – a full written account of the interview (with notes about non-verbal stuff)
➤ You make notes about what you saw and/or heard and/or felt and/or thought
➤ You summarise the findings from each interview in note form or as a list
➤ You summarise the findings from each interview as a map or diagram
➤ You list questions about the data
➤ You note ideas that occur to you.

You may find at this stage of the process that one or other of the following statements describes how you feel.

A. When you finish the interviews and/or read the transcripts you feel that you sort of understand or can see the big picture but are unclear about how the details fit in.
B. When you finish the interviews and/or read the transcripts you feel that you sort of understand or can see the details but are unclear about the big picture.

Taking it in – Part 2 After fieldwork is completed

You might find yourself working in a team with at least one other researcher or with a client, in which case it is likely that you will share your data and your ideas. If, however, you are working on your own it is very useful to find someone with whom you can share your ideas, someone who will act as a sounding board.

➤ You share your tapes and transcripts with other team members or with clients
➤ You circulate your notes to other team members or clients
➤ You listen to/watch tapes or other team members' interviews
➤ You read the transcripts of interviews completed by other team members
➤ You read other team members' notes about their interviews
➤ You prepare your ideas about what you think is going on in the data on your own
➤ You brainstorm ideas in a group session
➤ You take notes during the discussion or brainstorm session
➤ You talk to the team about your interviews and what you found
➤ You listen to others talking about their interviews
➤ You discuss your ideas with other team members or clients

▓ Getting to know the data

It is a good idea in the early stages of your qualitative research career (if time and teamwork considerations permit) to prepare your own transcripts. Not only will you learn a lot about your interviewing technique but it will give you the chance to get into the data, to get to know it thoroughly. If you are not able to do this make sure you listen to or watch your tapes or recordings and read through the transcripts (which someone else will have prepared for you) in full. Make notes as you do this, putting faces to words, noting how things were said, what was not said, what interpretations occur to you as you go through, what ideas strike you and so on.

Although you go into this more intensive phase of analysis with some ideas, feelings and impressions about what is going on, and perhaps some ideas about what it all means, it is important not to jump to conclusions too early. You may find that until you listen to your tapes or read through the transcripts that the interviews or groups you conducted all merge into one in your mind. There is a danger that you misremember things, or give some things more importance in your mind than was actually the case. You need to protect against the selectivity and decay of your memory (see Case study 7.6). This is why notes made at the time are particularly important – they are more reliable than notes made some time after fieldwork – and why listening to or viewing the tapes of the interviews is so important. When reading your notes and transcripts and listening to or watching your tapes, write down any analytic ideas and impressions that occur to you and make a note about testing them out right across the data to see if they hold up. You will need to go back through all of the data systematically and read, listen to or watch them closely to make sure that you see the whole picture, not just the bits that stuck in your mind. Test your ideas out by looking at and comparing data from different types of respondents. Do not get too attached to ideas too early – you may have to ditch them as the analysis develops. Keep your mind open throughout the process to the possibility of new or alternative explanations and new ideas.

▓ Getting to grips with what is going on

This is the 'pulling apart' stage of the analysis. Once you have read your notes and transcripts and listened to/watched the tapes, and looked at the data by respondent, by type of respondent or by topic, you will start to notice patterns and themes. You will see that some things crop up a lot, or at least more than others, that there are discernible patterns in attitudes, behaviour, opinions and experiences. You may notice patterns in the way in which people express themselves about an issue and the language they use to describe things. Record all of these – in a notebook, on the transcripts, on your data analysis sheet, in the computer program – whichever you use.

Coding and summarising

To understand fully what is going on you need to dissect the data, pull them apart and scrutinise them bit by bit. This involves working through the data, identifying themes and patterns and labelling them or placing them under headings or brief descriptions summarising what they mean. This process is known as categorising or coding the

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data. Later in the process, when you have a thorough understanding of all the elements, you can link the data – all the coded segments – together again.

This coding process is not just a mechanical one of naming things and assigning them to categories, it is also a creative and analytic process involving dissecting and ordering the data in a meaningful way – a way that helps you think about and understand the research problem. Coding is a useful 'data handling' tool – by bringing similar bits of data together (Miles and Huberman, 1994) and by reducing them to summary codes you make the mass of data more manageable and easier to get to grips with, enabling you to see what is going on relatively quickly and easily. The process of developing codes and searching for examples, instances and occurrences of material that relate to the code, ensures that you take a rigorous and systematic approach. Codes are also a useful 'data thinking' tool. The codes you develop – and the way you lay them out – allow you to see fairly quickly and easily what similarities, differences, patterns, themes, relationships and so on exist in the data. They should lead you to question the data and what you see in them. The coding process can help you develop the bigger picture by bringing together material related to your ideas and hunches, thus enabling you to put a conceptual order (Strauss, 1987) on the data (moving from specific instances to general statements) and to make links and generate findings.

Generating codes

But how do you generate these codes in the first place? Where do they come from? You can use the topics or question areas from your discussion or interview guide (without reference to the data) as general codes or headings. For example, you might have asked respondents to describe their ideal airline flight – you could have a general code called 'ideal flight' and during the coding process bring together all the descriptions from across the groups or interviews under this code or heading, as follows (although in a live project each extract would be labelled with respondent details):

Ideal flight

'*Good films, plenty of leg room, decent food. You're sitting on your own for six or eight hours, you want those things.*'

'*You want to feel appreciated by them. You don't want to be treated like a number.*'

'*Plenty of airmiles that I can use to go on holiday.*'

'*Nothing to annoy you – no one in front of you in the check-in queue, no delays, a seat with plenty of leg room and no one sitting beside you, decent food, clean toilets and not having to wait around for ages before your bags arrive.*'

'*Comfort and decent entertainment – that's it.*'

'*The service – the feeling that they're there to serve you.*'

'*There's never a queue at check-in – it's hassle-free . . .*'

'*A reserved car parking space, close to the terminal, that's free.*'

'*An efficient service from check-in right through to collecting your luggage.*'

'*Speed at the check-in, and not having to be there really early.*'

'*Comfort and plenty of room – and no one sitting beside you, that's great.*'

'A fully reclinable chair and plenty of room around you.'

'Being left alone to get on with some work.'

'A good entertainment system – good head phones, comfortable ones, and your own little screen.'

'No delays or hassles – simple things like that.'

'Being able to get off the plane feeling great, not uncomfortable and exhausted.'

Box 12.6 The analysis audit – part 2

Sorting and processing the data

There are several ways in which you might tackle this – I've called them 'bottom up' and 'top down'. You might use one or other, depending on how your brain works and on the type of project it is, or you might use a mix of both, in a sort of iterative, back and forth approach.

Order 1 – Bottom up

➤ You think about what individual respondents said/did not say
➤ You examine the words and phrases they used
➤ You note the frequency/strength with which things were said
➤ You examine how they said things as well as what they said
➤ You look at the context in which they said it
➤ You think about what they meant
➤ You think about what these things were examples of
➤ You create headings or codes or categories to label or describe things
➤ You make notes of these headings or codes in the transcript
➤ You highlight or colour code these bits of the transcript
➤ You cut and paste bits of the transcript under these headings, creating a new document or section for each heading
➤ You build up a 'code frame' or list of headings.

Order 2 – Sort of top down

➤ You have in your mind a list or set of ideas or concepts or headings
➤ You create a 'code frame' based around these
➤ You go through the transcripts looking for examples of each of these
➤ You make notes of these headings or codes in the transcript
➤ You highlight or colour code these bits of the transcript
➤ You cut and paste bits of the transcript under these headings
➤ You go through the material under these headings
➤ You think about what individual respondents said/did not say
➤ You examine the words and phrases they used
➤ You look at the context in which they said it
➤ You note the frequency/strength with which things were said
➤ You examine how they said things as well as what they said
➤ You think about what they meant.

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Remember during this coding some people may have talked about a particular topic or answered a question later or earlier than the topic was mentioned, so you may need to search the data record for all incidences of it.

Rather than imposing codes from outside the data you can go into the data (a bottom up, data driven approach) and see what words or terms or concepts respondents use to describe things and use these as the codes. Remember that different people may use different language to describe the same thing so make sure that you look for this.

The coding process

The coding process itself can also be tackled in a number of ways, and different researchers will have different approaches – using pen and paper or computer. A relatively easy way of doing it if your transcripts are available in a word-processing package is to create a new document for each heading, topic or code. As you work through your transcript, cut out sections of text that relate to the code and paste them into the document you have created to represent that code. In this way you can build up a store of relevant material related to that particular code or topic. Take care to label the source of each bit (respondent details, fieldwork details, place in transcript) that you cut so that you know the context from which it came, and can refer back to it if necessary. And remember that one bit of data or text may fit under more than one heading or code. You could, alternatively, go through the transcript and label bits of text *in situ*, before gathering the same or similarly labelled bits in one place or under one heading.

It is likely that you will make several – at least two – coding 'passes' through the data. At the first pass you might keep the codes fairly general and keep the number to a minimum. For example, you might have identified four or five key themes in your data or you may have divided it up under several topic areas. As you work through the data a second time you can divide these big, general codes into more specific ones. In the 'ideal flight' example you might, on a second coding pass, pull apart all the aspects respondents include in their ideal flight and code or group these under headings such as 'emotional aspects' (feelings of well-being and so on), 'physical aspects' (leg room and so on), 'facilities available' or 'service'. In this second pass you might group your data extracts under each of the relevant codes as follows (note that some appear in more than one category, either because the respondent said more than one thing and you want to maintain the quotation in full or because in some cases it is not clear in which category to include them):

Emotional aspects

'*You want to feel appreciated by them. You don't want to be treated like a number.*'

'*Nothing to annoy you – no one in front of you in the check-in queue, no delays, a seat with plenty of leg room and no one sitting beside you, decent food, clean toilets and not having to wait around for ages before your bags arrive.*'

'*Being left alone to get on with some work.*'

'*No delays or hassles – simple things like that.*'

Physical aspects

'Good films, plenty of leg room, decent food. You're sitting on your own for six or eight hours, you want those things.'

'Nothing to annoy you – no one in front of you in the check-in queue, no delays, a seat with plenty of leg room and no one sitting beside you, decent food, clean toilets and not having to wait around for ages before your bags arrive.'

'Comfort and decent entertainment – that's it.'

'Comfort and plenty of room – and no one sitting beside you, that's great.'

'A fully reclinable chair and plenty of room around you.'

'Being able to get off the plane and feeling great, not uncomfortable and exhausted.'

Facilities

'Good films, plenty of leg room, decent food. You're sitting on your own for six or eight hours, you want those things.'

'Plenty of airmiles that I can use to go on holiday.'

'Nothing to annoy you – no one in front of you in the check-in queue, no delays, a seat with plenty of leg room and no one sitting beside you, decent food, clean toilets and not having to wait around for ages before your bags arrive.'

'Comfort and decent entertainment – that's it.'

'A reserved car parking space, close to the terminal, that's free.'

'A good entertainment system – good head phones, comfortable ones, and your own little screen.'

Service

'Nothing to annoy you – no one in front of you in the check-in queue, no delays, a seat with plenty of leg room and no one sitting beside you, decent food, clean toilets and not having to wait around for ages before your bags arrive.'

'The service – the feeling that they're there to serve you.'

'There's never a queue at check-in – it's hassle-free . . .'

'A reserved car parking space, close to the terminal, that's free.'

'An efficient service from check-in right through to collecting your luggage.'

'Speed at the check-in, and not having to be there really early.'

'Being left alone to get on with some work.'

'No delays or hassles – simple things like that.'

Alternatively, you can code the other way round – coding everything that occurs to you as you pass through the data the first time and use the second or third pass to structure or revise these more detailed codes. There is no right or wrong way – do what feels best for you and for the data.

During the coding process do not rule out the possibility that bits of data may have multiple meanings or a meaning different from the one that you are assuming. Always check out the context of comments in order to learn more about the meaning of what was said; it may also be useful to go back to the tape. Stay open to new ideas and new ways

of looking at and coding the data. Try not to jump to conclusions or close off avenues of enquiry. Do not think of the codes you have created as static or fixed – they can be expanded, split apart or even discarded if they no longer seem useful or if they do not work.

Once you have bits of data together under a heading or code the next step is to compare all the bits – looking for similarities and differences between them. This will help you refine the codes, making them more specific, and it will also help you achieve a greater understanding of the data. You might do this during the second pass at coding, or even at a third pass, depending on the time available and the level of detail and depth you need to achieve with the analysis.

At this stage you may want to extract some verbatim comments – quotations or vignettes, extended story-like quotations that illustrate a typical experience or event (Miles and Huberman, 1994) – for use in the presentation or report of the findings. In selecting these make sure that you do not oversample the responses of the more articulate respondents. You may want to choose a range of responses that illustrate a particular phenomenon, attitude, feeling or experience, putting together a sort of database of quotations. Make sure in removing them from the transcript that you provide enough context so that the meaning is clear, and ensure that they are labelled with the relevant respondent details.

Box 12.7 Approaches to coding and analysis: variations by technology

➤ *Pen and paper*: use a different coloured pen to highlight or underline comments that relate to each topic or theme; cut out verbatim comments from the transcript and paste them together with other comments relating to that topic or theme on to a separate sheet of paper.

➤ *Word processor*: use the word-processing package to highlight comments using different colours or different fonts for different topics or themes; cut and paste relevant sections of the transcriptions under headings or themes on a separate page or into a separate document.

➤ *Qualitative data analysis package*: import transcripts into an analysis package, label sections of text that relate to particular topics and themes with relevant headings or brief descriptions – 'codes' – and use the software to sort and retrieve passages of texts labelled in the same way.

During and after this 'dissection' stage you will start to see links and connections between bits of data. The next step is to put things back together again in the light of the understanding you have achieved via the dissection. The summary version of the data – the coding scheme – can make it easier to see links, connections and relationships in the data.

▓ Making links and looking for relationships

You should now have a very good grasp of your data. A 'story' should be emerging, and it is likely that you will have some tentative ideas or explanations about what is going on. As you have read through and/or listened to your data and as you have

coded them you will have made notes about links between different themes or codes that overlap and you will have been asking questions of the data, testing out ideas and looking for relationships. For example, you might ask, 'Does the description of an ideal flight vary between frequent and less frequent flyers or those who usually fly club class and those who fly first class?', 'Is it only users who think x, or do non-users hold the same view?', 'Is it younger women who say that or is it all women?' or 'Is it life stage rather than age or demographics that might explain a particular pattern?' You may be able to develop typologies, categorising respondents in terms of similarities in their characteristics. You might be able to isolate several types of business flyer, for example, characterised by frequency of travel and attitude or delight in the experience; or different types of homeless people, characterised by the length of time they have been homeless and their feelings about their situation. The questions you ask of the data and the way you develop the data will be driven by the research objectives.

As you make links and connections, or see relationships, think about what might explain them and think about more than one explanation. Once you have generated some possible explanations start looking for evidence to support your ideas and interpretations as well as evidence that might not support them. At this stage you may well still be coding the data – and making the codes more detailed or refined. At the same time you may also find that you can move from the specific codes you developed to more abstract concepts and from these concepts to a greater degree of generalisation about what is going on in the data.

Box 12.8 The analysis audit – part 3

Thinking about what's going on

Words and meaning:

➤ You look for common words and phrases
➤ You look at the context of words to try to get an understanding of the respondent's meaning
➤ You try to think of alternative meanings in a phrase.

Frequency, strength and consistency of response:

➤ You examine the data to find out how common particular responses were
➤ You examine the data to determine if there was a range of response in relation to a particular topic or question
➤ You note how diverse or how similar the responses were
➤ You note how strongly opinions or attitudes or beliefs were expressed
➤ You examine how consistent opinions or attitudes or beliefs were

Piecing it together

At this stage one or other of these statements might describe how you feel . . .

A. You feel that you need to get to grips with all the detail in order to form the big picture.
B. You feel that you need to get an idea of the big picture in order to see how the details fit in.

Box 12.8 continued

➢ You look to see if your codes or categories or headings occur in all the transcripts
➢ You amend your code frame accordingly as you examine all transcripts
➢ You pull together all examples from all transcripts under these codes or categories
➢ You add headings into the body of the transcripts
➢ You compare and contrast individual cases (respondents, groups)
➢ You summarise the headings or codes
➢ You create a diagram or map or flow chart linking the codes or headings, showing how they relate to each other
➢ You create a grid or a table (an analysis sheet) using the main codes or headings to show how response varied or did not vary across the sample
➢ You make detailed notes about what you find out about each heading or code
➢ You make summaries about what you find out about each heading or code
➢ You re-read the transcripts thinking about only one or two headings or codes (or themes or ideas) at a time
➢ You form ideas or hypotheses about what might be going on in the data
➢ You test these ideas or hypotheses within the data
➢ You go back through your tapes or transcripts or notes looking for evidence to support your ideas or hypotheses
➢ You go back through your tapes or transcripts or notes looking for evidence that refutes your ideas or hypotheses.

Linking and connecting

➢ You look at the codes or categories or headings you have created
➢ You look for patterns
➢ You look for links or connections or relationships between them
➢ You link things – codes, headings – together
➢ You brain dump all your ideas
➢ You map out your ideas or your codes or headings
➢ You order the ideas or codes or categories or headings
➢ You go back and forth through the data checking and testing your ideas and hypotheses
➢ You formulate and test new hypotheses
➢ You look for or find outliers or anomalies
➢ You map out pathways or processes
➢ You create vignettes that illustrate typical behaviour or experiences
➢ You create typologies
➢ You write up a summary of the findings
➢ You revisit the literature
➢ You seek out more literature
➢ You use theories or models you found in the literature to explore or question your data further
➢ You use theories or models to help you explain your data.
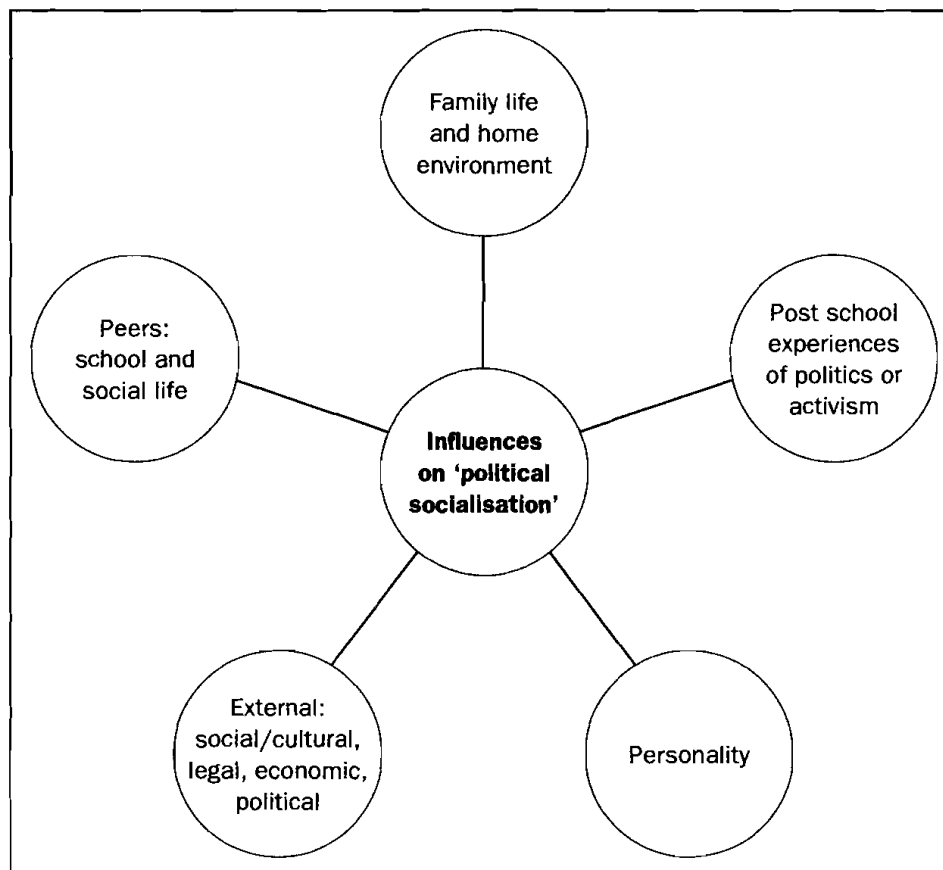
**Figure 12.1 Diagram summarising source of key influences on political socialisation**

Source: Adapted from Beattie, D., Carrigan, J., O'Brien, J. and O'Hare, S. (2005) ' "I'm in Politics Because There's Things I'd Like to See Happening." ' Unpublished project report, MSc in Applied Social Research. Used with permission.

Using charts, diagrams and maps

Using diagrams, tables, flow charts and maps to sort and present data can help you think and can help to uncover or elucidate patterns and relationships. Some people can think in and/or express ideas better in pictures and diagrams than they can in words. Reducing data to fit a diagram or table or mapping things out can focus the thinking on the relationships that exist in the data (see Figures 12.1 and 12.2). The most suitable format will depend largely on what it is you are trying to understand. A perceptual map may be useful in showing how different brands lie in relation to each other and key brand attributes. Figure 12.3 shows an example.
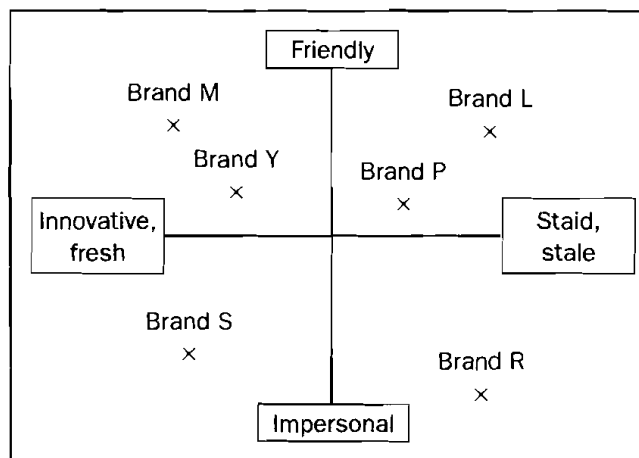
A flow chart might be suitable to show a detailed chronology of events, for example the events leading to homelessness or a move to a hostel or shelter, or the steps involved in investment planning. A table might be useful for summarising the reactions of different groups or types of respondents to particular stimulus material – product concepts, for example, or mood boards. An example is given in Table 12.1. Key comments about each concept can be written in for each respondent.

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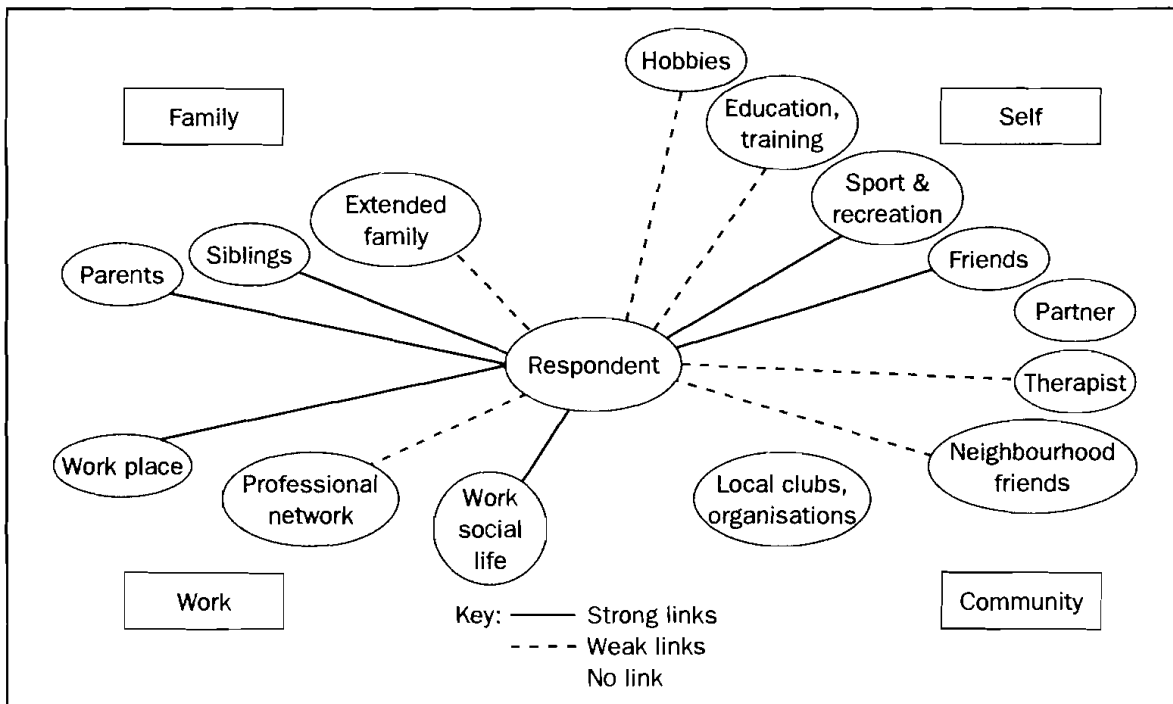
Figure 12.2 Map of respondent's social support network

Figure 12.3 Example of a perceptual map

Table 12.1 Data analysis summary table

	Younger respondents (15–18 years) Comments			Older respondents (19–24 years) Comments		
Concept code	R1	R2	R3	R1	R2	R3
1						
2						
3						
4						

※ Pulling together the findings

As you work through your data, immersing yourself in them, pulling them apart and building them up, questioning, testing out ideas and hypotheses, you are likely to reach a point where suddenly it all seems to fit together and make sense or produce a story. Here are a few ways of helping this along. When all of the data and ideas are in your head it can be useful to take a break from the analysis, to let things ferment, to give things time to 'gestate'. Go and do something unrelated – sleep, exercise, cook or listen to music – and you may find you have that 'eureka' moment. Another way is to talk about the findings out loud to someone not directly involved in the project. All they have to do is sit and listen and perhaps ask a few questions. Often in trying to articulate the ideas in your mind in order to speak them out loud and explain them to someone else you make connections or see a picture that you have not seen before. The other person can help by asking questions so that you have to explain your thinking and reasoning. They may ask questions that you have not asked yourself, which may help further. Yet another way is to read the literature relevant to your project, whether it is the original briefing notes or a journal article on the same topic. This may spark off fresh ideas, suggest further lines of questioning or help you make a useful connection.

Box 12.9 The analysis audit – part 4

Things that help

Sharing, not sharing

➤ Sharing the process with others (i.e. working in a group)
➤ Working on your own

Talking, writing, reading, drawing/visualising

➤ Talking about it out loud – to yourself and others
➤ Writing out your ideas, writing out summaries
➤ Reading things over – transcripts, notes
➤ Reading the literature or write-ups of other research
➤ Mapping things out or drawing diagrams

Taking a 'stance'

➤ Being totally immersed in the data
➤ Remaining detached
➤ Taking different perspectives – your own, the outsider's, the respondents', other team members', the literature.

Leaving it to gestate in your paraconscious/subconscious

➤ Leaving it alone and not thinking about it
➤ Doing something else entirely – sleeping, exercising, cooking, listening to music, doing nothing

During the whole of the analysis process it is important that you bear in mind the objectives of the research – do not lose sight of them as you become immersed in the data. It can be helpful after you complete the coding stage to start writing things down in some detail and, as you do so, to be constantly asking yourself how it all ties in with the research objectives. As soon as you have the story or the elements of the story clear in your mind, go back again to the research objectives. Think about what light the evidence you have uncovered sheds on the research objectives. Think about what implications the findings have – what is the 'So what?' of each of the insights the research has produced?

It is also useful to think about the quality of your findings:

➤ How plausible are they?
➤ Do they make sense?
➤ Are they intuitive or counter-intuitive? Surprising or what you might expect?
➤ How much evidence is there to support them?
➤ How credible and plausible is this evidence?
➤ How does it fit with evidence gathered elsewhere – from other research in this area, from theory, from the literature?
➤ Have you thoroughly examined the data for disconfirming evidence?
➤ Have you checked that other explanations do not fit the data better?
➤ Have you accounted for contradictions, oddities or outliers?
➤ Have you introduced any bias?
➤ Have you given more weight to what the more articulate in the sample have said at the expense of others?
➤ Have you been systematic and rigorous in looking for evidence and taking into account all views and perspectives?
➤ Are you seeing in the data what you want to see?
➤ Are you overinterpreting things?
➤ Is there anything you might have missed?

Box 12.10 The analysis audit – part 5

Checking, verifying, developing

➤ You think about what the connections and the patterns mean:
  1. in the context of the individual interview
  2. in the context of the whole sample
  3. in the context of the theme or concept or idea
  4. in the context of the big picture, the overall story.
➤ You re-read the transcripts for a holistic view
➤ You discuss the findings with team members and others (clients)
➤ You re-read the literature
➤ You seek out more literature
➤ You compare your findings with what is set out in the literature
➤ You question your findings further having read the literature
➤ You go back and forth between the literature and the data

Box 12.10 continued

➤ You go back and forth through the data checking out your ideas and hypotheses in the data

➤ You check whether your assignment of things to codes or categories or headings still makes sense

➤ You think about what assumptions you might have made

➤ You question whether there could be alternative explanations or interpretations

➤ You think about whether the detail really does fit with the big picture

➤ You think about whether the big picture really does explain or capture all the detail.

'Completing' it

➤ You are able to see or explain the big picture

➤ You are able to fit all the details into the big picture

➤ You are able to present the overall picture and relate key details back to the overall picture

➤ You feel that you have explained or accounted for any conflict or lack of fit or discontinuity

➤ You feel that you have moved forward towards a more complete understanding of the issues, the problem

➤ You are able to map or set things out in a series of sequential steps

➤ You are able to see a narrative or a coherent story in the data

➤ You feel that you have 'completed the circle', 'tied the story together', arrived at a 'best fit', found an 'internal logic'.

Using computers in data analysis

There is no computer program that will perform the task of data analysis for you. There are, however, many programs (including word-processing programs) that can be used for the more mechanical aspects of the process. There are programs that will store and manage data, search for and retrieve text and replicate the manual tasks of cutting, pasting and coding data. There are also programs that have mapping capabilities and some which help in building theory – linking concepts and categories. Most of this type of software has been designed by qualitative researchers in the social sciences who have worked on large-scale qualitative projects.

Computer-aided qualitative data analysis software (CAQDAS) is popular in academic research and in some larger scale social research, not least because it allows an audit trail through the researcher's analysis process, which may be essential for peer review of the work or for scrutiny if the findings are to be used in policy making. The approach is increasingly popular in social research for much the same reason – it implies a systematic approach, added rigour in the analysis process and a transparent and traceable route through the data (although most of these benefits come from how the researcher uses the software rather than the software itself). CAQDAS is little used at present in commercial market research. It can be time consuming, and most packages rely on full transcripts, which are not always produced in market research. Below we look at some of the functions available in the software.

▓ Storing and organising data

All qualitative analysis packages have this capability. Word-processing packages are also useful – you can open a new document each time you want to separate out segments of transcripts under particular headings. In order to trace the segments extracted back to their original, however, you have to make sure you have indexed them or labelled them in some way.

▓ Search and retrieve

Again all qualitative analysis packages offer this. Word-processing packages can be used to a limited extent to search and retrieve (more so if you can write macros). There are specially written programs that perform the task much faster than word-processing programs – they search for the word or phrase and can give you the extract in which the word is embedded (you can specify the length or spread of words either side of the key word).

▓ Coding

There are programs that allow you to code or label chunks of text and allow you to search under that heading for all those bits of text labelled with that code – rather than just searching for text that contains a particular word.

▓ Content analysis

There are programs that allow you to count the frequency with which certain words or phrases occur – particularly useful if you are doing a detailed content analysis.

Qualitative data analysis packages are a good way of storing and handling data and making analysis accessible. They allow you to change how you think about the data, reworking coding schemes as new insights emerge, revisiting segments of the data quickly and easily. As you work through the data you can record all your thinking about it (the way you might make notes in the margin of a transcript, for example). They allow you to see all the bits of data plus the whole – you can move back and forward in order to see the context of extracts. The search and retrieve functions allow you to interrogate the data more easily and so more thoroughly than you might with paper transcripts – and thus enable you to achieve a more in-depth understanding of the data and have greater confidence in your findings.

Ultimately, of course, any package is only as good as your own thinking and analysis skills. Do not think that by simply going through the procedures set out in the program you will end up with a good piece of analysis. The program will only carry out your instructions, it does not think for you. It will help you do the things you would normally do, and enable you to do them in more detail, more often and more thoroughly.

If you are thinking of using an analysis program it is advisable to have a good grasp of the principles of analysis before you start and you should bear in mind that despite

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your analysis skills there is quite a steep learning curve with most programs. In addition, most require full transcripts, which are time consuming to prepare, but once familiar with the program you may save time in the labour-intensive tasks of sorting, organising and coding the data. This is particularly true if you are working on a large project or have a complex mass of data to analyse. With smaller projects – Morgan (1998) suggests the cut-off point is six groups or less – it may not be worth the bother.

Chapter summary

- Qualitative data analysis involves looking for patterns, themes and relationships in the data. It is an ongoing process that begins at the start of a project and continues during fieldwork. The main work is, however, done at the end of fieldwork.

- It is a difficult and time-consuming task. There are no standard techniques or clearly defined procedures – there are many different approaches. Techniques are drawn from a range of disciplines within the social sciences, in particular from social anthropology and sociology. The approach individual researchers take depends, among other things, on their background and training.

- The aim of analysis is to extract meaningful insights from the data and produce valid and reliable findings that help answer the research problem. Analysis should be disciplined and rigorous, systematic without being rigid, and open to the possibilities and insights that emerge as a result – intuition and creativity are a vital part of it.

- One approach to analysis is the inductive approach – to collect data and from the data identify general principles that apply to the subject under study, moving from the specific to the general – theory building rather than theory testing. Grounded theory is an example of this approach.

- It is difficult to use a purely inductive approach in practice as it is likely that you will have some knowledge of the product field or area under investigation. In real-world research analysis is an iterative process involving both inductive and deductive reasoning. Hypotheses and ideas emerge from the data and are tested out within them.

- It is important in approaching fieldwork and analysis to be aware of your biases – ways of thinking, opinions and attitudes, ideas about the research and what you might find before we start. These should not be allowed to skew the analysis and interpretation of the data or limit it in any way. Throughout the analysis process keep an open mind, do not jump to conclusions too early; separate how you see the issue from how respondents see it.

- A good theory or model can be an invaluable aid to analysis, helping to develop and expand thinking; speed the process by giving it a coherence, suggesting lines of enquiry to follow and providing ideas for developing typologies. In choosing a model or theory examine how well founded it is – use those that are well researched

and empirically based. Do not force the data to fit with what a theory or model suggests.

➤ The process of analysis involves organising and sorting the data, getting to know the data in detail, thinking about them and with them, pulling them apart to understand them and fitting them together, making links and looking for relationships, to produce 'the findings'.

➤ In the real-life world of qualitative analysis these activities do not always exist as distinct phases – parts of each phase may be taking place at one time. Rather than moving from one stage to the next in a neat progression it is more likely that bits of each stage will be repeated over and over again as you move through the data.

➤ The process of coding or labelling the data is an important analytical tool. It not only helps summarise the mass of data but it enables the researcher to think with the data and uncover patterns, themes and relationships.

➤ Using diagrams, tables, flow charts and maps to sort and present data can help you think and can help to uncover or elucidate patterns and relationships.

➤ Findings and the evidence on which they are based should be checked and tested in the data in a thorough and systematic way.

➤ There are many specialist computer programs for the analysis of qualitative data. The programs help with the storage, sorting, searching and retrieval of data; some facilitate theory building. The quality of the analysis produced can be greater in depth and detail but is dependent on how the researcher uses it, not on the software itself.

Questions and exercises

1 Outline the key steps in the qualitative analysis process.

2 You are working on a project with two other researchers. Each of you has conducted six in-depth interviews. You are the lead researcher.
   (a) Prepare a briefing document for the team outlining how you plan to tackle the analysis.
   (b) Describe the steps you would take to ensure that the analysis of the data is thorough and consistent.

3 Discuss the value of each of the following to good quality data analysis:
   (a) Making notes at the time of fieldwork.
   (b) Preparing full transcripts.
   (c) Listening to recordings of fieldwork.
   (d) Watching recordings of fieldwork.
   (e) Making use of theory.

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Recommended reading

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For those interested in computer-aided qualitative analysis, the main applications are reviewed at the CAQDAS website, www.surrey.ac.uk/caqdas.