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QUALITATIVE RESEARCHING

Third Edition

SAGE

Los Angeles | London | New Delhi
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Making Sense of Qualitative Data

Making sense of qualitative data, in their various shapes and forms, may be both daunting and labour intensive, but it is also exciting and engaging. This is where you start having ideas about your data, interpreting them and working out what you think they say, or what you can say on the basis of them. But you also need to find effective ways of organizing and managing materials that are likely to be unstructured, multifarious and eclectic, so that you can assemble them, have them at your fingertips, and move easily among and through them in ways that will enable you to draw insights and make interpretations. This can feel challenging and, at times, even overwhelming, so it important to approach it in a calm and steady manner. We will cover two broad and overlapping spheres of activity in this chapter: organizing your data, and interpreting your data. It is important, in both these spheres, not simply to follow in an unthinking way what seem to be the conventions and rules for how these things are usually done in your discipline or field. Instead, we will see that you should engage in active epistemological thinking that is both creative and systematic, through all the processes involved. In doing so, the whole experience will come to seem less overwhelming and much more engaging.

ORGANIZING YOUR DATA

Organizing data is a practical challenge, but it is also always an epistemological one. Even apparently mundane or insignificant decisions will have implications for how you are able to interpret your data, as well as what kind of argument you will be able to make on the basis of your research. First and foremost, organizing data involves recognizing what actually constitutes data in your study, and understanding what you want from these data. Then you

can start finding ways to store, organize, assemble, index, search and retrieve your data, that are conducive with and facilitate the making of interpretations, and are consistent with your epistemological approach and the form of your intellectual puzzle (as discussed in Chapter 1).

Recognizing data and understanding what you want from them

Qualitative data can take a range of forms. Table 8.1 lists some of the most common; however, you may generate materials that are not mentioned but that you would still want to think of as data.

As you can see, and as has been implied by the discussions in Chapters 5, 6 and 7, qualitative data can come in many shapes, sizes and textures, and indeed any 'piece' of data can take multiple forms (an online chat can become an audio or video recording, a screenshot

Table 8.1 Forms of qualitative data

Interview transcripts, and partial transcripts	Diagrams
Interview notes	Other artistic or craft creations (e.g. collage, models, sewing, knitting, food/meals)
Transcripts of 'naturally occurring' talk, online chats etc.	Material things, objects, textures (e.g. ornaments, artefacts, textiles, clothing)
Fieldnotes	Maps
Other notes, jottings (yours or those of others), researcher's analytical notes (handwritten or digital)	Photographs (physical, digital – can be of anything, e.g. people, animals, environments, material structures, objects and things, weather, documents)
Audio recordings (of any sounds, e.g. speech, events and happenings, music)	Other documents (physical, digital)
Video recordings (which will probably also be audio recordings)	On-screen/online materials and 'live' data (e.g. web pages, chats, web postings, maps, emails, texts, chats, hyperlinks, browsing histories, transcripts, screenshots, transactional data and online metrics, GPS tracking and locational data)
Other sensory data (e.g. smell, touch, taste, temperature, weather, movement, rhythm – may be recorded in words, video, audio, or other modes)	Researcher's own 'live' experiences, memories, feelings, impressions, intuitions, interpretations; things they have noticed, witnessed, seen, heard, been told, felt (whether or not these are turned into fieldnotes, analytical notes, or other forms more readily recognized as data).
Written accounts, diaries, experience stories, narratives (physical – typed, handwritten, digital, text, photo, video)	
Drawings, sketches, paintings	

or set of stills, a transcript, a set of analytical or fieldnotes, a portal to other links, or even a set of metrics about the participants and the dynamics of the chat). Qualitative data can be solid and permanent, or ephemeral and intangible. Researchers will usually try to turn the latter into something more solid as part of the analytical process (for example in producing a transcript or a partial transcript of a conversation, or a video of a political rally, or a sketch of someone's living room, or sets of analytical notes to capture their own 'live' impressions). But if we accept the *Oxford Dictionary of English* philosophical definition of data as 'things known or assumed as fact, making the basis of reasoning or calculation' (Oxford Dictionary of English, 2005: 441), then I think we should recognize that these more intangible forms of knowledge do constitute qualitative data in the sense that they may be some of the 'things known' on which our interpretations are based.

- What count as data in my study?
- How are they data – literally, interpretively, reflexively, otherwise?
- What do I want and need from my data?
- What is their relationship to the phenomena I wish to study?

The important question of what counts as data in your study is one that you should explicitly ask yourself during and after the data-generation process, and we have looked at these issues in some detail in relation to interviews, observation and being creative with methods in the previous three chapters. As I suggested there, the answer to the question of what counts as data is not always obvious or a foregone conclusion, and you should not proceed as though it were. Essentially, when it comes to thinking about how to organize your data, what you are asking yourself is 'What do I need to take account of, from amongst the materials I have generated, in order to explain what is going on in relation to my intellectual puzzle?', or 'What, from amongst the materials, might provide insights?'. It is important that you look at these issues afresh in these later stages of your research. As I suggested in Chapter 1 (see Box 1.2), your puzzle might have been developmental, mechanical, processual, ecological, experiential, comparative, causal/predictive or a thick description, and you will now need to consider what materials you need to piece together, and in what ways, in order to build a reasonable explanation in those terms.

At these later stages you will be able to take stock of what kinds of data you *have actually generated* and assess their status and value in producing meaningful knowledge, so you will have the benefit of not having to work aspirationally or in the abstract. Asking what counts as data will require you to track back to the ontological and epistemological perspectives that underpin your research, and how these have played out in your intellectual puzzle, your research questions, your choice of methods and in how you have gone about generating data.

If you refer back to the discussion of knowledge and evidence in Chapter 1, and to the different approaches summarized in Box 1.1 for example, you will be reminded that different social scientific epistemological perspectives have different ideas about what might constitute knowledge or evidence of the ontological properties that they are interested in, and your own answers to these questions will have informed your intellectual puzzle, your research questions and your methods.

In the later stages of the process, asking yourself what counts as data enables you to view these connections again but in the other direction and with the benefit of experience of the research process, so you can look at what you have generated and consider what you can use, what you need to use and what you want to use in answering the questions you started out with. Reflecting back in this way is therefore important for a number of reasons. It enables you to examine how, and how well, different materials that you have generated (such as those types listed in Table 8.1) will help you to do that, and thus which ones might start to form the building blocks for your analysis and interpretation. It will also help you to think through what role different types of materials you have generated might play in the overall intellectual puzzle where you might have used a mix of methods and approaches for example, so that you can work out how the different forms of data support different parts of your investigation, and how the mix comes together (see Chapter 2). It also helps you to recognize if your focus has shifted during the data-generation process. For example, the types of materials you have actually generated may lead you to reconfigure your original research questions, or to revise your intellectual puzzle so that it takes a different form (see Box 1.2) or to see your epistemological perspective and any broad social science approaches that you have wanted to be aligned with somewhat differently (see Box 1.1), or even to reflect on different ontological properties (see Table 1.1) than those with which you began. Importantly, you may also find at this stage that you want to use materials you have generated or encounters you have had that you had not beforehand anticipated would constitute data in their own right, but which you now feel are important components of the knowledge that you want to use in developing your interpretations and arguments. But perhaps most significantly, reflecting back like this means that you will be engaging in active epistemological thinking of the kind that is vital not only for good qualitative research, but so that you will be able to work out how best to organize, manage and handle your data to facilitate interpretation and insight.

I introduced the ideas of literal, interpretive and reflexive readings of data in Chapters 5, 6 and 7 and you may find it helpful to consider these when you are working out what you want and need from your data, and thus how might organize them.

Literal readings. If you are intending to 'read' your data *literally*, you will be interested in their literal form, content, structure, style, layout, and so on. So, for example, if you are working with interview transcripts, you might be interested in the words and language used, the sequence of interaction, the form and structure of the dialogue, and the literal content. Similarly, if you are working with documents, video, film, visual artefacts, or whatever, a

literal reading will mean that you are interested in documenting a literal version of their content or 'what is there'. While you may want to make such literal readings, most qualitative researchers will not want to stop there. Indeed, many would suggest that a purely literal reading is not possible, just as a purely objective description is not possible, because the social world is always already interpreted and because what we see is shaped by how we see it.

Interpretive readings. Whatever your view on the possibility or otherwise of literal readings, you will need to consider to what extent you will want to make an *interpretive* reading of your data. An interpretive reading will involve you in constructing or documenting a version of what you think the data mean or represent or signify, or what you think you can infer from them, or what other phenomena they tell you about. In some cases, researchers are less interested in the literal form of the data, and more interested in what phenomena or concepts they can potentially lead to. You may, for example, read a section of an interview transcript as telling you something about implicit norms or rules with which the interviewee is operating, or discourses by which they are influenced, or something about how discourses are constituted, or as indicating some kind of causal mechanism in social action. You may be interested in absences and what is not said, because you think this tells you about important phenomena. You may be mostly concerned with what you see as your interviewees' interpretations and understandings, or their versions and accounts of how they make sense of social phenomena, or you may place more emphasis on your own interpretations. Probably, you will do both to an extent. Whatever form of interpretive reading you adopt, you will be involved in *reading through or beyond* the data in some way, be they texts, artefacts, visual images or whatever.

Reflexive readings. A reflexive reading will locate you and your interaction with participants as part of the data you have generated, and will seek to explore your role and perspective in the process of generation and interpretation of data. You will probably see yourself as inevitably and inextricably implicated in the data generation and interpretation processes, and you will therefore seek a reading of data which captures or expresses those relationships.

Many qualitative researchers make readings of their data on all three of these levels, and we have already discussed (in Chapters 5, 6 and 7) the implications of the different forms of reading for what you actually generate and record as data. For example, if you wish to read documentary data or visual images on all three levels you will need to have generated not only literal documents, but also data concerning perhaps the context of their production, consumption, interpretation and use, and data concerning your role in that – and you will want to see all of those as data, and find ways to organize them. The different types of reading have different implications for what you treat as data so that, for example, fieldnotes documenting your own response to a situation, or providing an account of how you interpreted what was happening at the time, how you interpreted it later, and so on, are more likely to be viewed as data in relation to reflexive than literal readings. What this means is that, whatever it is that

will be counted as data according to your perspective and the reading you wish to make, this must take a form (or be put into a form) that can be readily sorted and organized for analytical purposes in accordance with the epistemological approach and form of intellectual puzzle you are deploying (see Boxes 1.1 and 1.2 in Chapter 1). So, if you have analytical notes and memos, you will need to decide to what extent they can and should constitute data that will be sorted and organized. If you are using your 'live' experiences – your memories, impressions, and so on – as data, you need to think critically and honestly about how to organize and use them, and whether you need to transform them into something more 'solid', such as analytical or fieldnotes.

Data management

- What form do I need the data to be in? What are the relevant organizational units?
- How will I be able to familiarize myself with the data, and get to know them really well?
- How will I be able to retrieve, search, assemble, collate and cross reference them – or whatever else I might want to do with them?
- What do I need to keep? How and where? How do I keep my data safe and secure?

You will need to engage with the practical – and yet it is also of course epistemological – question of what form your data need to be in, as well as what you need to keep, and where. Do you need, for example, to transcribe interview recordings (or use voice recognition software to produce transcripts), or to partially transcribe them, or do you want to use the audio files? Do you need hard copies of photographs for example, or of transcripts, or do you want to take stills from film and video, or screenshots from the internet or PDFs from digital archives, and print these out? Or conversely, if your data are artefacts and things, or landscapes and settings, do you need to take photographs of them, or write descriptions and commentaries about them, or make sketches of them? And will these then take hard copy and/or digital form? Electronic and digitized data are now so easy to produce and to manage, manipulate, access, store and move that in some ways they have transformed the forms that qualitative data can take and the ease of working with them, yet many qualitative researchers still like the touch and feel of physical and hard copy materials. You will also need to consider practical questions like the resource requirements for different forms of data storage – for example, you will likely need large amounts of secure, accessible physical space if your data take the form of hard copies, or physical artefacts, and you may need to protect them from dust, moisture and light. You may need a secure and encrypted server, online storage or hard drive, and good quality equipment to keep materials digitally, and to ensure they do

not lose their sensory vibrancy or immediacy because of technical shortcomings. You will need to consider how long you can and should keep your materials for – whatever form they take – and whether you will have continued rights and access as their custodian. There may be data-management protocols and institutional requirements or restrictions that you need to adhere to (see also Chapter 4 on ethical issues), and you may need to think about whether you will deposit some of your materials in archives and, if so, what shape or form they will need to take and what data preparation might be required – anonymization for example, or special kinds of formatting. And of course you will want to consider how you can keep duplicates and back-ups. Often, these kinds of considerations make demands on your and other people's labour that you will need to factor into your plans.

As mentioned, these kinds of questions are not simply practical ones. In working out what form your data should take, and what kinds of preparation might be needed, you will need to be closely attending to those questions about what you want and need from your data. For most qualitative researchers, a first step with their data, especially when they are feeling overwhelmed by their sheer scale and apparent amorphousness, is to get really familiar with what is there. So in working out what form your data should take and how you might organize them, you should consider how you can develop this close familiarity. Sometimes the practical tasks involved in basic data organization can help here. For example, if you are transcribing your own interviews, or organizing your photographs into electronic or physical folders, and basically reading, listening to, looking at and assembling your data, you start to become very familiar with them.

But of course you will also want to devise mechanisms and practices that can help you move easily in and through your data; to search, retrieve and cross reference within your data and possibly to 'external' sources; and to be able to assemble and collate your data, or stream them simultaneously – all in ways that will aid you in having ideas, making interpretations, building explanations and arguments. In a sense this is like the points made in Chapters 5, 6 and 7 about using methods to get you into the right kind of zone from which knowledge can be generated. So too with organizing and managing your data – you need strategies and practices that will easily enable you, *the active researcher and epistemological thinker*, to get into the right kind of analytically generative zone with your data. Your data-management and organizational systems need to be inspired as well as pragmatic therefore!

So, in organizing your data, I recommend that you think carefully about questions like *what* you will want to be able to find, search for, retrieve, manipulate, and to have at your fingertips. What kinds of tags or metadata might you want to create and apply? What are the *units* of analysis you will want to use? These should relate to your epistemological approach and the form of your intellectual puzzle (as in Boxes 1.1 and 1.2, Chapter 1). So, for example, if your units are interactions, or if they are people, or if they are biographies, or if they are interpretive themes, or sequences of talk, or underlying mechanisms, or sets of object relations – then you will need a system that will allow you to identify and find these.

Similarly, if you are posing a developmental puzzle, or a mechanical puzzle, or a processual puzzle, for example, you will need to be able to assemble your materials in ways that help you to have ideas and draw inferences about how something has developed, the chronology of it, how something works, or how things change, and so on. Importantly, you will also want to be able to test out your developing explanation (see Chapter 9), so you will need to think about how your materials might need to be organized so that you can explore 'counter factuals' or alternative possible explanations.

These points may seem obvious and uncontroversial, but many qualitative researchers initially approach the task of organizing their data either like a startled rabbit in the headlights (I know this from personal experience!) or by assuming these are straightforwardly practical and administrative tasks requiring no deep intellectual thought. I cannot emphasize enough, therefore, the importance of active epistemological thinking about these matters, and you should apply this most assiduously when thinking about whether and how to approach commonly used methods of qualitative data organization like coding, indexing, case studies and narratives. We shall now turn to a discussion of these.

Coding, indexing and thinking cross-sectionally

- Why might I want to code or index my data cross-sectionally?
- Does/how does that logic relate to my ontological and epistemological perspectives, and the form of my intellectual puzzle? What kind of explanatory logic does it support?
- What are the limitations? What will I miss or fail to perceive? How will this direct my gaze?
- What materials can I code or index? What am I coding and indexing for?
- Where will my codes come from?
- How many codes do I need?
- How and when do I create and apply my codes?

Cross-sectional coding or indexing involves devising a consistent system for indexing which can be applied across your data set according to a set of common principles or measures that you create. In everyday qualitative research parlance, codes may be defined as thematic, descriptive, conceptual, axial, interpretive, analytic, hierarchical, loose, rough or open, but they usually have in common that idea of a cross-sectional slicing of your data in the search for common themes, and indexing these so that you can retrieve them easily, manipulate them, compare them, and so on. Graham Gibbs has sagely pointed out that qualitative analysis of all kinds, and coding in particular, tends to 'expand the volume of data, not reduce it' (Gibbs, 2007: 3), and coding can be a massively time-consuming activity.

It is vital, therefore, if you use this approach, that you think carefully about what it can yield for you in relation to the form of your intellectual puzzle, what you would want to code, and crucially, what use you will be able to make of data coded in this way.

You will need to devise a set of codes that enable you to tag appropriate sections of your data (which can be textual, visual or audio) in ways that can subsequently be used to make the kinds of retrievals you want to make, using the appropriate units of analysis. Coding can appear to take on a life of its own and to expand to consume all of your resources of time and energy, so you need to be sure the results will be worth it. There are many software options to help you with these processes, but their promises can be alluring and their features somewhat seductive, so they can make coding seem like the main event in your research, or a really neat idea for its own sake, which means they do not always save you time and can divert you from clear epistemological thinking about what you are doing coding for. It is important to emphasize from the outset that software does not supplant your role as *active epistemological thinker* in any way. Despite the somewhat inflated claims of some of the software developers and marketers, software does not analyse or interpret the data for you and neither does it build theory or arguments; *you* do all that. Software can certainly help you to catalogue, search and retrieve your data, to make links between different parts of data, to stream or synchronize clips or episodes in media data, to link them with external sources, to record, visualize or map your developing explanations, and to assemble, export and present the materials. These are all useful functions, but the real value of software is to help you get yourself in the analytically generative zone, facilitating an easy closeness with the data, to be able creatively to interpret, analyse and build theory, or test out your explanation; it will not do your creative work for you.

Here are some examples of reasons why you might want to engage in some kind of cross-sectional coding or indexing, which help to clarify what is the logic and rationale of these approaches:

1. Your epistemological perspective, and the form of your intellectual puzzle, support the idea that meaningful knowledge about the social world can be generated through cross-sectional thinking about themes or elements that can be coded for across a data set. We might think of this in metaphorical terms as taking a transect walk through your data and systematically noting all instances of the same set of issues. Some epistemologies (like Grounded Theory) may be more comfortable with this logic than others (like biographical and narrative approaches) for example (see Chapter 1, Box 1.1).

   You might see this somewhat pragmatically as a useful way to get familiar with your data and to assemble materials that can help you describe 'what is going on', by seeing through the lens or the horizontal slicing of your data that cross-sectional themes can

provide. Engaging in some kind of indexing process – which usually involves amongst other things the systematic and routine scrutiny of one's data – can help the researcher to distance themselves from the immediacy of the initially striking or memorable elements, and therefore gain a more measured and comprehensive view of the whole. Coding and indexing can thus help you to get surprises from your data, which take you beyond an impressionistic view based on the limitations of your own memory and your capacity to sort and organize in your head. It can help you to identify and draw together instances and themes that are scattered across the data set. Beware though; this is a very labour-intensive way to get familiar with your data, so if you are going to commit to it you will need to feel that cross-sectional thinking and organization will help you to describe and explore patterns in your data, to understand distributions of phenomena that you are interested in within them, or to help you to draw comparisons. You might think that cross-sectional codes can give you analytical 'handles' on your data, or ways to get into the zone with your data, so that you can use them (now or later) to decide how to focus your analytical activity, to decide what is relevant and what is not, and to develop your explanations and arguments. You might for example want to assemble and read all the data that are indexed under one specific code, or under a combination of codes, to help you to explore what is going on in relation to these themes. Once you have applied the codes to the data (and there is a very big proviso here because of the sometimes massive amounts of time involved in coding), software will enable you to create these assemblages quickly and easily, or to find your way to (and possibly to synchronize multiple) coded media clips or episodes.

You might feel this is the only form of data organization you will want to do because it aligns fully with your epistemological perspective about how the phenomena you are interested in can be known. Or you may combine this with other forms of organization like case study and narrative (see below), as many qualitative researchers do, perhaps because you think these different modes can facilitate complementary forms of interpretation. It is possible also to combine the horizontal slicing mechanism of cross-sectional coding with coding of vertical slices too, for example where you may code instances or sequences and patterns of a theme in one case (for example a single interview transcript, or a grouping of them such as a family). Increasing numbers of qualitative software applications support this combined horizontal and vertical mechanism of coding. The logic, however, does not depart from the cross-sectional thinking of the idea of themes being distributed across data in ways that can be coded for, but it simply applies it to themes within a case.

2. Your data are predominantly text-based, or are presented (or you have prepared them) in a form that is codable. Coding and indexing procedures are most readily applied to

text-based data, where you will need to decide for example whether you code on the basis of the literal words spoken, or interpretive themes implied and words unspoken, or other aspects of the interaction that can be detected in text, or reflexive themes that you can detect in or apply the text. Be aware that often what we are interested in is not manifest directly or literally in chunks of text, and you will need to think through how useful if will be for you to code and assemble multiple chunks of coded text. What sense will they make?

However, although text-based coding is the most commonly used, it is certainly possible to create cross-sectional indexing systems for visual material like photographs – where photographs or parts of them can be indexed with keywords relating to content and meta-data concerning the context. As Rose points out, the usefulness of this approach for qualitative research may be limited as it has usually been used to conduct some kind of quantitative content analysis of large collections of photographs (Rose, 2012, Chapter 5). There are multiple software packages for text-based qualitative data coding, and there are now also some which are explicitly designed to help with the coding of visual and audio materials. Digital technology facilitates the indexing of audio and video recordings as well both through adding metadata and inserting indexing or coding markers. Some software will enable you to code and then synchronize media data in the form of, for example, clips and episodes. If you are generating and using visual data, you will need to think carefully about how much cross-sectional indexing you wish to do, and how useful it will be, given that most of the systems and techniques have been devised with text-based data in mind or to support a more quantitative approach to coding.

3. You may wish to use cross-sectional indexing to enable you to 'take stock' of your progress in the research process, to see 'what you've got', and assess what to do next. For example, taking stock can enable you to make informed decisions about further sampling and data generation (in accordance with principles of theoretical sampling where you analyse your data as they are generated so that you can make further decisions on the basis of the developing analysis and associated theoretical principles; see Chapter 3 for a further discussion of this). Or it can mean taking informed decisions about whether and where to redirect your analytical activity.

It is important to work out which, if any, of these answers apply to your own research, rather than seeing them simply as 'advantages or disadvantages of cross-sectional coding'. Your reasons for thinking and coding in this way (or indeed for deciding not to do so) will influence the ways in which you do it, as well as what kinds of subsequent analyses you are able to perform. A worst case scenario, for example, is that you spend many

months coding your data cross-sectionally, only to find that the codes you have used are not very meaningful, or the chunks of texts or elements of visuals or audio that they enable you to assemble do not make much sense in that form, or do not assist you to develop your interpretations, or are epistemologically inconsistent with the logic and form of your intellectual puzzle. Ontologically, you will need to be clear about what kinds of phenomena your codes and the consequent data chunks are supposed to represent or constitute instances or expressions of. Epistemologically, you need to think carefully about whether and how your indexing categories represent instances of these ontological phenomena. What kind of knowledge or evidence do they constitute?

As should be clear by now, there is no point in coding and indexing just for the sake of it or because you think it is what you are supposed to do. You need to ensure that the cross-sectionally indexed chunks or slices of data are going to make some kind of analytical sense. This means that you must think very hard about what your indexed slices of data will look like once they are retrieved, and what kind of explanatory logic they might feed into. Box 8.1 illustrates some of these points using an example of a piece of an interview transcript and posing some questions about how it might be coded.

BOX 8.1

INTERVIEW TRANSCRIPT EXTRACT AND QUESTIONS RAISED ABOUT CODING

The interview transcript excerpt[1]

Interviewer:	I'm interested about the time when you met and when your families met each other and what they thought.
Cynthia:	Walter came to visit for the first time and he decided to try and grow a beard. He was cleaner and tidier than he'd been in college but he, his beard didn't work that time. It was very wispy and very thin and he'd got very blonde long hair and I'm afraid it didn't go down well at all with my father.
Walter:	[laughs]
Cynthia:	He couldn't understand how I loved this man and how I wanted to marry this man or thought I did anyway, at the time. So anyway, well I did. [laughs] Obviously, I mean we've been together 49 years nearly,

48 now, so. He, [short pause] now my mother loved him. She took him, she didn't look at what he looked like, she'd got, she summed him up, you know, as a kind man, a lovely man and that's what she wanted for her daughter and she was happy. She even went to play tennis with him when I wouldn't come, on our tennis court.

Walter: Oh gosh, yeah. She was a nice lass.

Cynthia: I think that was the first time. She liked him. My auntie said, she was like my father, she didn't think so. She, she said, "You'll never get on. It won't last." I said, "Why won't it last?" She said, "Look at the state of his bedroom!"

Walter: [laughs]

Cynthia: "Yes auntie." I said, "Well we'll see." And of course there was always, as there is with every woman, the thought that they'll change their man. Course you never do. I've just got used to it now. [laughs] And his clothes stay wherever they land. Except when I want them to wash [short pause]. And initially, I suppose, I don't really remember because we, we were in the, you know, the caravan. My father obviously came round but he was never really comfortable with you, was he?

Walter: No. No. I think that's true.

Cynthia: You, I mean you both had very similar early backgrounds in that his, he was very poor.

Walter: I don't know with your dad how far he just wanted to be secretive.

Cynthia: Oh yes, of course, I'd forgotten that bit.

Walter: [laughs]

Cynthia: Yes, my father, my mother was ill for the last years of her life. She died the week before she was 80.

Walter: She was older than he was and couldn't be involved in the kind of elevated life that he led.

Cynthia: He was very well connected in the town. He was very well in with all the tradespeople in the town. He was, in fact I got into trouble because I was having a bit of fun with one of the conductors. I got a job for a year before I went to college to, in a factory that I worked in. And it was

(Continued)

to get experience and I went on shifts which meant I had to cycle down into the town about half 4, 5 o'clock in, in the morning, when I was on morning shift, and leave my bike in the bus depot, where this lad Fred worked. And if he was on leave, we used to have a bit of fun together. I think we met up once or twice and just, this was before I met him [Walter], you know, and walked along the canal. And the manager was amongst all this lot of me father's friends, you see, and he joined in on the banter and, you know, he thought it was quite funny. Anyway, he told my father who was furious. He said, sort of, "You don't want to be going with a fella like that. Think!" I said, "Look dad. I'm having a bit of fun." And he said, I was sorry to say, because he wasn't brought up like this but my father said, you know, "What would people think of me if you go out with him?" I said, "I don't care," I said, "I'm just having some fun." And I said, "However I go out with him, I'm going to college. I'm not going to get meself pregnant before I go so I can't go." I said that outright [laughs]. "I'm going to college. I want to go. I want to go to university but I'm not going to not have fun before I go." And so I did, I had me fun.

Walter: Yeah, you've forgotten about the secretive bit.

Cynthia: Oh the secretive bit, yes.

Walter: [laughs]

Cynthia: Well, yeah, and to some extent Walter and I got a bit estranged from my father. He [short pause] wouldn't come and visit and I don't know. Anyway, it transpired his, when she was 15, she were a friend of mine, this girl. And she became, well she became my friend when she became his receptionist. My mother had been keeping the place going in the war and, and she'd a health scare and she'd just, she was just exhausted and so she got, they got an assistant. He got a receptionist and somebody to do all this and all that sort of secretary, etcetera, do all the bookings and that, and took the weight off my mum. And she was 15 when she went. She was a few years older, just about 3 years older than me. And I liked her and we had great fun together and I got on well with her family and all the rest of it. As time went on, we didn't really know until my mother died, but she'd been, oh I don't know how old she was when it started, but she and my father had an affair that went on and on and on. He would never leave my mother, she knew that,

and I don't think she wanted him to in one sense. She never told her parents, they would have been absolutely furious if she, if they'd known because they liked my father and our family and everything. And my mother and all the rest of it. You know, I mean, small town. Everybody knew, how they kept it so quiet I don't [short pause].

Walter: Well this is the reason why I wonder whether or not her dad kept me at arm's length, us at arm's length, because he didn't want to present opportunities for us to find out. Do you understand what I'm saying? I mean, I don't know how that could have occurred but he only came over to see us once in his, I mean we used to trip over with the kids, we even went over on Christmas Day on one occasion, and we used to see them. But I wonder how far his secretiveness was because he was having this affair and he didn't want anything to get out about it and he thought the safest thing was to keep us at arm's length. That, that's my summary anyway.

QUESTIONS ABOUT CODING THIS EXCERPT OF TRANSCRIPT

Your own interview transcripts, if indeed you produce them, might look different from this, but its unstructured nature and verbatim dialogue, with the addition of simple punctuation and notes to indicate pauses, is not unusual. Different and more elaborate transcribing conventions, including those that take literal note of more aspects of the speech and interaction, or of non-verbal elements, can be applied. You might like to think about whether and how you would want to transcribe a piece of data like this, and how you would code it, for example:

Would you want to create codes to literally index aspects of the speech and interaction, for example pauses, turn taking, interruptions, emphasized words, agreements/disagreements, laughter and joking? Are there particular words you would want to create codes for?

Would you want to create meta-data tags, for example indicating demographic and contextual aspects that are not contained in the text itself?

Would you want to create and embed links to other materials that you have, perhaps photographs, or things like family trees or drawings that might have been made in the interview?

(Continued)

Would you want to create reflexive codes that refer to the researcher's own role and experience, and their part in the interaction? Would you have enough to go on in the text of the transcript?

Would you want to create interpretive codes for key themes which may or may not involve coding the actual words spoken? You might, for example, code what you interpret to be an example of a conceptual theme that you interpret to be present in some form at a particular point in the transcript. For example you could consider 'gender roles', 'respectability', 'father–daughter relationships', 'sexuality', 'morality', 'identity', 'management of self'. Or you could code mentions of more 'descriptive' topics that you are interested in, like 'wartime', or 'factory working', or 'secrets'.

Would you want to find a way of noticing the story about 'being secretive' that unfolds across this piece of data, and the way in which it does so? Could you do that with cross-sectional thinking, or do you need a more holistic or narrative approach? Would it make sense to code the whole excerpt as a 'narrative', or an example of 'secretiveness'?

What do you think would be the epistemological status of the extracts that you have coded, and any aggregations of these you might produce across your data set? Are they instances, mentions, examples, illustrations, possibilities, interpretations?

Answers to these kinds of questions depend crucially of course on the intellectual puzzle being investigated. But it is helpful to think through examples like this, and indeed to do it with your own data, so that you can work through how useful (or otherwise) it would be to be able to search and retrieve chunks of text coded in these ways. Otherwise, you may find that although your codes seemed like good ideas in the abstract, they start to make less sense when you use them in practice.

In focusing attention on what the chunks of coded data will look like when they are extracted from their contexts and aggregated or synchronized with others of a similar type, you will be forced to confront the limitations as well as the possibilities of coding data cross-sectionally. It is easy, especially given the functionalities of some of the qualitative analysis software programmes, to see coded data as altogether more solid, objective or quantitative than they are. For example, software that allows you to explore hierarchies and relationships between codes, or that produces metrics about the data that are indexed with your

codes, can lead you to assume that the coded chunks and aggregations of data are unitary and uniform categories, or equivalent units, or representations in a statistical sense, or worst of all that they can be treated as variables. It is highly unlikely that your coding practices would support these kinds of conclusions, nor even that you would have intended that they should. If we start to think of text coded on the theme of 'respectability' in the example in Box 8.1 for example, or of manipulations and calculations you might be tempted to make on the basis of demographic or contextual characteristics that have been applied as meta-data tags, it is unlikely to make any sense to treat these as variables. But the practice of coding, and the use of qualitative analysis software, can be a little seductive in creating misleading impressions of this order.

The considerations we have discussed so far leave open the questions of where your codes will come from – where will you get the ideas for them? – as well as how many you will need and when you should apply them. However, tackling these questions simply means extending the kind of active epistemological thinking we have rehearsed already in the chapter. For example, the answer to the question of 'Where will I get my codes from?' is likely to be that they are generated from a blend of the data, your research questions and intellectual puzzle, your background knowledge, your theoretical ontological and epistemological orientation, and from ideas you want to try out by looking across the data set. Of course putting it this way somewhat over-simplifies some complex philosophical and methodological issues (see Chapter 9), but the point really is that some researchers will wish to generate codes in a fairly grounded way on the basis of 'what is there' in the data, and their ongoing interpretation of them, while others may be less concerned with working in a grounded way. Most researchers within the qualitative tradition fall into the former group, so let us just consider what *generating indexing codes from the data* might involve.

In the first place, it means making sure that you are as familiar as you can be with your data – read them, look at them, study them, play them, listen to them, think about them and the process of their production, sleep with them under your pillow if you think it will help. However, it also means being very familiar with what I have been calling your intellectual puzzle and with the questions you are attempting to address with your research. You need to ensure that you are coding in a way which will produce the right kinds of slicing of your data set. Essentially, you will want to create for yourself an analytical mechanism for moving back and forth between your intellectual puzzle, your research questions and your data, so that you develop your indexing codes through this iterative and interactive process. Keeping to the forefront the question 'Where do the codes come from?' – as well as questions about what the codes and chunks of data constitute – should help you to ensure that this process is as interactive as you would like it to be. So, for example, if your honest answer has to be that the codes you are developing come entirely from your data with no reference to your research questions, then you can make the appropriate adjustments to your practice so that you keep the epistemological connections live.

Using this logic you can start creating codes at any stage in the research process, although I suggest below that you also need to make sure you stop at some point. So, for example, you might start creating codes before you have generated any data, or when you only have a small quantity. Such codes clearly will be informed mostly by your intellectual puzzle and research questions, and will need to be reworked in the light of the further generation of data. If you are doing a pilot study involving the generation of data, then this might be a very good time to start thinking about and creating possible codes – they will assist in the preliminary analysis of your data, and they will give you useful practice in code creation and application.

Ultimately, there is probably no better mechanism for ensuring that the creation of codes is interactive between research questions and data than the process of coding itself, whether this be at the pilot study stage, or at any point later on. Once you have revisited your research questions, and thoroughly familiarized yourself with your data, it is a good idea to develop a few trial codes and start a trial run. Once you begin trying to code, not only will you start to discover how sensible and workable (or not) the codes you have seem to be, but also you can simultaneously begin developing new codes if you wish, and start indexing these too. If you keep your research questions and intellectual puzzle physically nearby while you do this, you can make sure that you are constantly cross-checking between them and your data in the process of developing and applying your codes. You should develop notes, records or memos on the construction of the codes while you are doing this, so that you devise a clear set of definitions of what each one constitutes and how and why it has evolved, as well as instructions about how to apply them. Many software packages provide 'writing spaces' for this kind of material. These can usefully form the basis of discussions with peers and colleagues about your developing coding system. However, you must remember that this is a trial run: if your indexing codes are to be systematic and workable in true cross-sectional fashion, then they will most likely need to be standardized and be consistently applied. This implies that at some stage you will need to end the trial run, construct the final list of codes (and definitions and application instructions) and begin afresh. It is a good idea to have a trial run of making sense of your coded data, perhaps by writing a thematic paper on the basis of part of them, to see how well (or badly) they can operate to get you in the zone, and to aid your interpretations and arguments. Again, this can help you better to see what works and what does not, and to refine your coding practice accordingly.

The strategies of generating indexing codes at least in part from data, on the one hand, and producing consistent cross-sectional codes on the other, can seem rather contradictory. The one suggests interpretive sensitivity to data and a high degree of flexibility – for example, to reinterpret codes, to create new ones at any stage in the process when you might have further ideas or get flashes of insight – and the other suggests a higher degree of analytical rigidity, at least once a final set of codes has been decided upon. But as I suggested earlier, if your data slices or chunks are going to be useful according to a cross-sectional logic, you will need to introduce consistency at some stage. It is therefore important to keep in mind the question

'When do I make final decisions about what the indexing codes will be?'. The temptations to delay the final decision about this are great, and this question is useful not least as a constant reminder that you do have to make such final decisions and not find yourself forever mired in the process of generating codes. Otherwise, you may waste a lot of time and effort producing an indexing system which is so *ad hoc* as to be useless, or that grows beyond all sensible proportions. Or, you may spend so long developing and refining your list of indexing codes that you leave yourself far too little time for the painstaking business of actually doing the indexing, and the retrievals, and more importantly working with the products to develop your interpretations and arguments.

There is, of course, no point in having a perfectly refined list of codes if you do not have time to index your data with all of them, or if you do not have the time or resources to do all the retrievals that you want to, and to analyse further the products of these retrievals. Do not underestimate how long indexing, retrieval and further analysis will take you. A trial run can be useful in helping you to calculate this fairly precisely (it will depend on the number and complexity of your codes, the nature and quantity of your data, and so on). Do not make plans to code your data more than once unless you have very good reasons for doing so, or to develop elaborate hierarchies, because this may represent a very large investment of time for a procedure which is ultimately likely to constitute only a limited part of your total analytical effort. My advice with coding is to keep it simple.

This raises the question of how many codes you should create. If you have too few, you may end up with what you feel is a sketchy and inadequate indexing system – just like a book index which has only half of the relevant items within it. Given that you will be wanting to do further work on the retrieved slices or aggregations of data, you will have to accept that if they are not focused sufficiently on core issues (because you have cast your codes too generally or broadly), or if there are not slices for all of the core issues (because you have missed some out), then you will have problems at that stage. The first problem is easier to deal with than the second, since it simply means that you may wish to do some sharpening or refining, and possibly some subcoding. Although these all represent investments of time and effort, they are possible, and may actually help you as you assemble the materials you need to help you in building explanations and arguments. On the other hand, if you have entirely overlooked some important codes, and you do need cross-sectional data slices for these, then you will have no choice but to do without them, or to index the whole data set again with your new codes.

However, if you have too many codes you will also have problems, and in my experience this is the more likely pitfall for enthusiasts of cross-sectional thinking. If you have simply included some codes which you subsequently decide are irrelevant, then the problem is only that you have wasted time and effort in indexing them. But if you have produced a set of codes that are too precise and too refined at too early a stage, then they may be less useful than you had hoped.

Overall, I think it is useful to remember that the purpose of cross-sectional coding is to enable you to move through your material, to get a cross-sectional familiarity, to have data at your fingertips, to search, assemble and retrieve them, in ways that will help you to make your interpretations, to have ideas, to draw insights, and to compare and analyse. Cross-sectional coding, although it relies on your interpretive and epistemological thinking in creating the codes for example, is essentially simply one way of organizing and managing your data, and it is not the automatic, nor can it ever be the only, answer to the question of how to make sense of qualitative data.

Cases, narratives, and thinking holistically or ecologically

- Why might I want to develop cases, narratives or to think holistically/ecologically?
- Does/how does that logic relate to my ontological and epistemological perspectives, and the form of my intellectual puzzle? What kind of explanatory logic does it support?
- What are the limitations? What will I miss or fail to perceive? How will this direct my gaze?
- What materials can I draw into a case, a narrative, or a holistic or ecological form of organization?

As we have seen, the logic of cross-sectional data indexing is that you devise the same set of indexing codes for use, cross-sectionally, across the whole of your data set, so that you are using the same lens to explore patterns and themes which occur across your data. By contrast, a more holistic or ecological approach to organizing data involves ways of feeling your way through and sorting your data, which do not necessarily use the same lens across the whole in this way. Instead, these approaches are concerned to organize and assemble materials in such a way that they will support interpretations that involve explaining phenomena in contexts, or as narratives, or cases, or layerings – where whatever is under investigation is viewed as a story, or a process, or an assemblage, or an ecology, or a system for example, instead of something that can be known via a set of cross-sectional themes or coding tags. So, for example, you might be interested in biographies and 'whole' life stories, or the dynamics and atmospherics of a place over time, and so on. Very often, such approaches will want to trace links between, for example, personal and social histories, or other versions of the particular and the contextual. In that sense, it is a practice guided by a search both for the *particular and the processual in context* rather than the common or the consistent or the pattern across the board. Essentially the focus is on the *holistic and ecological* rather than the cross-sectional, and on ways of organizing your data that help you to interpret them with these kinds of lenses. This kind of approach is much less well supported by qualitative analysis software, although digital technologies more generally can of course be very useful for

storing, presenting, linking, synchronizing and layering the kinds of heterogenous materials that might be brought to bear in a holistic or ecological analysis.

If you are considering taking this approach to organizing your data, you will need to have some idea that this is going to be useful for the kind of intellectual puzzle you have posed and the epistemological position you are adopting. Holistic or ecological ways of thinking may be especially conducive to certain kinds of epistemological approach (for example biographical, narrative, humanist, psychosocial, actor network and object relations), but they can be used for a range of types of project. Let us consider why you might want to adopt such an approach, and what logic and rationale might underpin it:

1. You are likely to be interested in uniqueness and distinctiveness of phenomena that you are investigating, rather than looking for thematic or other similarities, differences or patterns. You wish to organize data around themes, issues, conjectures or topics which do not appear cross-sectionally in your data set because, for example, they are particular, specific or idiosyncratic. You might reject the idea that everything can or should be indexed with a common set of categories, or alternatively you might use cross-sectional indexing for some purposes and holistic/ecological modes of organization for others.

2. You will be interested in the workings or development or layerings or processes of something (indeed you might have a developmental, mechanical, processual or ecological intellectual puzzle). You wish to understand interwoven elements or layerings in your data, or social processes, or narratives or practices, for example, and you believe that these are too complicated or elaborate to be amenable to cross-sectional indexing (or at least to be usefully indexed in this way). You think this method of data organization will provide the most appropriate form of analytical 'handle' on your data, enabling you to make comparisons and to build explanations in a distinctive way.

3. You are likely to place great emphasis on context, in two senses. First, you are likely to be uncomfortable with the idea that it is meaningful to explore themes in data cross-sectionally and out of the context that produced them. So you would want to explore how any piece or chunk of data was embedded in a wider set of interactions and associations. Second, you may also feel that any social science observation should be seen as embedded in a wider historical or cultural context. So your object of study, and possibly also your study itself, may be seen as embedded in, shaped by, and expressing a wider context in this way.

4. You may wish to use this method in addition to, for example, cross-sectional indexing, so that you can build explanations based on two alternative ways of 'slicing' your data set. Most qualitative researchers would be unhappy simply to adopt cross-sectional indexing, and will want also to use some holistic and ecological forms of data organization.

In thinking about how to go about holistic and ecological forms of data organization, you will need to decide what the meaningful data organizing principles are and especially what the data 'wholes', ecologies, cases, contexts or 'layerings' and contexts are, both in the sense of the data you have generated or are in the process of generating, and the intellectual puzzle that informs your study. Just as with cross-sectional coding, so holistic and ecological forms of organization are ways of moving through and with your data, creating assemblages of and links between them, albeit around different epistemological and explanatory principles, so that you can get in the right kind of analytically generative zone – with a different form of closeness to your data than cross-sectional coding provides – and make interpretations of them that will be meaningful for the kinds of questions you are seeking to answer.

It is useful here to reflect back on the 'Cynthia and Walter' extract in Box 8.1 above. If you were approaching that with a holistic or ecological orientation, what might you want to do with it? Undoubtedly, you would be very interested in the story that is told within it. You might want to explore the humour of it as well, and the almost 'comedic timing' of Walter's interruptions and his finally being able to make his point about secrecy. Or you might take a psychosocial perspective to follow the free association in the narrative so that you can say something about Cynthia and Walter's unconscious, or their defended selves. If you are interested in this story, you might want to try to understand how it is part of a bigger or another story, that might for example be contained within the interview interaction as a whole, or a series of such interactions. But you might also want to bring to bear other materials that you have generated in relation to Cynthia and Walter. You could examine photographs, or artefacts that they have, or explore the nature of their home and surroundings and any materials they have that would help you to understand the context of Cynthia's parents' lives. Indeed you might want to assemble and explore materials in relation to the historical and cultural eras, or discursive contexts that they refer to and speak from.

Certainly, some of the methods for exploring the meaning of photographs, cultural objects and visual materials use what I would think of as a form of holistic or ecological logic. Penny Tinkler, for example, suggests that 'five lines of enquiry provide the foundations for working productively with images in contemporary and historical social research' (pp. 19) and, interestingly, none of these involve cross-sectional coding. Instead, she suggests researchers should: identify basic details; scrutinize images; consider material evidence (that is, the materiality of the photograph and how it was produced and presented); do contextual research (which 'embraces the historically and culturally specific practices of making, presenting, circulating, viewing and using photos in public and domestic contexts' (p.24)); and reflect on meaning (which she interprets in terms of the content of the image, institutional frameworks, the photographer's intended meaning, and the subject's meaning) (pp. 19–32). These are strong examples of holistic and ecological thinking in relation to data (see also Rose, 2012, Chapters 6–10, for a range of broadly holistic/ecological approaches to visual analysis).

Holistic and ecological forms of data organization often result in looser and apparently more eclectic assemblages and collations of materials than the more formulaic approaches to cross-sectional coding are likely to produce. Sometimes, materials are pieced together on the basis of what is available to a researcher acting as detective and deploying an investigative orientation to explore and make the best of what there is (see Mason, 2007). As such, these forms of data organization may look less tidy, and involve less standardization of units of analysis within them, and because they are not being cross-sectionally indexed there is a lesser requirement for all to be prepared in the same way as, for example, texts. So the materials for a case or a biography might involve documents, photographs, creative materials, film and so on, and as a researcher you will want to immerse yourself in these holistically/ecologically, to start to try to make sense of them, and to explore the potential links between the ways each of them can – epistemologically speaking – tell you about what you are interested in. All of this will enable you to start to develop your interpretations and arguments. You will want to scrutinize the particularities of the materials and their distinctiveness, rather than to try to see them all through the same lens.

Yin says that 'the case study allows an investigation to retain the holistic and meaningful characteristics of real-life events – such as individual life cycles, organizational and managerial processes, neighbourhood change, international relations, and the maturation of industries' (1989: 14). However, you do not have to see yourself as doing 'case study research' or biographical research to be able nevertheless to identify case studies, or 'wholes' within your data set for analytical purposes. While holistic or ecological data organization does not have to be done around 'real-life events' or chronologies, these are commonly used principles. Equally, however, you might identify 'holistic sequences' or ecological layers which do not map directly in these ways.

Just as with cross-sectional indexing, and the resultant data chunks and collations, you will need to think here about what kind of sense your data will make once organized holistically or ecologically around the principles you have chosen. So, for example, does it make sense to collate and prepare data on the individual biographies of some of the interviewees in your study, or some of the participants in your setting? If so, where does 'biography', or what constitutes 'the individual', begin and end? What constitutes 'a life' and what range of materials would help you reflect on this? Would a case study which charts the emergence, construction and context of a particular law be meaningful? If so, how do you identify the key elements in its emergence? Would a detailed analysis of the layout and style of a particular visual image be helpful? If so, do you need more of the context, for example, of its production and use, to constitute your case or your 'whole'?

Underlying all of these questions is the central one, which is what constitutes the case, the ecology or the 'whole', and according to what principles? You should not take the answer to this question as a given or assume it is defined only commensensically or by 'real life' categories (for example, a person's life, an organization, a film). This raises all the familiar

questions discussed in Chapter 3 in relation to sampling, about identifying categories or, for present purposes, 'cases', 'contexts' or 'wholes', that are meaningful in relation to the kind of puzzle your research addresses. This of course brings into play once again your theoretical perspective in the form of ontology and what you see the world, or the case, to be, and your epistemology in how you think it can be known, and along which dimensions you feel you can assemble knowledge about it.

If you want to organize your data in these ways, you need therefore to do it according to principles that you identify strategically. You will not feel bound to ensure that you have a common set of codes for indexing, worked out in advance, as you would with cross-sectional logic, and you may not use qualitative analysis software for this part of your work. Your task will be to identify and represent what you see as the key elements of the *particular, holistic or ecological* parts or layers of the data you are examining, and to think creatively about what needs to be in view for you to start to understand these kinds of connections. Just as the creation of cross-sectional indexing codes should be done as a reflexive practice, where you document the steps in your thinking and in the final definitions of each code, so too with these non-cross-sectional methods you should be clear about what organizing principles you are using to identify the key elements of your holistic and ecological wholes.

INTERPRETING YOUR DATA – USING CREATIVITY AND IMAGINATION

So far in this chapter we have considered questions about organizing your data, and have explored two broad approaches to data management. Although I have been at pains to emphasize that the practice and process of these should always involve active epistemological and interpretive thinking, and of course even the most routine and administrative seeming procedures will involve acts of interpretation, nevertheless coding or organizing your data do not constitute the interpretation of data in themselves. I have suggested that you should think of these activities as getting you in the analytically generative zone, and getting you close to your data in the right ways, so that you can make interpretations and develop explanations.

Interpreting your data means getting creative and imaginative, so you can use your assembled materials – cross-sectionally coded or otherwise – to work out what your interpretations are and what insights you can draw. In fact, of course data interpretation is not simply something that happens towards the end of your research, when you have a neat set of assembled and coded materials. As Coffey and Atkinson warn, it can be totally paralysing if we wait until this stage to start doing what we think of as 'data analysis' – as though we can suddenly switch on our interpretive faculties to order (Coffey and Atkinson, 1996). Any qualitative researcher who is an active epistemological thinker, and who is conducting an investigative piece of research, will be making interpretations throughout the whole data generation process. Sometimes this

will be in an interview, or whilst doing some observation physically in the field for example, and the researcher will be making interpretations in how they are picking up a thread; they will be interpreting what is going on as a way of working out what to ask next, or where to go next. Interpretation is about careful and immersed attentiveness to data, and about creative and imaginative thought and processes of 'wondering' – What is going on? What might this mean? How should I best understand this? If I ask this question of my data, what kind of answer do I get? Therefore, by the time you have a fully organized data set to wonder about, you should be used to these modes of thinking and working.

Nevertheless, sometimes it does feel as though 'data analysis' is a phase in its own right – and I think in many ways it should do – where you approach your data afresh and get down to the wholesale business of interpretation. It is useful, therefore, to have some ideas about how you will handle these activities, and how you can help yourself to get creative and interpretive. In this final part of the chapter therefore, we are going to consider some strategies for approaching the interpretation of your data, to help you feel your way. You may use these at any stage in your research, as soon as you have started generating data. But they will be invaluable once you enter whatever you think of as the 'data analysis' phase. We will start with the most obvious question.

- Can I look for patterns, stories, and for what is going on?

You can use your data to start to look at what you think is 'going on' in your data, or in small parts of them, and hopefully the ways you have organized your data will assist in this process. That might be looking at patterns that seem to be manifest in cross-sectionally coded data, or it might be by seeking out and exploring stories that are told in the data, or that seem to be told when you combine different forms and types of data. It might involve working out the story by immersing yourself in synchronized streaming of transcripts with different media files. It can be very helpful to share these forays into telling stories and looking at patterns with your colleagues. You could consider sharing a small piece of data (like the Cynthia and Walter example in Box 8.1), or some pictures or video, with colleagues and see how they would interpret it and what strikes them.

- Can I pose analytical questions, and follow these through the different forms of data?

Throughout the book I have emphasized the merits of asking yourself difficult questions, and in the same way I think it is useful to ask questions of your data. This can involve formally asking the questions that are already posed (in your research questions and intellectual

puzzle for example), and then tracing possible answers to them through your different forms of data. You may want to make this a dialogic approach, so that you factor both the question and the various answers your data seem to provide into the exercise: for example, 'if I ask these questions, then these are the possible answers'. Again, trying these out on colleagues and peers can be very helpful.

- Can I look for negative instances, counter factuals, alternative intepretations?

In a way this may seem like putting the brakes on just when you are beginning to get interpretive, but it is important – just as you follow questions through your data – to make sure you follow lines of enquiry that might test or point in a different direction than the interpretation you are beginning to develop. You could do this as part of a strategy of analytic induction (see Denzin, 2009), where you consciously search for negative instances in tandem with the logic you have used in your sampling strategy (see Chapters 3 and 9). The logic here is that you actively search for negative instances or contradictory cases in relation to your developing analytical ideas, and this ties in with your sampling strategy in that you will look for or sample cases or instances which do not fit with your ideas or which cannot be accounted for by the explanation which you are developing. The argument is that if you cannot find any, and if you can show that you have looked in places where such negative cases are likely to occur, then your explanation is strengthened. If you can find some, then you may need to modify your explanation.

- Can I use some of the principles of Facet Methodology to aid imaginative interpretation?

I introduced the Facet Methodology approach to qualitatively-driven mixed methods in Chapter 2, and it has some useful strategies for working out how you might interpret your data (see also Mason, 2011). These all emphasize the researcher's agency and creativity. The most important of these are that you can:

- 'listen' gently to your data, rather than your first impulse being to try to force it into categories;
- seek insights, rather than total coverage or gap-filling kinds of descriptions of your data. Be prepared for gentle forms of enlightenment, and be attuned to what might be flashes of insight;

- follow what's fascinating, intriguing and puzzling in your data;
- be imaginative in how you read and explore your data; question the 'rules' that you assume you are meant to follow, and look beyond them;
- follow inventive lines of investigation through your data;
- be prepared to 'play with epistemologies', and to explore how different epistemological perspectives than your own might ask questions of and listen to your data. Investigate how a different orientation or sensibility might produce relevant knowledge;
- pay attention to and try to notice oblique knowledge, namely those things we learn when we are not looking or asking directly. Look for surprises;
- look for knowledge that seems evocative, resonant, and that you find convincing. Start to explore what makes it evocative, and why you are convinced (see Chapter 9).

- Can I use writing and other creative forms as interpretive methodological devices?

I am a big fan of using the art of writing as a methodological device to explore and develop your own interpretations. The products may or may not be publishable, but their purpose at this stage is to help you derive interpretations and insights from your data. There is a range of ways you can do this. Here are some ideas:

- Write a narrative, or the story, of answers you think your data give to different questions which you might pose of your data set. You can write this in debate with existing arguments and theories.
- Write a story that plays with different epistemologies to try out a range of ways of seeing and deriving knowledge. Write about how you have tried to apprehend oblique knowledge.
- Write about an idea that has struck you from part of your data, and then see where you get to with writing about that idea using other parts of your data.
- Write the story of a case, or a facet (if you are using Facet Methodology). Try to write about what you think is going on in the case. Then you can pick another case, where you think something different is happening or that would present an interesting contrast, and write about that one too.

- Write the story of the contents of one of your cross-sectional coding files, drawing on all of the data that it has been applied to in your coding scheme. Try writing about how this might relate to the story of a case.
- Try out different starting points, or try to write an alternative argument to the one you think you are developing, and see how well your data might support it.
- Try out different styles of writing with a range of forms of data.
- Write a blog to try out some of your interpretations.
- Try presenting any of these writing products to colleagues or peers, and getting a dialogue going about them.
- Try putting together an online exhibition of materials you and/or your participants have generated, or making a webpage of them. Be reflexive about what principles you used in making the selections, or in displaying and narrating the materials.
- Try writing about or presenting some of your data using alternative sensibilities, for example see Box 8.2 below on data poems.
- Make visualizations (of the argument or interpretation you are developing). You might use software to do this digitally, or you could produce diagrams and sketches in other ways.

BOX 8.2

DATA POEMS AS AN EXAMPLE OF USING AN ALTERNATIVE INTERPRETIVE SENSIBILITY

The following is an example of an extract from an interview transcript on an ethnographic project I conducted on the theme of 'Living the Weather'. In the project I was struck by the lyrical way in which people expressed their experiences of living the weather, both in writing and verbally. In this case, Mary is talking about the experience of hearing a flood siren and knowing that a flood was on the way. As well as analysing the data using cross-sectional coding and holistic/ecological strategies, I found I wanted to use a more poetic sensibility to distil what are sometimes called 'data poems' from the accounts.

This involved reading the data with a quite different orientation from the usual social scientific one. Underneath the transcript excerpt below, you will find the data poem I made from Mary's account. I made an edited collection of data poems and extracts compiled using this kind of poetic sensibility (which was published as Mason, 2016).

THE TRANSCRIPT EXCERPT[2]

Mary:	I heard the siren, yeah …
Interviewer:	Yeah.
Mary:	… here on … because it was Boxing Day morning, wasn't it …
Interviewer:	Yeah.
Mary:	… um. [Pause]. Yeah. And … I don't know if I told you about the, the … it wasn't that one but two weeks before when the siren went off …
Jennifer:	Mm, yeah.
Mary:	… I, I was actually meditating, um, I haven't spoken to you about this, have I, I've not seen you …
Interviewer:	No, you haven't.
Mary:	… but that was, that was such an odd experience, because you, you know, you're sitting there kind of with whatever's happening, you know, [laughs] and, and, um, and the flood siren went off and, you know, it, it's that, just that apocalyptic noise, isn't it …
Interviewer:	Yeah, yeah.
Mary:	… of the, of war and, and terror. And it just it…and because I, I decided to just sit there, but I just registered because I was sitting there in a very sort of peaceful way, just the impact it had from, you know, like just feeling every hair on the back … on my back and up the back of my neck and up the back of my head …
Interviewer:	Mm.
Mary:	… just, just prickle up, and then that, just that sick feeling of, oh, those people …
Interviewer:	Mm.

(Continued)

Mary: … all the, you know, and then just the associations with war and … But it was just really quite a massive experience to, to just sit there and absorb this sound and what it meant [laughs] …

Interviewer: Oh.

Mary: … um, was really quite intense, um, and then, you know, fortunately that one didn't turn out to be such a, a bad thing, but then, you know, obviously Boxing Day was just awful.

THE DATA POEM

Absorbing the sound
When the flood siren went off
I was meditating.
Such an odd experience, sitting there.
That apocalyptic noise
of war and terror
and registering it in a peaceful way.
Feeling every hair
on the back of my neck
and up the back of my head
just prickle up.
And then that sick feeling
'Oh, those people'.
It was quite an experience
just to sit there
and absorb this sound and what it meant.

CONCLUSION

Overall, methods of organizing your data to get yourself into an analytically generative zone with them, and adopting creative strategies for interpretation, can be very useful, and they will help you see what you are doing as a qualitative researcher as practising a craft; *the*

craft of knowledge (see Smart et al., 2014), where you find imaginative ways to 'live with' your data (see also Back and Puwar, 2012). In all of these cases, the point is to think about how such methods might free you up in a creative sense whilst keeping you close with your data, so that you can make meaningful interpretations, and in the process produce insightful research. It is important of course not to get distracted or to follow endlessly creative and inventive but somewhat pointless lines of enquiry, just because they seem like fun. This is as bad as (albeit in a different way) mindlessly and uncritically following conventions of qualitative analysis and just doing what you think you are supposed to do. Hence you will also need to be selective in how you 'have and use ideas' with your data and, as always, to think closely and carefully about how this will help you to form interpretations that are relevant to the investigation of your intellectual puzzle. I have suggested some exercises which are designed to help you to be creative and imaginative in your epistemological and interpretive thinking, but you will need to continue to ask yourself those difficult questions about what such exercises can yield, and how worthwhile you think they will be. In the final chapter we shall move on to explore how you can make convincing arguments with qualitative data.

NOTES

1. This is an excerpt from a real interview conducted as part of a project called 'Family Backgrounds and Everyday Lives', undertaken by Jennifer Mason, Stewart Muir and Carol Smart. The project was part of the National Centre for Research Methods Node 'Real Life Methods' (2005–2008), and was funded by the Economic and Social Research Council, Grant number RES-576-25-5017. Names and other details have been anonymized.
2. This is an excerpt from a real interview conducted as part of my project entitled 'Living the Weather' (2015–2016), funded by the Leverhulme Trust.

FURTHER READING

Although it is now quite old, I think Coffey and Atkinson's *Making Sense of Qualitative Data* (1996) is an excellent text for helping you to get a feel for what might be involved in interpretation, beyond coding and organization. Silverman's *Interpreting Qualitative Data* (2015) is also very helpful on ways to interpret and draw insights from data. An excellent guide to coding qualitative data is Saldaña's *The Coding Manual for Qualitative Researchers* (2015b). Bazeley's *Qualitative Data Analysis: Practical Strategies* (2013), is also very useful and comprehensive. Tinkler's *Using Photographs in Social and Historical*

Research (2013) provides very useful advice on analysing visual materials, and Rose's *Visual Methodologies* (2013), is thorough, thought provoking and very clearly written. Three of the books in the SAGE Qualitative Research Kit (2007) are also useful: Banks's *Using Visual Data in Qualitative Research*; Gibbs's *Analysing Qualitative Data*; and Rapley's *Doing Conversation, Discourse and Document Analysis*. Silver and Lewins's *Using Software in Qualitative Research: A Step-by-Step Guide* (2014), is a thorough, no nonsense approach to the merits and limitation of using qualitative analysis software. Smart et al.'s (eds) *The Craft of Knowledge: Experiences of Living with Data* (2014), is a reflective and honest collection of sometimes inspirational essays that show some of the ways in which researchers 'live with' their data, make interpretations and get in the zone where they can draw insights.