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Learning Qualitative Data Analysis on the Web

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Notes

Videos

🖺 A short, 3 minute video produced by the Open University as part of their Exploring Psychology course. It is No 5 Analysing an Interview.

🖺 An excellent, 3 minute eo of a conve between two researchers about how to code a short passage of text. (Though unfortunately, the sound is rather poor.) The two reviewers from the Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre), at the Institute of Education, University of London, demonstrate the process of discussing a transcript and deciding upon themes and creating codes.

🖺 A 14 minute video by of coding in Interpretative Phenomenological

Analysis (IPA) by Michael Larkin. Even if you are not doing IPA you might find this an interesting discussion of both descriptive and interpretative coding.

I've got some interview data! What

next? A short (9 minute) PowerPoint video lecture on qualitative analysis and coding by Ian Robertson, a senior lecturer in education at RMIT University, Melbourne, Australia

b Videos of a lecture by

<u>Graham R Gibbs on</u> approaches to grounded theory. (March 9 2010.) Five short videos (7 to 22 minutes long) examine the core elements of the Glaser and Strauss approach and examine the three stages reccomended by Strauss and Corbin.

An Inductive Approach

🕥 David R. Thomas (nd) "<u>Oualitative Data</u> Analysis: Using A General

Inductive Approach"

This discusses a general inductive approach for qualitative data analysis and examines some of the ways in which a coding scheme can be sorted into a small number of key themes

A pdf version of the

How and what to code

Tutorials

Authors of this page: Graham R. Gibbs and Celia Taylor Affiliation: University of Huddersfield Date written: 30th June 2005 Updated 19th Feb 2010 Ref: Taylor, C and Gibbs, G R (2010) "How and what to code" Online QDA Web Site, [onlinegda.hud.ac.uk/Intro_QDA/how_what_to_code.php]

Coding

Coding is the process of combing the data for themes, ideas and categories and then marking similar passages of text with a code $% \left({{{\rm{D}}_{{\rm{c}}}} \right)$ label so that they can easily be retrieved at a later stage for further comparison and analysis. Coding the data makes it easier

to search the data, to make comparisons and to identify any patterns that require further investigation.

Codes can be based on:

- Themes, Topics
- Ideas, Concepts Terms, Phrases
- Keywords

found in the data. Usually it is passages of text that are coded but it can be sections of an audio or video recording or parts of images. All passages and chunks that are coded the same way – that is given the same label – have been judged (by the researcher) to be about the same topic, theme, concept etc.

The codes are given meaningful names that gives an indication of the idea or concept that underpins the theme or category. Any parts of the data that relate to a code topic are coded with the appropriate label. This process of coding (associating labels with the text, images etc) involves close reading of the text (or close inspection of the video or images). If a theme is identified from the data that does not quite fit the codes already existing then a new code is created.

As the researcher reads through their data set the number of codes they have will evolve and grow as more topics or themes become apparent. The list of codes thus will help to identify the issues contained in the data set.

Approaches to starting coding

It is possible to start coding with themes identified from a priori ideas such as pre-existing theories or just to let new codes emerge from your data set as you read it (grounded theory).

A priori codes

These can be identified from a range of sources:

- Previous research or theory
- Research or evaluation questions you are addressing
- Questions and topics from your interview schedule
- Your gut feeling about the data or the setting

Video on a priori coding using pen and paper.

Grounded codes

Grounded codes emerge from the data because you put aside your prejudices, presuppositions and previous knowledge of the subject area and concentrate instead on finding new themes in your data.

What to look for when you are coding

Most typically, when coding, researchers have some codes already in mind and are also looking for other ideas that seem to arise out of the data. When coding in this second, open minded manner, Charmaz (writing in the grounded theory tradition) suggests you ask the following questions about the data you are coding:

- "What is going on?
- What are people doing? •
- What is the person saying? What do these actions and statements take for granted?
- How do structure and context serve to support, maintain, impede or change these actions and statements?" (Charmaz 2003: 94-95)

A more detailed list of the kinds of things that can be coded are Table 1 below. The examples of each kind tend to be descriptive because it makes it easier to explain the phenomena. However, when you are coding it is advisable to move from descriptive codes to more analytic ones as quickly as possible. See the discussion in the next section.

WHAT CAN BE CODED EXAMPLES NO. 1 Behaviours, specific acts Seeking reassurance, Bragging 2 Events - short once in a lifetime events or things people have Wedding day, day moved out of home for university, starting first job done that are often told as a story Going clubbing, attending a night course, conservation work 3 Activities – these are of a longer duration, involve other people within a particular setting $% \left({{{\mathbf{r}}_{i}}} \right)$ 4 Strategies, practice or tactics Being nasty to get dumped, Staving late at work to get promotion occ "I'll novor m



paper

Some good articles or texts on coding.

Coffey, A. and Atkinson, P. (1996) Making sense of Qualitative Data Analysis: Čomplementary Research Strategies. London, Thousand Oaks, CA: Sage. See chapter 2.

🛸 Langdridge, D. (2004) Research Methods and Data Analysis in Psychology. Harlow: Pearson Education. Chapter 14.

🛸 Mason, J. (1996) Oualitative researching. London: Sage. See chapter 6.

🛸 Maykut, P. and Morehouse, R. (2001) Beginning Qualitative Research: A philosophical and practical guide. London: Routledge Falmer. See part III.

📚 Miles, M.B. and Huberman, A.M. (1994) Qualitative data analysis: a sourcebook of new methods. Beverly Hills. CA: Sage. Chapter 4.

🛸 Ritchie, J. and Lewis, J. (eds) (2003) Qualitative Research Practice: A Guide for Social Science Students and Researchers. London: Sage. Chapters 8 and 9.

Ryan, G.W. and Bernard, H.R. (2003b) 'Techniques to Identify Themes', *Field Methods*, 15(1): 85-109.

See also:

Ryan, G.W. and Bernard, H.R. (2003a) Techniques to Identify Themes in Qualitative Data',

🛸 Smith, J.A. (ed) (2003) Qualitative Psychology: A practical guide to research methods. London, Thousand Oaks, New Delhi: Sage. See especially chapters 4 and

Strauss, Anselm and Corbin, Juliet (1990) Basics of Qualitative Research. Grounded Theory Procedures and Techniques, Newbury Park, CA: Sage. (2nd Ed. 1998)

4 During coding it is easy to generate a huge number of codes, particularly if you are using CAQDAS software. You need to manage your codes. Later on you may decide to refine them. See sorting

out the codebook.

anyone better at my age" settling for someone who is not really organisations suitable 6 Meanings – A wide range of phenomena at the core of much qualitative analysis. Meanings and interpretations are important pars of what directs participants actions. What concepts do participants use to understand their world? The term 'chilling out' is used by What norms, values, and rules guide their actions young people to mean relaxing and not doing very much b. What meaning or significance it has for participants, how do Jealousy " I just felt why did she get they construe events what are the feelings him A PhD is referred to as 'a test of c. What symbols do people use to understand their situation? What names do they use for objects, events, persons, roles, setting and equipment? endurance' (because finishing a PhD is a challenge) 7 Participation - adaptation to a new setting or involvement About new neighbours "In my new house I have to keep my musi down at night as the neighbours have young children". Seeing family " Now my sister lives 8 Relationships or interaction in the next road she visits more and we've become much closer. Lose of job (before financial difficulties), moving away (before lost contact with old friends) 9 Conditions or constraints Confidence gets dates, positive attitude attracts opportunities 10 Consequences 11 Settings - the entire context of the events under study University, work place, housing estate Probing question "How did you feel when he said that?" 12 Reflexive - researcher's role in the process, how intervention generated the data

Table 1. Types of phenomena that can be coded (Adapted from Bogdan and Biklen, 1992; Strauss, 1987; Mason, 1996; and Gibbs, 2006)

Constant comparison

Many writers make suggestions about the ways you can approach your data so that you remain open minded about what can be coded and start to notice significant patterns in the data. Perhaps the most famous are those made by the grounded theorists.

The most common procedure they recommend is 'constant comparison'. What this means is that every time you select a passage of text (or its equivalent in video etc.) and code it, you should compare it with all those passages you have already coded that way, perhaps in other cases. This ensures that your coding is consistent and allows you to consider the possibility either that some of the passages coded that way don't fit as well (and might therefore be better codes as something else) or that there are dimensions or phenomena in the passages that might well be coded another way as well. But the potential for comparisons doesn't stop there. You can compare the passage with those code in similar or related ways or even compare them with cases and examples from outside your data set altogether.

Here is a <u>short animation</u> (3 mins) about sorting coloured beads that illustrates well the process of constant comparison. After an initial sort into piles (an initial categorisation) additional beads are sorted into the existing piles but as there are more beads (cases) to deal with it becomes clear that some piles can be divided into two (codes can be divided or sub-codes can be created). A simple metaphor, but entertaining!

For example, Strauss and Corbin (1990) devote a chapter called 'Techniques for Enhancing Theoretical Sensitivity' to examining some of the ways they recommend qualitative analysts might use to ensure that they look carefully at the data and explore all its dimensions (Strauss and Corbin, 1990 pp.75-95). This includes systematic comparisons and far out comparisons. In the former, you think about all the ways in which some phenomenon you have found in the data can vary and be treated and seen differently by people. For example, if your respondent has been talking about the way her parents continued to give her financial support after she had left them and set up her own home, you can be the weight of the set of compare this with all the other ways that parents might support their children, financial, emotional, child care, finding employment, setting up personal contacts, housework, do-it-yourself, gardening and many others. This allows you to think or discover new ways of coding the experiences this respondent and others in your study might have had.

In the case of far out comparisons, the comparison is made with cases and situations that are similar in some respects but quite different in others and may be completely outside the study. For example, still thinking about parental help, we might make a comparison with the way coaches help sports men and women. Reflecting on the similarities and differences between coaching and parental relationships might suggest other dimensions to parental help, like the way that coaches get paid for their work but parents don't!

Other techniques to identify themes and codes

Ryan and Bernard in a recent paper (2003b) suggest a number of ways in which those coding transcripts can discover new themes in their data. Drawing heavily on Strauss and Corbin (1990) they suggest these include:

- Word repetitions look for commonly used words and words whose close repetition may indicated emotions
- Indigenous categories (what the grounded theorists refer to as in vivo codes) terms used by respondents with a particular meaning and significance in their setting. **Key-words-in-context** – look for the range of uses of key terms in the phrases and sentences in
- which they occur.
- which they occur. **Compare and contrast** essentially the grounded theory idea of constant comparison. Ask, 'what is this about?' and 'how does it differ from the preceding or following statements?' **Social science queries** introduce social science explanations and theories, for example, to explain the conditions, actions, interaction and consequences of phenomena. **Searching for missing information** essentially try to get an idea of what is not being done or talked out, but which you would have expected to find. **Metaphors and analogies** people often use metaphor to indicate something about their key, central beliefs about things and these may indicate the way they feel about things too. **Transitions** of the discussion encode which includes ture taking in

- **Transitions** one of the discursive elements in speech which includes turn-taking in conversation as well as the more poetic and narrative use of story structures. **Connectors** connections between terms such as causal ('since', 'because', 'as' etc) or logical

('implies', 'means', 'is one of' etc.)

Unmarked text – examine the text that has not been coded at a theme or even not at all. **Pawing (i.e. handling)** – marking the text and eyeballing or scanning the text. Circle words,

- underline, use coloured highlighters, run coloured lines down the margins to indicate different meanings and coding. Then look for patterns and significances. **Cutting and sorting** the traditional technique of cutting up transcripts and collecting all those coded the same way into piles, envelopes or folders or pasting them onto cards. Laying out all these scraps and re-reading them, together, is an essential part of the process of analysis.
- A short video from a lecture on coding that includes discussion of Ryan and Bernard's ideas.

Types of coding

Whatever techniques you adopt, the tendency, when you start coding is to create codes that are some kind of summary or précis of the text you are examining. This kind of coding is called descriptive coding because it essentially forms a summary description of what is in the transcript or text. An essential part of QDA is that you move on to develop codes that go beyond description and start to categorise and analyse the data. <u>Two examples of mainly descriptive coding</u>.

Descriptive coding

This is when coding is used to describe what is in the data. Here are two exercises to help demonstrate descriptive coding.



Exercise Interactive Exercise A - Amanda

This short text is by a young woman who discovered she was pregnant. Read the 10 lines of text and decide which of the listed codes describes what is happening in each line. Go to Exercise A. Go to Exercise A.



cise Interactive Exercise B - Karen

This short text is of a young women talking about leaving home. Read the 10 lines of text and then create you own codes for each line of text. Go to Exercise B.

Training video on coding

This is a short presentation showing how to interpret a short piece of text and develop codes and how to mark the text with those codes.

Analytic/Theoretical coding

These are codes based on the analytical thinking by the researcher about why what is occurring in the data might be happening.

A short video from a lecture on coding that includes discussion of the move from descriptive to analytical codes.

Videos of a lecture by Graham R Gibbs on approaches to grounded theory. (March 9 2010.) Five short videos (7 to 22 minutes long) examine the core elements of the Glaser and Strauss approach and examine the three stages reccomended by Strauss and Corbin.

🖺 A short, 3 minute video produced by the Open University as part of their Exploring Psychology course. It is No 5 Analysiing an Interview.

Organising codes into a coding frame or coding list

As well as marking the transcript or field notes to show what is coded as what, you should keep a separate list of the codes you have constructed and against each one write a short definition. Next time you find a passage that you think can be coded with an existing code, you can see if it exists in your frame or list and if it does, check with the definition to be sure that it does fit there. If you can't find an appropriate code (there isn't one or the text doesn't fit with the definitions) then you can create a new one

Eventually, you will have a large number of codes and you will find it necessary to sort them into some sort of order or into groups. One way to do this is using a hierarchy. You may find several codes group together as types or kinds of something. In that case move them together and put them either in a list of their own, or make them sub-codes a major code the kinds or types of which they all represent.

Two things may emerge from this re-organisation. First, you may find that you are able to start categorising your codes. Such categories can form one of the bases for a between cases comparison or analysis. Second, you will probably find that by looking at groups of similar codes that are all types or kinds of something several new possibilities suggest themselves. This is what Strauss and Cobin (1990) refer to a '**dimensionalising**'. Typically people do things or react to things or categorise things or cause things in a number of different ways. Strauss and Cobin refer to these different ways things or cause things in a number or different ways. Strauss and Corbin refer to these different ways as dimensions of the thing. For example, people tend to want to take a break, occasionally, from their normal work (paid and in the home). They may do this in an enormous variety of ways, for example they may, take a holiday, go out for a walk, read a book, watch TV, take a nap, wander round the garden, work out at the gym, go for a drink with friends, get drunk, take drugs, chat with the garden, work de drive, job of de drive, job of de drive rame, follow a hobby, do voluntary work or go to a music gig. These are all dimensions of 'taking a break'. There are so many, that you might find yourself even categorising these into types of break. Several things are suggested by such dimensions. First, you may be able to think of dimensions that you haven't yet got a code for. Include them in your coding list because either you might find text that can be coded with them later, or, if you don't, then you might want to offer an explanation as to why not. Second, dimensionalising and categorising will begin to raise questions about the relationship between codes (do those who have been coded using one particular code tend also to be coded in another particular way?) or between cases (why are these cases coded this way and other cases in a different way?). Thus, this kind of development of coding and reorganisation of codes can form the basis for some key analisis of the data.

Non- Hierarchical coding (flat coding)

A non-hierarchical arrangement of codes, like a list, there are no sub-code levels.

- Close, generalised friendships
- Sporting friendships Sports club members
- Work friends .
- Making new friends same sex
 - Making new friends different sex Losing touch with friends
- Becoming sexual relationships

(Remember, in a real code list, you should also include short definitions.)

Hierarchical coding (tree coding)

A hierarchical arrangement of codes, like a tree, a branching arrangement of sub-codes. Ideally, codes in a tree relate to their parents by being 'examples of...', or 'contexts for...' or 'causes of...' or 'settings for...' and so on.

• Friendship types

- Close, generalized
 - Sporting
 - ClubNon-club
- Work
- Changes in Friendship
- Making new friends
 New same sex friends
 New different sex friends
- Losing touch
- · Becoming sexual relationship

A short video from a lecture on coding that includes discussion of hierarchical coding frames.



cise Interactive Exercise C - Hierarchical coding

This exercise involves putting a list of codes into a hierarchical arrangement. Go to Exercise C.

Applying new codes

As you code the data you are likely to create new codes, you therefore need to go back and check the units of data you coded previous to creating this code. This is to check if there is any more data that should be coded at the newly created node.





Create new

Diagram to show how new codes should be applied to previously coded data.

It is important to apply all your codes to the whole data set because:

data set

- Something you come across later on may change how you want to code the data
- You may not have noticed a new pattern in the data until you had coded a number of interviews

- If you only code the data units after you created the node, any previously coded data units will not be included in the searches involving this code

It is a lengthy process and you may find that previously coded data does not need to be coded at the newly created code but you could not know this without checking.

Memos and codes

It is important to keep written notes that are meaningful to you, during your coding process. These notes are often called memos. A major use for memos is to record longer definitions of the codes and to note any analytic thoughts you have about the significance and relationship to others of the code in question.

Typically, information you could incorporate into the memo about a code will include:

- why you have created the code
- some detail of what the code is about and what the coded text reveals why you have changed a code (for instance re-named it)
- thoughts and questions about the analysis that occur to you as you code

Memos are essential if you are working in a team and sharing the coding of the data so colleagues know why you have coded the data in that way. See <u>Memos in Writing as Analysis</u>.

Summary

- Coding involves categorising and indexing sections or chunks of your data,
- Codes can come from theory and explanations 'outside the data' and/or 'emerge from the data', Data formats that can be coded ranges from transcribed text to video,
- Coding often starts by being descriptive but needs to becomes analytical, Any new codes created should be applied to the whole data set (previously coded units of data), Memos should be used to record your thoughts and ideas about your codes during the process.

KFive short videos from a lecture on coding.

References



Strauss, Anselm and Corbin, Juliet (1990) Basics of Qualitative Research. Grounded Theory Procedures and Techniques. Newbury Park, CA: Sage. (2nd Ed. 1998)

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