QUALITATIVE RESEARCH METHODS

QRM

DOING DEVELOPMENTAL PHENOMENOGRAPHY

EDITED BY JOHN A BOWDEN AND PAM GREEN

DOING DEVELOPMENTAL PHENOMENOGRAPHY

Edited by
John A Bowden and Pam Green

Qualitative Research Methods series
Series Editor: Professor John Bowden

RMIT UNIVERSITY PRESS
MELBOURNE

First published by RMIT University Press

Edited by Bette Moore
Cover design by David Constable
Design and production by Publishing Solutions

National Library of Australia Cataloguing-in-Publication data:

Doing developmental phenomenography.

Bibliography.
ISBN 1 921166 03 7.

1. Phenomenology. I. Bowden, John A. II. Green, Pamela, 1958- . III. Title. (Series : Qualitative research methods series (Melbourne)).

142.7

Published by RMIT University Press, an imprint of:
RMIT Publishing
PO Box 12058, A'Beckett Street,
Melbourne Victoria 8006
Australia
Telephone 61 3 9925 8100 Fax 61 3 9925 8134
Email: info@informit.com.au
http://www.informit.com.au
Online edition available on Informit e-Library,
http://search.informit.com.au

Contents

Series Preface

For a period of a decade or more, a number of academic staff at RMIT who used qualitative methods in research found themselves invited with increasing frequency to attend postgraduate classes to discuss approaches to qualitative research. These have always proved to be exciting and rewarding activities. Normally, the postgraduate students are at the beginning of the research cycle: they are developing or firming up their research questions and they are seeking an appropriate research method. Many are interested in qualitative methods, but find it difficult to get a feel for any particular method from the existing literature.

This series of monographs on qualitative research methods is intended primarily to assist such research students to understand what the different methods are about and how to choose the most appropriate method for their particular research interests, as well as to provide guidance in the conduct of the research throughout their candidature.

The series includes four monographs on major qualitative methods used in research at RMIT. The first monograph is about *Action Research*, the second is about *Phenomenography* and the third deals with various forms of *Phenomenology*. A fourth monograph, titled *Slices of Life*, provides briefer descriptions of a number of other qualitative research methods including case study, biography and naturalistic enquiry. A fifth monograph, *Emerging Forms of Representing Qualitative Data*, addresses alternative ways in which qualitative data can be collected and represented – alternatives to the traditional surveys and interviews normally reported in prose form.

These first five monographs on the different methods are similar in the following ways. First of all, the authors are people who have had extensive experience in using the research methods being discussed. Second, the descriptions of what the research method is about and how the researcher uses the research method have a 'warts and all' feel about them. The pros *and* cons are discussed as well as some of the difficulties in undertaking the research highlighted. Third, there is much use of the first person in the prose, along with descriptions of how it 'feels' to do the research in this way. Fourth, the individual monographs are not written to convince the reader to take up the particular method. Indeed, a

conclusion that a particular method is inappropriate and that a different method is needed should be the most common outcome (statistically) from reading any one monograph. The emphasis in this monograph series is on providing new researchers with enough detail about the various qualitative methods that they are able to find the most appropriate research method for their project aims and their own values and interests. Finally, each monograph includes accounts by recent postgraduate students who discuss why they chose their particular research method and how it worked for their thesis topic.

This sixth monograph, *Doing Developmental Phenomenography*, is different from the other five. Like one of the five, it is about phenomenography. However, while *Phenomenography* provides a range of accounts from a dozen researchers about each of their projects, *Doing Developmental Phenomenography* takes an in-depth look at just two related projects. The intention of the first five monographs was to provide a picture of the variation across the undulating surface of qualitative research methods. We felt, however, that for the new postgraduate research student, something more was needed if they were to get a feel for what it is like to do research. They need to see the crusty, rocky, chaotic structure underneath the surface: What problems do researchers face when trying to collect data? What does the analysis of data look like when it is only half-finished? What do those who do the research one way think of the different ways that others do the research? And, perhaps most importantly: What is it like to use a particular research method for the first time? These are the features that *Doing Developmental Phenomenography* offers the reader.

Readers of *Doing Developmental Phenomenography*, especially new postgraduate research students, should be aware that one of the projects was undertaken by a group of researchers, some of them new to phenomenography. Of course, their views reflect the fact that their only experience of phenomenographic analysis is by a team process. The other project was a PhD study completed recently by an individual phenomenographic researcher. Throughout the various chapters, both the team approach and the individual approach to phenomenographic analysis are argued for, and sometimes one approach may be taken for granted. The purpose is not to convince new postgraduate students that they should take either particular approach, but to enable them to understand the pros and cons of each and to realise that this is an issue that each researcher needs to address in their own context.

John A Bowden, Series Editor
September 2005

CHAPTER 1

In search of detailed instances

Pam Green and John Bowden

Introduction

As outlined in the Series Preface, this monograph is the sixth in a series on qualitative research methods. While the other five monographs provide descriptions from a wide range of perspectives by more than 30 researchers on different qualitative research methods, this monograph takes one of those methods and provides an in-depth description of the experiences of just five researchers on two projects. One of those earlier five monographs is titled *Phenomenography* (Bowden & Walsh, 2000) and readers should examine that text to get a basic understanding of what phenomenography is about, from the perspective of a variety of phenomenographic researchers. The present text will be exploring some issues to a depth never written about before, rather than providing an authoritative account of phenomenography in general.

The series as a whole seeks to provide an explicit and critical take on a variety of theoretical positions, approaches and practices around a range of research methodologies using qualitative methods. The present text contributes to the search for detailed instances of qualitative research. It focuses explicitly on phenomenography and aims to bring into sharper focus the different ways in which phenomenographic research might proceed, the situated issues that warrant attention, and the ways in which findings might be portrayed. The monographs in this series provide a close-up look at attitudes, practices and experiences that most other books on qualitative research do not. This book serves as a resource for researchers, supervisors and research students, not only for those interested in phenomenography but also for others wanting to understand 'what qualitative researchers actually do'.

Two major studies, one focusing on 'researchers' conceptions of success in research', and the other centred on 'ways of experiencing being a university researcher', provide the detailed instances from which phenomenographic practices may be viewed. Both studies use developmental phenomenography (Bowden, 1994a; 2000a) rather than pure phenomenography (Marton, 1986b). Thus, they provide instances of applied research where the implications for the field, in this case research

in higher education, are deemed as being a vital part of the justification for, and planning of, the study (apart from genuine curiosity). Hence the title *Doing Developmental Phenomenography*. The two studies, methodologically linked but differing in specificities, enable the reader to follow the choices available and the subsequent decisions made by researchers along their respective phenomenographic journeys. The major difference between the two studies is that the 'success in research' project was a team endeavour, while the 'being a researcher' project was an individual task. As explained in the Series Preface, this issue of team vs. individual is a central theme for the reader concerned with decisions about how to conduct phenomenographic analysis. Other issues discussed within the two projects include sampling decisions; interview strategies; the role and nature of piloting; appropriate forms for questions or scenarios; data analysis processes, including further exploration of the emergent categories of description and their structural relationships; presentation of findings, and the implications for practice. The studies afford both methodological and substantive detail, but the focus of this text rests unapologetically with the former. However, to get a more general view of the research method, readers would do well to peruse the earlier monograph in the QRM series – *Phenomenography* (Bowden & Walsh, 2000) – before continuing to read this current text.

Findings about the nature of success in research and about the experience of being a researcher are included in this monograph as well primarily because they provide examples of how results may be presented and insights may be made into the ways that research goals influence method. They may also be relevant to readers interested in the research topics per se. Further, such findings may be of interest to those engaged in mentoring supervisors informally or through formal means such as supervisor development programmes.

How the book works

The text begins with the presentation of five stories from researchers engaged in the above-mentioned studies. The initial four stories are derived from the collaborative project on conceptions of success in research. This project involved four academics (and one other) interested in phenomenography, of whom only one was experienced in the approach. The researchers each came to the project with their own methodological backgrounds, biases, hopes and concerns.

Bowden, the experienced phenomenographer, tells his story first in chapter 2. The shift from the world of science to that of education in the 1970s meant that old ways of researching were questioned and he built

his own ways of working within a phenomenographic paradigm across several decades (see Bowden, 1994a; 2000a). He highlights what underpins his approach to phenomenographic research, with the concept of relationality providing the key theme which he explores in detail. Bowden tells of his experience of working within the 'success in research' team in terms of the tension between offering guidance (much sought after by the team, especially in the beginning) and encouraging the other researchers to take control of the research processes for themselves. The experience of working in the team, as in all of the first four stories, is reflected upon. Such reflections provide food for thought for those considering the use of collaborative effort, even if only at the analysis phase.

Green, previously a naturalistic inquiry devotee, tells in chapter 3 of her journey into phenomenography, focusing firstly on what counts as basic tenets of research, given her theoretical position. As Green conducted all of the interviews for the project, this chapter details issues, strategies, and reflections on phenomenographic interviewing. Rigour is a key issue in all research. Green considers strategies that give the research credibility, drawing on her prior work with naturalistic inquiry and contrasting it with her experience of the collaborative phenomenographic project.

Barnacle, a phenomenologist, highlights in chapter 4 the experience of team analysis processes from her position on the crisis of interpretation as derived from Gadamer. She reflects on her initial concerns with the analysis processes (specifically the development of categories of description) and how these were resolved. Further, Barnacle draws attention to the seductive nature of the text, the potential wildcard that may emerge (things hinted at but not made explicit in the text), and ponders the role of the researcher in such situations. Similarly, she explores the role of the question and the issue of not just what is being said, but also what is not being made explicit. Her story ends with questions for researchers to pose when engaged in phenomenographic inquiry and the need to struggle with ambiguity.

Cherry's story in chapter 5 comes from a researcher with a history of action research. She recalls the journey into phenomenography, and the questions that arose and shifted as she grew more familiar with the approach. Cherry considers what she perceives to be key assumptions underpinning the approach as well as the issues of rigour. The search for clarity about how to do phenomenographic research, as in the stories by Green and Barnacle, is discussed and addressed, at least in part, in this story.

Those are the four stories on success in research. What follows in chapter 6 is a story by Åkerlind which tells of an analysis of interview

data collected during her PhD research some years before about ways of experiencing being a university researcher. Åkerlind describes the journey into phenomenography as an individual process. Unlike the previous stories which emerged from a team investigation, Åkerlind's story reveals her individual shift from positivistic, experimental psychology to phenomenography. Like the other stories, she explores initial misgivings or hesitations, and then moves on to describe the ways in which phenomenography worked for her project. Her discussion of interviewing and analysis are central to her story and readers will find this most practical. The theoretical stance taken by Åkerlind is made clear and well justified. Åkerlind's story is a must for those weighing up the pros and cons of working on phenomenographic analysis as an individual or as part of a team process.

The next chapter provides a reflective analysis of the five perspectives described above. In order to probe further our understandings and reflections on our own experiences of phenomenography as a team endeavour, Åkerlind conducted a focus group interview with the four researchers – Bowden, Green, Barnacle and Cherry. What flowed from that session, which was over three hours in duration, was a discussion of what troubled us, what we assumed, what worked, what convinced us with respect to rigour, and what value we derived from the overall experience of conducting phenomenography. Åkerlind, Bowden and Green analysed the four stories and the transcript of the focus group interview and drew out the different perspectives on a number of common themes which provide the basis for chapter 7.

Moving on from the five research stories of phenomenography and their analysis, the book provides explicit details of the inherent methods. In chapter 8, Åkerlind provides a comprehensive, coherent analysis of phenomenographic research methods, leaving few questions unanswered about the practicalities or their theoretical justification. Derived from the methods chapter of her doctoral thesis, chapter 8 in this monograph describes in detail the methods employed in her study of the development of academics and looks at sampling, interview design and conduct, analysis, and presentation of research findings. Further, she explores relationality between phenomena as well as validity and reliability checks.

The reader might well anticipate a similar methods chapter on the collaborative study focusing on success in research. However, given that the initial four stories describe the methods and also that there is a detailed findings chapter, the explication of the methods used in that collaborative study was seen to exist within the book already.

The outcomes of the study on ways of seeing success in research by active researchers are described by Bowden, Green, Barnacle, Cherry and Usher in chapter 9. The final outcomes were developed by an iterative process in which various versions were produced, criticised, re-analysed and modified to yield the next version. In all, eight versions formed the chain of analysis and the initial draft of the categories of description is presented here, alongside versions 2 and 3. Note that all of the eight iterations are provided in full in Appendix A. The differences between the first three iterations are explored here (as well as in some of the team stories) and the importance of time, reflexivity, discussion, and also fidelity to the transcripts are emphasised. A detailed presentation of the final categories of description is made using relevant excerpts from the 24 transcripts upon which the findings are based. Note that the categories of description fall across transcripts. What the findings reveal is a pool of meanings across individuals that, in this case, have yielded five categories. The relationality between the categories is explored and presented. Dimensions are depicted in matrix table form to illustrate structure, enabling a further way of seeing or interpreting the data.

Chapter 10 describes the outcomes from Åkerlind's analysis of data collected but not dealt with during her doctoral study on ways of experiencing being a university researcher. The chapter presents the categories of description, each with illustrative quotes. Moving into a discussion of the structural relationships between the categories, Åkerlind considers critical patterns of variation and what they mean in terms of hierarchy. Having examined patterns of variation *between* categories, she then moves to discuss patterns *within* categories. Åkerlind also examines the change process as the analysis proceeds and the different versions of the categories of description are provided in Appendix B.

The decision to include the appendices in this monograph is a conscious one that is in keeping with the spirit of the whole monograph. Not unexpectedly, most editors and publishers encourage authors to be efficient and economical in terms of the number of words used. As a consequence, most journal articles and book chapters highlight the essence of the research method used and present the final research outcomes in succinct form. Readers may well perceive a very neat process and outcome that belie the complex and often haphazard pathways that most research actually follows. Simple presentation of the beginning and end points mask that tortuous pathway. We wanted to communicate to readers a range of aspects of the research experience that includes the curiosity and commitment that

drive it on the one hand, and the doubts, the confusion, the pain, the false starts and the joy of making a breakthrough on the other. Hence, the focus in many of the stories is on the feelings each researcher experienced, the difficulties they faced, and the experiences that helped them move forward. We believe that researchers who are new to phenomenography or to qualitative research in general will be advantaged by reading such 'warts-and-all' accounts. We also believe that such readers would find it interesting to examine the 'research outcomes' in their various interim forms as the process of iteration transforms earlier drafts until eventually some closure is reached. Hence, the appendices have been included.

Thus, the monograph presents two major research projects based on phenomenographic ways of working from a variety of viewpoints. It seeks to present variation rather than 'pretend' that there is one agreed way of doing phenomenography. We aim to encourage the reader to consider phenomenography as a way of researching. Whether or not this is appropriate depends on the nature of the question and the methodological leanings and personal preferences of the researcher.

Ways of reading this monograph

There are numerous ways to read this monograph. We give a few options, but encourage readers to make their own way. Given the content and structure of the book, the reader is presented with a range of options in terms of how to proceed. While we do not want to be seen as pedantic or overly methodical, we do feel the need to make suggestions. Of course, the reader might choose to dip in and out of the chapters randomly, but we would suggest one or more of the following ways into the text.

i) Read from cover to cover as it is sequenced. Then reread the stories (chapters 2–6) again with respect to the discussion (chapter 7) or the method by Åkerlind (chapter 8).
OR

ii) Skip the stories, read about the methods (chapter 8), and then the findings or outcomes (chapters 9 and 10), followed by the stories for reflection (chapters 2–6). Other chapters are optional at this stage.
OR

iii) Read for each study. For example, read Åkerlind's chapters on method (chapter 8), outcomes (chapter 10) and her story (chapter 6). Similarly, read about the collaborative project

through the stories by Bowden (chapter 2), Green (chapter 3), Barnacle (chapter 4), and Cherry (chapter 5), and the outcomes chapter by Bowden et al (chapter 9). If you want a contrast between two approaches to phenomenography (the team effort and the individual), then read both strands finishing with the discussion (chapter 7).

The reader will also note that, for ease of flow and to avoid repetition, the references for all chapters have been collated into one list at the end of the book rather than at the end of each chapter.

PART I

STORIES OF PHENOMENOGRAPHY

CHAPTER 2

Reflections on the phenomenographic team research process

John Bowden

Collecting the data

It was a challenging prospect. Five of us were to undertake an analysis of interview data collected from 24 RMIT researchers about their research. Of the five, I was the only one with substantial experience of phenomenographic analysis. The experience of the other four ranged from no experience at all with phenomenography to supervision of postgraduate students through reading about the method. But all had extensive experience with other forms of qualitative research. That is what made it especially interesting.

The first task was to make sure that we had adequate data to analyse and two of us embarked on that activity. I played the advisory role and the other person, Pam Green, undertook the planning and the interviewing. Some of the important issues we addressed included whom should be interviewed, how many, about what, using what kind of initial input to the interview, and using what sequence of questions subsequently. Another important issue was what should not be asked, or what kinds of comments the interviewer should not make. The answers to these questions are affected by a fundamental aspect of phenomenography – relationality – that I want to deal with first.

Relationality

What is relationality?

One aspect of phenomenography that is emphasised repeatedly is the fact that it is based on a relational view of the world. Other perspectives, such as individual constructivism or social constructivism, usually have what is called a dualist view by focusing on either an inner

or outer world as being an explanation for the other. Individual constructivism sees internal mental acts as being an explanation for external acts and behaviours. The reverse is true for social constructivism (see Marton & Booth, 1997, for more detail).

Phenomenographers are among a range of qualitative researchers who take a non-dualist stance. We do not focus on hypothetical mental structures separate from the world. There is no dividing line between the inner and the outer worlds. There are not two worlds with one held to explain the other. The world is not constructed by the individual, nor is it imposed from outside, 'it is constituted as an internal relation between them. There is only one world, but it is a world we experience, a world in which we live, a world that is ours' (Marton & Booth, 1997, p.13).

This is not simply a remote philosophical distinction. There are practical implications that I want to explore now. Relationality is the key idea underlying the approach that I and many others take to phenomenographic research and can be used to explain the following practices:

a) I always use an identical opening scenario for every interview within any one phenomenographic study.
b) With one exception, I never make any further substantive input into the interviews except to refer interviewees to issues they have introduced themselves, in order to get more complete explanations. The only exception is when a further input is planned for a particular stage in every interview in the set.
c) The only evidence used in developing categories of description is that contained within the transcripts.

These practices will be discussed later in this section, but I have listed them here to encourage the reader, while relationality is being explained in the coming paragraphs, to reflect on why those practices are advocated.

The object of study in phenomenographic research is not the phenomenon being discussed per se, but rather the relation between the subjects and that phenomenon (see Figure 1.1). So the focus of the research is on the researcher trying to find out about the object of study which is the relation between the subjects and the phenomenon.

Of course, there is a relation between the researcher and the phenomenon and a relation between the researcher and the subjects (also shown in Figure 1.1). The researcher has his or her own way of seeing the phenomenon and has some relationship to the subjects. One methodological question that needs to be addressed is how to ensure that the focus of the research is maintained on the object of study, the

relation between the subjects and the phenomenon, rather than on the researcher's own relation to the phenomenon. That is, how can researchers make sure that they are not allowing their own understanding of the phenomenon to be imposed on their interpretation of the ways the subjects see the phenomenon?

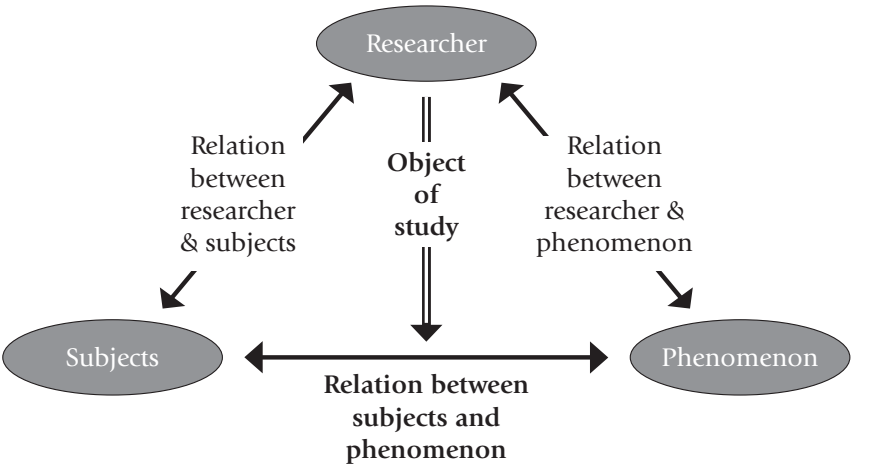


Figure 1.1: Phenomenographic r elationality

In addition, the researcher has a privileged position in relation to the subjects through the interview process. The relationship between the researcher and the subjects also has the potential for imposition of the researcher's view of the phenomenon if subjects seek or receive guidance or approval from the researcher for what they say during the interview.

Methodological processes to deal with relationality issues

In any phenomenographic research situation, you have some phenomenon, a group of subjects, the researcher, and some process of communication (in this case interviews). Normally those elements are arranged by the researcher who:

- devises an interview schedule about a chosen phenomenon
- invites each subject individually to comment in various ways about the phenomenon
- encourages full disclosure by each subject of their ideas about the phenomenon by various interview techniques
- records the interviews, and
- has them transcribed.

Then the transcripts as a group are analysed so as to map out a limited number of categories of description that represent the range of ways that the group as a whole sees the phenomenon.

Data collection

It is imperative that the researcher's own relation to the phenomenon and to the subjects be controlled so as to avoid distorting the research outcomes. In the interview process (the most common data collection method in phenomenography), the controls involve a planned process with certain issues being introduced by the interviewer at given stages in the interview, and the avoidance of any new inputs other than those planned (relates to dot-point (a) listed earlier). This means that all subjects receive the same information from the researcher and so their responses are to the same phenomenon. How can the researcher refrain from introducing new information and still maintain a conversation with the subject during the interview? This is done by making sure that the kinds of questions asked and comments made by the interviewer are limited to requests for further information or encouragement of explanation of ideas raised by the subject (relates to dot-point (b) listed earlier). Such requests are used constructively to encourage the subjects to reveal everything possible in relation to the phenomenon. Judgemental comments, whether positive or negative, should never be made by the interviewer.

Why take these precautions? Well, since the object of study is the relation between the interviewee and the phenomenon, it is imperative that the transcripts of the interview reflect that relation as it exists at the time of the interview. Normal conversations involve interchanges during which each person's relation to any phenomenon under discussion shifts. Comments or inputs by one person cause the other to rethink and perhaps re-conceive the phenomenon. It is inevitable that such shifts will occur. The idea in phenomenographic interviewing is to limit inputs by the researcher to planned sequences that are primarily designed to introduce the phenomenon to the interviewee whose relation to it is being investigated. The interview can then proceed with the interviewee defining what is relevant and the researcher encouraging the interviewee to be as complete and as explicit as possible.

If, for instance, care is not taken to open the interview with the same scenario each time, then it is difficult to be sure what phenomenon the research results refer to. The same ambiguity arises if the researcher introduces new and different issues into some but not other interviews or if the researcher were to occasionally praise or

criticise any views being expressed. In such situations, there will be a set of transcripts, some of which represent the relation between some interviewees and a particular phenomenon but others that concern the relation to a slightly different phenomenon. In such circumstances, the research outcomes are of diminished value. So, to maximise the power of the research outcomes, there should be enough pilot interviewing to ensure that all interviews are conducted with the same planned inputs by the researcher.

Analysis

In the analysis stage, the controls involve:

- the use of no other evidence except the interview transcripts
- the bracketing of the researcher's own relation to the phenomenon
- the use of group analysis in order to ensure the first two controls are effective, and
- the analysis of the structural relation between the categories of description being postponed until after the categories have been finalised.

The relationship between the researcher and the phenomenon and the influence of that relationship on the research outcomes need to be minimised in the analysis phase as well as in the data collection phase. The object of study is the relation between the group of subjects and the phenomenon and, as discussed above, the interviews are conducted so as to ensure that the transcripts contain data that are focused on that relation. The next step is to analyse those transcripts in a way that allows the mapping of the different ways the subjects relate to the phenomenon, without that mapping being distorted by the researcher's relation to the phenomenon (referred to as 'bracketing' of the researcher's perspective). The primary way of minimising such distortion is to base all analysis on the transcripts: if it is not in the transcript, then it is not evidence (relates to dot-point (c) listed earlier in this chapter). Just because the researcher can 'imagine' a different way of looking at the phenomenon or a better way of constituting it, it is not an acceptable category if such descriptions cannot be derived from the transcript evidence.

For the same reason, I argue that the structural links between the different categories should be investigated after the categories have been determined. Investigation of the structural links explicitly

involves the researcher perspective. The researcher examines the categories of description and tries to 'see' the relations between them. That seeing is affected by the researcher's own relation to the phenomenon. If development of the structural relationships is undertaken simultaneously with the development of the categories of description, there is potential to distort the categories by including the relation of the researcher to the phenomenon in addition to the true focus of study, the relation between the subjects and the phenomenon.

A further step that I take to ensure that the researcher's perspective is bracketed and that the categories are derived only from transcript evidence is to engage in group analysis. Other members of the team act as devil's advocates at every stage and demand evidence in the transcript before any aspect of the analysis is accepted. In regard to most of these analytical practices, my approach is different from some other phenomenographers and my position is derived from my interpretation of the fundamental, relationality perspective. But now, back to the questions that Pam Green and I faced regarding the interviews in this project.

The interviews

Whom to interview?

In order to maximise the variation in ways of seeing research, we tried to ensure that the interviewees included both men and women, researchers from a variety of fields and across a range of research experience. Further, we decided, since a major reason for doing this research was to feed back the results into RMIT's research development programme, that the researchers interviewed should all be RMIT academics. We know that if we were to interview researchers from different universities, we'd be likely to get a lot of overlap in their ways of seeing research, but we would also get differences. Phenomenography is a creature of the particular people from whom the data are drawn. We had to make a choice, and we did. We anticipated that we would not be able to conclude from our research that university researchers in general see research in particular ways. We never intended that. Phenomenography does not provide that kind of outcome. What we wanted to be able to say is that when you interview an appropriate cross-section of RMIT researchers, these are the ways of seeing research that emerge. We anticipated that you could talk to any RMIT researcher and, while you would find that that person's way of seeing research would to a large measure be idiosyncratic, it would be

likely you could make sense of their way of seeing it in relation to our findings. However, no outcomes from phenomenographic research can be regarded as generalisations or universal statements.

How many to interview?

The smug answer from a phenomenographer when asked this question is that you need to interview enough people to ensure sufficient variation in ways of seeing, but not so many that make it difficult to manage the data. Two people would be too few and two hundred would be too many. In practice, most phenomenographers find that between 20 and 30 subjects meet the two criteria. You have sufficient variation and you can manage the data. In this case, we focused on that range and interviewed 24 RMIT researchers.

Interviews about what?

It is possible to ask people in an interview the direct question – What is X? We might have asked – What is research? or What is research success? But we didn't.

There is an alternative. You can ask people to describe a recent experience that concerns the issues under consideration. That is what we did. Pam Green asked each RMIT researcher to think of recent experiences of research that were successful and to describe one of them in detail. At the same time, each interviewee was told that later they'd be asked to describe an example of research they had done that was not so successful.

This was not an arbitrary decision; rather it is based on experience. When 'what is X?' questions are asked in such phenomenographic interviews, the outcomes tend to be less varied and they more or less reflect the standard, espoused theories available in the literature. On the other hand, when people are asked to describe their own direct experiences, their immersion in that detail often reveals a much greater variation across the interviews in ways of seeing than with the more narrowing 'what is X?' approach.

There is a second reason as well. It is easier to get people to describe something they've experienced than to get them to philosophise about an issue to which they might not have given much thought before. So you get a much deeper insight into how the interviewees actually see the concept in practice as well as having a better opportunity to explore and probe in a comfortable and non-threatening way – given that you are asking for more information about their

actual experiences rather than appearing to be 'testing' their theoretical knowledge.

So Pam Green and I agreed that the interview would begin with a brief statement that we were interested to find out about RMIT academics' experience with research and that participants would be asked to choose and describe an example of research they had undertaken that had been successful and another that had been less successful. In her story to follow in chapter 3, Green elaborates this in more detail.

What kinds of questions to ask and what comments to make?

It was also agreed that following this common beginning to each interview, all subsequent questions would be directed at getting the interviewees to reveal everything they could about the examples they had chosen. Questions would be of various kinds:

(1) Neutral questions aimed at getting the interviewee to say more.
Example: Can you tell me more about that? Could you explain that again using different words? Why did you say that?

(2) Specific questions that ask for more information about issues raised by the interviewee earlier in the interview.
Example: You have talked about X and also about Y, but what do X and Y mean? Why did you talk about Y in that way?

(3) Specific questions that invite reflection by the interviewee about things they have said
Example: You said A, and then you said B; how do those two perspectives relate to each other?

The central purpose is to encourage the interviewees to reveal as much as possible about their ideas and their experience. However, the limitation is that beyond the planned inputs such as the opening part of the interview, all other questions should not introduce new ideas (for a more complete explanation of why this is so, see the earlier section on relationality). Only the interviewees should be introducing new ideas because the purpose of the interview is to find out what issues people see as relevant as well as what their views are on those relevant issues. It is not about getting people's comments on issues that occur to the interviewer from time to time along the way. So the opening input from the interviewer is effectively to establish the topic and then all subsequent non-directive questions are aimed at finding out what the interviewees think about that topic.

It should go without saying that no judgemental comment should be made about anything the interviewees say. All comments should be related to the intention to explore further.

Why should there be pilot interviews?

In most conversations we are well used to exchanging points of view and so, when someone undertakes a phenomenographic interview for the first time, some practice is needed to maintain an appropriate interviewing approach. In early pilot interviews, novice interviewers (in a phenomenographic sense) often find themselves making comment and sometimes discussing or debating something said by the interviewee. They need to learn not to do that. Pilot interviews are important to enable the interviewers to perfect their phenomenographic interviewing skills.

More than that, it is also crucial to test whether the planned inputs, such as the opening scene-setting, actually do elicit comment on the intended topic. In this case we had all of the input at the beginning of the interview, but in some phenomenographic interviews a number of inputs may be made in a planned way at various points of the interview. Pilot interviews are always essential to ensure that the topic that interviewees are encouraged by the planned inputs to discuss is the topic that is the subject of the research. Otherwise the planned inputs have to be modified until they do catalyse response on the research topic.

In this case, I interviewed Pam Green first of all to give her some insight into the phenomenographic interview. She then interviewed me and subsequently several other RMIT academics as part of the pilot phase. It is important (1) that the pilot interviews be with people similar to the intended interview sample, and (2) that those pilot interviews are then discarded and not used as part of the research study. Clearly, any data from pilot interviews are tainted by potential errors in questioning by the interviewer and by the shifting focus of the planned inputs as they become refined. In chapter 3, Pam Green describes the pilot process in more detail.

When do you begin the analysis?

I take the strong position that no analysis should begin before all interviews have been conducted. Already I have referred to the abnormality and difficulty of conducting a warm and supportive conversation with someone without making any comment on the content of the conversation. Even experienced interviewers sometimes find that they have to discard half an interview transcript because they have lapsed by inadvertently introducing new, unplanned content halfway through the particular interview or by making a judgemental observation about

something said during the interview. If the researcher has already begun to analyse the early interviews before the rest are complete, there is a real danger that the later interviews will be altered, either explicitly or perhaps unconsciously. It is much safer to wait until the interviews are complete before beginning the analysis. Analysis in this project did not begin until all interviews had been completed. It should be noted that not all phenomenographers are so concerned with this issue. Reproducibility is important to me so that I can clearly claim that the categories of description finally developed are related to a particular set of inputs across all of the interviews. It would be difficult to define just what the categories refer to if the interviews had varying content inputs from the interviewer.

My experience of the analysis in a team situation

The early meetings

MY SELF-PERCEIVED ROLE

As the first meeting approached, I had mixed feelings. I knew that, as the one member of the team of five with substantial experience of phenomenographic research, there would be some pressure on me to lead. Yet my educational philosophy is at odds with a 'tell them what to do' approach. I wanted my colleagues to move creatively towards a way of seeing this research method that reflected their own experiences, rather than emanating from my instructions. So I deliberately lobbied for another member of the team to take the lead role and I tried in the first meeting to withhold my own point of view until everyone else had expressed their views on any particular issue. Some people who don't know me might consider that action heroic; others who know me might not believe it at all. I have never asked my colleagues whether they noticed that I was doing that and I realise of course that they might not have noticed.

However, I became sensitive to situations during the early meetings when one or more of my colleagues would look to me for my judgement on what had been said. I realise that I may have been reading my own concerns into the situation, but it certainly felt like there was an expectation that I should take a more leading role than I had envisaged.

ACTUAL ROLE

It turned out that I did take a more leading role after all. Eventually I agreed to become the lead researcher on the first analysis (one person

as leader, the others taking a devil's advocate role – this was already mentioned in the section on relationality and will be discussed in more detail later).

MY 'NATURAL ATTITUDE'

I have found it interesting to reflect on my own attitudes and behaviour. In some ways my behaviour and my beliefs were at odds with each other. Phenomenography, along with many other qualitative approaches, has an underpinning philosophy that values variation. We expect there to be a number of perspectives on any issue among a range of people, and the focus of much of qualitative research is to find out about that variation. Qualitative researchers, therefore, try to look at any issue from multiple perspectives. Indeed, within phenomenography, there is the explicit practice of bracketing mentioned earlier. The researchers attempt to the best of their ability to bracket their own views as they put themselves into other people's positions and try to understand what it is that they see. They reject the natural attitude, which sees the world as an object separate from the observer. The natural attitude is that how I see something is the way it is. As Marton & Booth (1997) put it:

> Reality, as a rule, has a taken-for-granted character. We tacitly believe that the world is what we see, the same world that always was and always will be seen, and the same world that others see. Reality and experience of the world are taken to be the one. (p.148).

If you have the natural attitude, you can't understand 'multiple perspectives'. Surely everyone else is not looking at the object properly. You can see it clearly and it isn't the way they are describing it. You can see 'it' and they are wrong.

In everyday life many of us operate through the natural attitude. Indeed most community disputes, most civil court cases, most arguments in the home, most news analysis, and probably most social interactions, emerge through the natural attitude. All of those activities are characterised by several different people dealing with the same issue, seeing it differently and being unable to understand how the other person can be so wrong. Either they are stupid or they are lying. Perhaps the most extreme example is the umpire's or referee's decision at a football match (probably of any kind). When a clash of players occurs, you often hear a roar emanating immediately from the

whole crowd. Yet half the crowd are quite sure that a free kick should be given to one of the players while the other half are equally sure it should be given to the opposing player. And as they yell at each other, neither can understand how the other supporter was obviously unable to see what happened right before their eyes. Imagine if, instead, thousands of football supporters began to say to each other – 'Well, I can see from one perspective that you could imagine your player was infringed, but if you look at it using different criteria perhaps you would agree that my player was infringed instead'. No, it doesn't happen like that. The natural attitude rules and the opposition supporters are clearly both blind and biased.

And if we turn to television news analysis, any guest who attempts to look at the particular issue from several perspectives is quickly dismissed as being someone who either (a) has no real opinion, (b) wants to be liked by everyone, and/or (c) is an academic.

Now why have I gone off on this tangent about the natural attitude? Well, in my work, dismissal of the natural attitude is at the core. Yet, at the beginning of this project, I felt myself slipping into the natural attitude, and it worried me.

What happened was this: as much as possible, I tried to get my colleagues to work through methodological and analytical issues themselves. That was a conscious decision that I followed for a short time. Yet I was often asked to be the arbiter of disagreements about the method. The early meetings focused on discussion of process without actually carrying out the processes. I found myself taking an almost positivist perspective and defending my way of seeing phenomenography as if it were 'truth'. It is reasonable, even desirable, for everyone to argue for the way they see the situation. That is what I am doing throughout this chapter. But there is a need to be open to contrary argument and to be willing to change if the argument is strong enough. I feared I was taking the natural attitude towards phenomenography; I could see where everyone was going wrong and I was drawn into correcting them. At first I think my colleagues were happy about that because as novices to the phenomenographic experience it provided some stability. But it soon led to disputes and I think we really only made progress when different people began to take responsibility from one meeting to the next for different aspects of the analysis. Then we were all in the business of seeking evidence to support or dismiss various perspectives.

COMPARISON WITH OTHER METHODS AT A META LEVEL

Another aspect that made the early meetings complex was that most of my colleagues were trying to understand phenomenographic processes as a variant on the qualitative research method with which they were most familiar. Comparisons, at least at a meta level, were being made and each person's view of phenomenography was coloured by the lens through which they were looking. Hence, conversations about how certain processes are undertaken within phenomenography focused more on why it was different from their own methods than on why that approach was internally consistent within phenomenography. The learning about phenomenography in the early stages was very much linked to the other methods.

Later analysis meetings

MORE DEMOCRATIC PARTICIPATION

As I indicated earlier, later meetings became more shared and different people took the lead. I felt personally that this diminished pressure on me. No longer was I the lead analyst and defender of process. Other people were taking the lead and, in doing so, engaging in process themselves. Thus, they had an experiential base from which to discuss process and the meetings were more functional as a consequence.

THE ISSUE OF DEVIL'S ADVOCACY

In other places (Bowden, 2000a, for example), I have argued strongly for team analysis in phenomenography and the importance of the devil's advocacy role. This study was a team effort and all of us played the devil's advocate role most of the time. The way we worked was this. One person prepared the next set of categories of description based on discussions we had had. Often there was a focus on, say, just one category that was puzzling us at the time. The person responsible went back and re-read the transcripts and produced the new version. At the next meeting, the rest of us had the role of questioning the reformulation of the category.

To show how this was done, let me take category B in version 3 (see Table 3 in Appendix A). The following is what category B looked like at that stage:

> Research is successful if participation in it or the outcomes produced from it are satisfying to the researcher. These may be because of the inherent interest of the activity and the various feelings of being thrilled, challenged or exhilarated by successfully tackling complex issues efficiently and with high standards. The satisfaction may be linked to a number of achievements including being able to meet clients' needs, being able to confirm one's own prior hypotheses and participating in the act of discovery. The researcher may feel proud of what has been produced.

In the second part of Table 3 in Appendix A, you will see the following:

> **2** (9); **3** (23); **5** (6,8); **6** (4); **7** (7, 11); **9** (5,6); **11** (13); **13** (7, 10); **14** (7); **15** (13); **16** (11); **17** (1,3,4,6); **18** (7, 8); **19** (3); **20** (3,4); **22** (11); **23** (9)

These are the page references to parts of various transcripts that seem to refer particularly to the way of seeing success in research represented by category B. The number in bold refers to the transcript and the numbers in brackets to pages within the particular transcript. For example, transcript 5 contains the following quote:

> 'One thing that made it successful for me personally was what I found interesting … it was complex, there were lots of twists in it, there were lots of different categories, people make interesting decisions, so it's inherently intellectually stimulating.'

What the devil's advocates do – the rest of us – is to ask the originator the basis for the particular way of writing the category of description. Why did you focus attention on success being related to outcomes satisfying to the researcher? Why did you choose those particular words? Where in the transcripts can we see evidence that this is the best way to describe this particular category? Of course each of us would read the pages listed as relevant and we would reflect on whether a better description could be found. There would be discussion and argument. It should be noted here that the emphasis in reading is to discern the fundamental meaning. The category descriptions should be faithful to the meanings in the transcripts. This may mean using particular words present in the transcript, but that would be a frequent consequence and not a goal of searching for meaning.

One thing we often found we needed to do was to go back a few pages earlier than the designated page in the transcript and, as well, read forward a few extra pages, if we were to really capture the meaning. This contrasts with the cut and paste approaches that some people use in which they extract particular sentences and paragraphs and pool them. We did not do that and to my mind it was for good reason. In this particular case we found that the meaning that came through in this category was much stronger than had been originally represented, and we found that out by going backwards and forwards in the transcript – by continually using the whole transcript.

That phrase 'whole transcript' needs explanation because in a sense we only ever read every single page of the transcript in one sitting during the first or second readings. But using the whole transcript means always having the whole transcript at your disposal all the time – never separating any particular utterance from its context. In this case we found that the stronger meaning that came through was a sense of excitement in undertaking the research rather than mere satisfaction with its outcomes. Part of that change was also related to the need to differentiate between categories. We found that this new focus meant that category B was tighter in that all the aspects were concerned with the effect on researchers of participating in the research, with category A being the one focused on outcomes. Thus, we were getting greater coherence within the categories and clearer differences between categories. The shift in emphasis meant that some other consequential changes were made and these appear below, with the changes highlighted.

> Research is successful if the researcher finds it exciting to do. This may be because of the inherent interest of the activity and the various feelings of being thrilled, challenged or exhilarated by successfully tackling complex issues. The excitement may be linked to a number of achievements including being able to meet clients' needs, being able to confirm one's own prior *hypotheses and participating in the act of discovery. The researchers may feel proud of what has been produced and excited by the attention they receive*.

The next week someone else might take the lead role with a particular category and the rest of us became devil's advocates for that discussion. It should be noted that at all times the only evidence that can be relied on is what is in the transcripts. If the evidence does not exist, then any category description has to be adjusted so that it rep-

resents what is in the transcripts. This means that while there might be some ambiguous hints in some transcripts that there is some other issue, such ambiguities would not emerge in the categories due to the lack of explicit evidence in the transcripts. Phenomenographic outcomes don't provide all the detail that is present in the transcripts, they only map the range of ways of seeing for which there is clear evidence. It is not acceptable to infer what else might have been said in the interviews if it wasn't actually said. Again, this points to the importance of getting the interviews right in the first place.

THE ISSUE OF MAPPING VERSUS CATALOGUING

One of the tendencies in the early part of a phenomenographic analysis is to focus on differences. Often a researcher may have 20 or 30 candidates for categories after the first reading. That first reading overwhelms you with variation. The goal has to be to extract the main holistic meanings that are there in relation to the focus – in this case the meaning of success in research. Some researchers can be led astray by focusing on the multitude of details to the exclusion of establishing a smaller number of more holistic meanings. The former can lead to a kind of content analysis in which you can list the large number of issues that are talked about and demonstrate how many people talk about each one – a kind of cataloguing process.

The development of a smaller number of holistic meanings is more of a mapping process. The whole map from a content analysis perspective may look like a mass of details – highly populated urban centres, small towns, regional centres, rivers, hills, lakes, farms, industrial complexes, parks, etc, and a cataloguing process would alert us to how many of each of those there are. In contrast, the phenomenographic process would look for more holistic meanings in which the patterns of such detail vary and give us different meanings. The presence of a highly populated urban centre along with industrial complexes and location on a river or the seaboard might indicate a state capital. A smaller urbanised area, perhaps on a river that connects to the state capital with some industrial activity around, but significant farming land as well, might indicate a regional centre. And so on. Both kinds of analysis are accurate, but the second provides greater insights for me. You can get a sense of the whole from the analysis for holistic meaning. The detail of the content analysis crosses those meanings, but provides fewer insights. Of course, if you had a particular quest that was about providing supplies to citizens depending on where and in what conditions they live, the content analysis approach

might be very appropriate. But if you want to use the data to get a picture of the different types of environments that exist, then the holistic mapping process is to be preferred. For better or worse, phenomenography is concerned with the latter. That may be a disappointment for some people who would like to get outcomes that enable detailed comparisons of individual cases. My only answer can be that phenomenography is not the right method to use for those purposes. If you really want individual descriptions then you need to use a different method.

THE VALUE OF AVOIDING LABELS UNTIL THE END OF THE ANALYSIS

You will see from earlier pages (and by reading Appendix A) that as you proceed through the analysis, the category descriptions change as you try to maximise differences between categories and maximise coherence within categories. If, in version 3, we had called Category B 'Researcher satisfaction' rather than simply Category B, there would have been a psychological tendency to try to find evidence for this label. Giving labels early in the analysis tends to limit further development of the category description. Providing a full 'rich' description better facilitates adjustment of the description with each iteration. In the end, we did use the label 'satisfaction', but the description had by then become much richer than it might otherwise have been.

In another project some years ago, the analysis progressed through 16 versions. I compared successive versions with each other of a particular category and found small changes of the kind you can see above for category B between versions 3 and 4 in this project. However, when I compared version 16 with version 1 in that other project, I found that there was nothing left in version 16 from the first version. Fifteen small iterative changes had resulted in complete change. Early labelling would limit such changes.

THE KEY ISSUE OF CONSTANT FOCUS

You may have gathered already that sometimes researchers can become distracted during the project and follow paths that are in the end unproductive. There is a need to remain focused throughout and constant vigilance is required. You begin by developing a coherent notion of the purpose of the project. Just what is the phenomenon being investigated, how will it be researched, what kind of outcomes are sought, and how will they be used? These questions contribute to the project planning, but the answers to the questions provide the

framework for the conduct of the project, and focusing on that framework at all stages is essential. In the interviews, the purpose is to find out the different ways that the target group see the particular phenomenon. This demands that the interviewer communicates clearly and consistently what the interviewee is being asked to comment on, interacts in a way that elicits a full elaboration of the way the person sees the phenomenon, and refrains from introducing any new content beyond the planned introduction while making the interviewee feel comfortable and willing to reveal all their thoughts about the phenomenon. This often means referring the interviewee back to things said earlier and asking for clarification and explanation. Perhaps engagement in strategic listening is a key capability needed, as well as the ability to comfortably get the interview back on the research focus if it drifts away.

In the analysis, it is important to be reading for a particular purpose. As a general rule, I read transcripts with the following thoughts in mind. If the interviewee is saying this about X or Y, what must the phenomenon mean to them? If they are now saying Z as well, does this change my interpretation of how they are seeing the phenomenon? It is possible to become distracted and to begin to analyse the various ways of seeing X, for instance. There is a greater danger of losing focus in this way if you cut the interview transcripts into pieces and re-assemble the similar pieces from different transcripts together. I prefer to read key statements and then move backwards a few pages and read forward, going several pages beyond what was regarded as the key statement. I then ask myself about the significance of the key statement with respect both to the focus of the study and the meaning you can ascribe to the statement given the context in which it was provided.

As you will see in a moment, it is not difficult to lose focus and to avoid it requires constant vigilance. Anchoring all analysis to the transcripts alone, reading forward and backwards around key statements, and using the devil's advocate process, all assist in maintaining focus during the analysis.

It is acknowledged, of course, that the object of study, the focus of the research, is never completely separate from the researcher. The research outcomes are not 100 per cent independent of the researcher; they are relational. However, the procedures described above are intended to maximise the extent to which the research outcomes are influenced by the subjects and to minimise the extent to which they are influenced by the researcher's perspectives.

THE REMARKABLE EXPERIENCE OF SEEING SOMETHING NEW EACH TIME WHEN READING THE SAME TRANSCRIPTS AGAIN AND AGAIN WITH A DIFFERENT PURPOSE

Something that I have observed every time I have undertaken a phenomenographic analysis remains a source of joy and a motivation to continue with repeated analysis of interview transcripts. The observation is that as you proceed with the analysis, each new reading of the transcript brings new insights. What you see when you read something is affected as much by what you bring to the task as it is by what is in the transcript you are reading. I am sure literary scholars and others would be able to explain that in more enlightened ways than I can, but the observation leads me to conclude that going through five, ten or fifteen versions of the categories of description is necessary. I don't believe you could read the transcripts once and then write the final categories of description. After the first reading, with the draft categories written, you read the transcripts again with different eyes. The draft categories guide your reading, but you are looking for evidence to undermine that draft representation – to test the coherence of a category description or to question the difference between two different draft categories. Aspects of the transcripts that were not seen as significant before become significant now. You see them afresh. Despite having read the transcripts many times, it seems like you are seeing that aspect for the first time. Every new reading of the transcripts is a new experience. Perhaps when it ceases to be like that is when you've reached the last version.

DO YOU GO BACK AND CHECK THE OUTCOMES OF YOUR ANAL YSIS WITH THE PEOPLE YOU INTERVIEWED?

My answer to that question is a qualified 'No'. Let me take the general issue first and the qualification later. The aim of the phenomenographic interview is to help the interviewees to express as completely as possible their perspectives on the phenomenon displayed through the opening scenario. The interviewer should take care to do two things – to facilitate the exposure of as many aspects of the interviewee's perspective as possible and to guard against influencing the nature of those aspects elicited – beyond what is catalysed by the opening scenario or any further planned interventions during the interview.

There are several reasons for this approach. The first reason is that in reporting the outcomes, it can be unambiguously stated that these results stem from the responses of these particular people to the given

scenario, with the same scenario being presented to all interviewees. This was elaborated in earlier sections. The second reason is because the analysis is of all the transcripts together; the categories are not derived from individual transcripts. You might produce five categories of description and each of these owes its meaning as much to the differences between the categories as to the common ideas within each category.

Hence, you want the transcripts all to be about the same issue since they are being analysed together. So you don't go back to the interviewees with the analysis outcomes and undertake 'member-checking' as is common in other qualitative methods. First, it would not make much sense to ask an individual interviewee whether one or more categories fit their perspective since the categories were derived from a range of transcripts and not just their own. The individual interviewee is not in a position to judge. Second, once you begin any subsequent conversation about the analysis, you are introducing new material and you might expect any interviewee now to see the phenomenon differently. Learning will have taken place. Anything they say is just like the comments of an interviewee when the original interviewer accidentally introduces new material. The interviewee's comments are no longer in relation to just the original common scenario; they are related to the new input. It is possible to do this kind of member-checking, but you would need to do an extra analysis of the new material as well. However, this would not change the original analysis which is related to the responses to the original scenario.

Now there is a qualification. What some phenomenographers do is take the analysis back to groups of people familiar with the phenomenon. This may include the interviewees. What is looked for is whether or not the outcomes have face validity. Often such checking is done using focus group discussions. Note that the purpose is not for each person to recognise one category that exactly describes their perspective. The phenomenographic method is a mapping process. The aim of the focus group discussions would be to test whether the group of people see the categories as encompassing their range of perspectives. If the interviews have been carried out well, then the feedback will be positive. This means that getting the interviews right is a key aspect of doing phenomenography properly.

DEALING WITH THE EMOTIONS – THE ISSUE OF MUTUAL TRUST

The descriptions I have provided throughout this text have tended to be procedural, with some reflections about process. However, phenomenographic research is a part of life and emotions play an

important role. I think I hinted at that earlier when I spoke about the need to frame an interview in a way that is non-threatening to the interviewee. A well-conducted interview inevitably results in the person interviewed revealing something about themselves they had not expected they would. Sometimes they become aware of aspects of their own thinking or feelings that they hadn't realised themselves before. This is because the phenomenographic interview is the vacuum cleaner of data gathering. You press into every nook and cranny in an effort to find out what the interviewee's perspective is. So it is very important to establish proper procedures both to meet ethics requirements and, perhaps more importantly, to ensure that the interviewees feel comfortable and that their willingness to cooperate is never abused. It is for this reason that no published material ever provides quotes from interviews that could identify the interviewee. This assurance should be given and should guide all writing about the project.

During the group analysis, members of the research team are also vulnerable. At all times, but especially the first time you take the lead position, being the target of devil's advocacy from (in this case) four of your colleagues is a bit scary. Their aim is to question your analysis, even to undermine it completely perhaps. Intellectually you can acknowledge the reality that this is one step towards a better outcome. But emotionally it still feels like you are being attacked. You've given it your best shot and they are pulling your analysis to pieces. It is important that, as soon as possible, the team of researchers establishes mutual trust so that these processes cease to be disturbing. Perhaps that is an unattainable goal so all members of the team need to be continually sensitive to their colleagues' feelings – not to change what the group does (that would defeat the purpose) but to change how they do it (perhaps by making the devil's advocacy process and its progressive role more explicit) whenever one of their colleagues appears more vulnerable than usual.

Perhaps I should finish this account with a confession. I think that I sometimes do cause my team colleagues more grief than I should. I think I am the kind of person who enjoys phenomenographic analysis (in fact I know I am!). I like the process of producing something new knowing it is much better than the previous version, but also knowing that it will itself be changed by further work and improved significantly. So I engage either in the defence process or the devil's advocacy with a great deal of energy and excitement. I think sometimes this causes my colleagues stress and it is an example of the problem of balance between academic zeal and human compassion and caring. It is a continual struggle, but I know what my goal has to be.

CHAPTER 3

A rigorous journey into phenomenography: From a naturalistic inquirer standpoint

Pam Green

Questions: A beginning

The journey into phenomenography began with three central questions about which I was curious: How do active researchers perceive of research? How does phenomenography really work? and Where does this approach to research fit, given my own research history or baggage? This chapter addresses the first question somewhat, but concentrates mostly on the latter two by retracing the phenomenographic journey involved in a three-year project focusing on researchers' conceptions of what counts as successful research. The journey is retraced through the exploration of similarities to, and differences from, previous ways of researching and, in this way, sheds light on the latter questions. Given that there was a constant interplay (especially at the beginning) between my 'research baggage' (mainly related to naturalistic inquiry) and phenomenography, the chapter explores such variation. A comparative discussion seems appropriate given that phenomenography is founded on variation theory (see Marton & Booth, 1997) in which differences are used to highlight a range of ways of seeing. However, consideration of the three questions that sparked the journey is made prior to the presentation of the comparative exploration.

The first question pertains to the ways in which researchers perceive of research and is elaborated fully later in Chapter 9. This question arose out of an inherent interest grounded by more pragmatic views located in the match (or mismatch) between strategic goals (both governmental and university based) and actual perceptions, as well as the nature of the existing literature on research. A phenomenographic study of how researchers perceive of research seemed to

provide a possible way to break away from the textbook notions of what constitutes research. This was very enticing as for years I have listened to frustrated colleagues, both staff and research students, lamenting the dearth of honest, down to earth versions of what constitutes research and just how research proceeds, as well as what counts within the research journey. It seemed likely that research grounded in variation theory might expose some ideas beyond the notions contained within the general research literature. In turn it was hoped, by exposing a wider range of conceptions surrounding research, that the study might inform what is seen to count as successful research and extend how we view and value differences in terms of research practices and outcomes.

The question of how does, or rather how might, phenomenography work related to a much awaited journey into phenomenography. When the 'right' kind of research question arose that lent itself to phenomenography, there was opportunity to focus on this question of methodological workings. I was genuinely curious to work with phenomenographic inquiry in ways beyond the purely academic. I had engaged with phenomenography in terms of theory through my own reading, networks and research students, but had not worked on a study based on this approach. A key drawcard for me was the opportunity (and challenge) to explore phenomenography firsthand – in particular the experience of phenomenographic interviewing and that of team analysis. Both proved to be quite different from the interviewing styles and analysis techniques that I had utilised within naturalistic inquiry (and indeed all other approaches in which I have engaged).

Coming to the study with the research methodological baggage of a naturalistic inquirer meant that I was filled with further questions based on a previous way of working. For instance, while I trusted phenomenography as a significant methodology, I was accustomed to a strict list of strategies in the name of trustworthiness and these were suddenly irrelevant and non-applicable. I wondered about the issues of rigour. With no triangulation, how could one check data sources? Within only one method (interviewing), how could one be sure to gain all of the data needed to answer the question at hand? Without member checking (taking the data back to participants), how could one check the data? So many questions arose for me at the outset. While I could see beyond my 'baggage', it did cloud my thinking at times but also enabled me to look critically at the approach at hand and check for rigour.

Starting points: Crucial similarities

Research paradigms

While many questions highlighted differences between approaches there were similarities. In a sense, if the approaches had been too different in overall theoretical positioning, I perhaps would not have embarked on a phenomenographic journey at all. If the research paradigm or key underpinnings had differed significantly, theoretical shifts in terms of what counts as knowledge (epistemological issues) and how we know what we know (ontological issues) would have been too great. This was not the case as both approaches subscribe to an interpretivist stance. Such a stance is based on the notion of multiple realities. In other words, reality is neither singular nor fixed. Rather, realities are constructed from interpretations made as a consequence of interactions within the world. As I have noted elsewhere, such a theoretical stance assumes a subjective epistemology in which the transactions between the researcher and the research participants create understandings that are value-mediated or subjective (Green, 2002, p.6). The distinctions between epistemology and ontology are, thereby, blurred.

While both approaches fit within this theoretical position, the ways in which this is played out differs. For instance, while naturalistic inquiry focuses on the context of the research site as the key to meaning, phenomenography does not. Naturalistic inquiry is often bound up in investigations of individuals with respect to viewpoints, behaviour, discoursal practices, and so on. In order to make sense of such data, the context in which the research participants are located within that particular time, space and place is deconstructed (or at least taken into account). Not so in phenomenography. I wondered about this as for the most part I am interested in the individual. However, phenomenography does enable individuals to voice their perceptions of a given phenomenon, but undertakes the analysis in a way that goes across individuals and across contexts.

'Bottom up' processes: Grounded in data

Another similarity is the inductive nature of both research approaches. 'Bottom up' modes of working, or processes of induction, are utilised where interpretations or findings are grounded in the raw data. Rather than a 'top down' approach in which hypotheses are constructed and then tested (deduction), inductive processes start from

data collected in the field and move up conceptually. As data are analysed and re-analysed, ideas form, and findings arise from processes of induction. In this sense both research approaches discussed in this chapter reside in ways of working that are grounded in the data, and take the stance that being 'true' to the data means referring directly to raw data and using the meanings found in the text of the participants rather than applying concepts drawn from elsewhere. While naturalistic inquiry (Green, 2002; Lincoln & Guba, 1985) explicitly claims to be based on grounded theory (Glaser & Strauss, 1967), phenomenography does not. Yet there are similarities with respect to the ways in which data are analysed in that there is strict and constant reference back to the data, whether in the form of open coding (as in naturalistic inquiry), or in the development of categories through processes of iteration (phenomenography) of transcript analysis.

Sampling

Purposive sampling (Patton, 2002) or purposeful sampling (Lincoln & Guba, 1985) refers to the purposeful selection of a given sample. This is another similarity between the two approaches discussed here. Phenomenography aims to maximise the variation in ways of seeing and the choice of characteristics of the participants is driven by that goal. Thus, maximum variation sampling is used as a means to that end. While naturalistic inquiry uses purposive sampling, maximum variation sampling may be used, but equally an enquiry researcher might choose critical case sampling, or typical case sampling (Patton, 2002, pp.234–236).

Outcomes

An essential criterion for me in order to be positioned to engage with research pertains to the stance on outcomes. In developmental phenomenography (Bowden & Walsh, 2000), as opposed to pure phenomenography (Marton, 1986b), the research is designed with the intention that there will be practical outcomes. Implications for learning and for practice abound. The research is intended to inform and influence practice (as well as add to a body of knowledge). In other words, research is not conducted merely for its own sake, but rather to inform and improve practice. In order to be able to engage in research in a way that is highly motivated and focused, applicability is essential.

What counts is crucial

Given that some of the basic tenets of what counts for me as researcher in doing meaningful research (theoretical perspective, inductive processes grounded in data, applicability) were in place, I was positioned in such a way to cope with (though not always accept from the outset) the differences between the two approaches. I was most concerned about the essential aspect of rigour, but the further I continued on this journey of phenemenography, the more this concern dissipated. Before a close look at this issue, it seems appropriate to discuss the method of data collection, namely, interviewing followed by the processes of analysis.

Interviewing

Phenomenography uses interviewing as its primary means of data collection, unlike naturalistic inquiry that insists on at least three data collection methods. In our study of researchers' perceptions of research, there was a team of five academics. We decided that, in order to maximise consistency in terms of questioning and the use of prompts, thereby minimising researcher impact on the data, the interviews ought to be conducted by one person. This became my task.

Although well experienced in the conduct of qualitative interviewing (from the open interview to the tightly structured – with a strong preference for the former rather than the latter), phenomenographic interviewing is a little different. The interviewer needs to avoid introducing new material that is not part of the planned interview structure for all interviews and cannot ask additional impromptu questions beyond those of prompts. That is certainly the practice of John Bowden, the experienced phenomenographer in our research team who has elaborated this view in detail in chapter 2. While it is acknowledged that the selected scenario does drive the interview and therefore the data yielded, the interviewer must take utmost care to avoid adding her own concepts or ideas to the interview in an unplanned way. Furthermore, the scenario presented must work to produce the kinds of data needed to address the focus of the research. Consequently, piloting is essential.

Preparing to interview

In the study at hand, I conducted three pilot interviews with colleagues who were not to be included in the sample. Prior to those

pilot interviews, John Bowden conducted the planned interview with me as interviewee. This provided valuable data from which I could focus on interviewer techniques. I then listened to the tapes over and over to consider and note methods of prompting as well as ways to facilitate contrasting comment without detracting from the rigorous data. This exercise yielded the following types of prompts or pointers that I then tried out within the pilot interviews.

Seeking clarification:

'Tell me more about that …'

'Describe that to me from start to end.'

'Tell me how you felt about that …'

Playing the naïve:

'What do you mean? I am not clear …'

'Your substantive area is not my own and so there are some things here that I am not clear about. (e.g., You used the term 'XXX', can you define it for me.)'

Exploring contradictions:

'It is interesting to me that earlier you noted that X was significant, but later you talked about Y. These seem to contradict each other. Can you tell me about that?'

Piloting

After this exercise in getting to know phenomenographic interviewing through active and critical listening, I conducted three pilot interviews that were audio taped and transcribed verbatim (as are phenomenographic interviews).

The original scenario put to the interviewees was as follows:

'I am going to ask you to tell me about some research that you have been engaged in. The interview will be in two main parts.

First, I would ask you to tell me about some research that you have been engaged in that you view as being successful. Describe it to me from start to finish and tell me how you felt about it.

Second, I will ask you to tell me about some research that you have been engaged in that you view as being unsuccessful. Describe it to me from start to finish and tell me how you felt about it.'

The first pilot interview revealed that the scenario assumed that research could be clearly defined as either 'successful' or 'unsuccessful'. This seemed far too simplistic and the interviewee struggled to contain his examples into one or the other categories. Thus, the scenario needed varying a little. I altered the scenario only slightly in terms of actual word change, but this made a massive difference in the kinds of data gained and in the ability of the interviewees to tell a story or two about research. The re-wording, or rather additional words, also enabled the interviewee to select, if need be, one instance of research and use it for both parts of the interview that focused on the nature of successful research. The change in wording was simply a move from the above to the following (differences shown in bold):

> 'I am going to ask you to tell me about some research that you have been engaged in. The interview will be in two main parts.
>
> First, I would ask you to tell me about some research that you have been engaged in that you view as being successful **in some way**. Describe it to me from start to finish and tell me how you felt about it.
>
> Second, I will ask you to tell me about some research that you have been engaged in that you view as being unsuccessful **in some way**. Describe it to me from start to finish and tell me how you felt about it.'

Further, a third part was added to the latter part of the interview in order to maximise the opportunity for contrast and to enable the participant to elaborate on reasons for choices made and what such choices revealed about research. It also enabled the participant to clarify what had been said, to explain or reflect on any apparent contradictions, and to theorise where appropriate.

> 'You have now told me about instances of research that you view as being successful in some way, and some that you view as being less successful in some way. Can you compare the instances and tell me why you selected them?'

The piloting also showed the need to resist attempts by interviewees to hear my view. The following strategies show some of the ways in which I tried to keep the interview on track:

> *Resisting being caught up in opinion:*
>
> 'I want your perceptions here. My view is not relevant here.

While I am happy to talk with you later about my view, I would really rather focus on your view now.'

Getting back on track:

'I don't mean to be pushy, but I would like to hear more about …'

'No, I don't want an institutional (or a textbook) view here. I want your view.'

'Thanks for that, but could we return to the scenario? Remember I asked you to tell me about …'

Recapping:

'Can you tell me why you chose the first story of research to illustrate success?'

'Can you recap the successful elements? The unsuccessful ones?'

Check for gaps:

Check to see that both feelings and descriptions have been provided, for example:

'Thank you for describing the research in detail. Could I now ask you to go back and tell me how you felt about it?'

Allowing for theorising:

Allow for participants to theorise from their experiences where appropriate, for example:

'What did that experience mean for you in terms of how you view success in research?'

'How did it fit with your existing view?'

'How did you theorise from that practical experience?'

The interviews

The actual research interviews were conducted within a slice of time. After the pilot phase, I interviewed regularly within a two to three month period dictated by issues of access. Twenty-four interviews with RMIT researchers (across disciplines, male and female, experienced and very experienced 'active' researchers) were conducted. The interviews were of about 40-60 minutes in duration, and transcribed verbatim. They were conducted in the location of the research participant's choosing and at a time deemed convenient. Prior to each interview, information about the study was provided in the form of a plain language statement and a consent form was signed in keeping with the RMIT research ethics guidelines.

The interviews yielded pools of meaning across individuals with respect to what counts as 'success' in research. The participants told

their own stories, and reflected on what these stories meant for them personally and/or professionally. Some participants used the interview as an opportunity to theorise a little about their own views of research and of what counts as success for them.

Unlike naturalistic inquiry where follow up interviews are often used, phenomenography normally relies on one interview per participant. Certainly, that was how we conducted this project and there was no opportunity to go back to interviewees to clarify or extend data. Furthermore, there is no need to take the interview data back to participants for checking as the presentation of findings go beyond individual voices so much so that individuals need not worry about misrepresentation. No information is published that can identify an individual. Therefore, the sole interview is crucial as I have indicated earlier. In addition, the time period within the field for data collection purposes can be much shorter than that for naturalistic inquiry. Prolonged engagement in the field does not occur. This was the source of some anxiety on my part as I knew that if the interview did not yield useful, uncompromised data (that is, untarnished data – free of unnecessary researcher influence) the opportunity to gain the given participant's view would be lost. If data are tainted by undue influence of the researcher, the research interview is discarded from that point in the transcript. Sometimes in phenomenographic research whole transcripts of tainted data are discarded. However, the time spent in preparation for the interview means that such worries diminished as the research proceeded, and that if due care is taken then the risk of losing data is much reduced.

Analysis: A team experience

As noted earlier, we conducted the analysis of the transcripts through team processes. Rather than work as individuals analysing data in a solitary way, we used team processes to derive categories of description from the transcripts. While each of us did read and re-read the transcripts many times away from the team, any decisions about how the categories should be formed, and the wording to be adopted as most appropriate, fell to the team.

John Bowden argues that the phenomenographic analysis should not begin until all of the interview transcripts are ready for reading as a whole. That is what we did in this project. This is quite different from naturalistic inquiry that centres on the emergent so that data are analysed all the way through and the emergent findings influence further data collection and therefore the overall research design.

Analysis is conducted by the individual researcher through the whole phase of data collection and again when all of the data are gathered.

Phenomenographic analysis relies on processes of reading and re-reading. For some, this prospect might seem daunting and indeed it is at the beginning when the data seem quite unfamiliar (even when one has done all of the interviewing!). The reading becomes more manageable as familiarity increases, but then the pressure on the researcher(s) to be even more diligent in their analysis grows further. It is essential that the researcher read and re-read (and re-read and so on) from the full set of data – from start to finish. The analysis is derived from a pool of meanings from which ways of conceptualising such meanings are gleaned. This is not a rapid process. In fact, it proved to be a very time consuming but fascinating activity. Commitment by the whole team to the task of analysis is sought at the beginning. It is not very productive nor consistent to have differential analysis teams just because some members cannot attend all meetings. For our study, the focus of success was analysed by a team of five; other foci that were taken up later, such as the conditions of research, and processes of research, were analysed by a team of four and three respectively.

The first attempt at developing a set of categories of description about what counts as successful research was a task that fell to me. This seemed to be an enormous endeavour at first as I felt obliged to derive a set of categories that worked. This was not to be. It was totally unrealistic.

Consequently, in hindsight, important advice for phenomenographic novices is that they should expect that the first attempt at building categories will not be 'right' but will rather provide a way into the data through which the categories can be revisited, and revised as part of the processes of iteration. The iterations, as onerous as they may seem from an outsider perspective, hold the key to meaning. They play a pivotal role in the development of our understanding of the meanings derived from the data pool.

The opportunity to work with a team of competent, critical and articulate researchers who varied with respect to methodological backgrounds, was both irresistible and challenging. Just how challenging the project would transpire to be was not predicted but well appreciated. We read and re-read data so much that our heads swam with complexities. The critical component of such team processes meant that we argued the point, left no stone unturned, grew weary with semantic play, discarded ungrounded descriptions, and shared in the joy and satisfaction when forms of clarity finally emerged.

The power of working within a team of academics who were committed to constructive but critical debate was undoubtedly the greatest strength of this approach. I am convinced that by working as a team we engaged in robust and, at times, potentially confronting discussion that moved us to develop rigorously considered categories. For instance, Nita Cherry tended to raise questions that ensured that we were explicit about why we were doing what we were doing under the umbrella of phenomenography. This meant that we needed to be explicit about the purpose behind our actions as well as the implications for rigour and for other methods. John Bowden frequently played, without orchestration but more through his own natural inclination, the role of devil's advocate. This meant that we were frequently challenged to justify the ways in which we framed the categories. We had to go back to the data constantly and check for accuracy. Questions included:

> 'Where did this term come from?' (avoiding the invention of new terms)
> 'What is missing?' (searching for gaps)
> 'What else might this mean?' (allowing for alternative meanings)
> 'What does this not mean?' (looking for contradictory evidence)
> 'What do 'unsuccessful' notions mean for 'successful' ones?' (using negative instance to show the positive)
> 'What is different about this category?' (trying to maximise difference to find a coherent, consistent and focused category)
> 'How else might this be represented? (looking for another way to show the category – such as the use of grids and concept maps to show relationality).

These processes are based on loyalty to data. An illustrative example comes to mind. At one meeting, John Bowden literally jumped up with an idea and started mapping a new way of seeing one of the categories for success on a whiteboard. It made sense to us all and it looked like an appropriate way to summarise what we had discussed. In addition, I guess that it appealed to us at the end of a very long debate. However, thankfully we adhered to our agreed routine of checking systematically the key terms within the description, only to come to the realisation that in our enthusiasm we had totally reconstructed the category. Not only did we check the references that we had noted in the grids such as those below, but we read the wider context of the transcript – at times re-reading the entire transcript. The

realisation struck that we had constructed a category in such a way that it bore little, if any, relationship to the data. Thus, the newly created version was discarded without further ado. We were even more convinced of the vital role of rigorous processes, such as checking the data continually. Without such mechanisms for checking, the findings would have been well and truly skewed in a way that made no sense, in terms of the data. If any of us had still held doubts about the approach in terms of rigour, such doubts disappeared after this event.

Checking back and forth to the data meant that the categories were very much grounded. Consideration of the possible relationality between categories is needed. Novices should not assume, as it is tempting to do, that phenomenographic categories are necessarily hierarchical. For phenomenographers like John Bowden, such relationships need to be represented in the way they are found in the transcript data rather than simply through some reflective, logical analysis by the researcher. We developed, after many months of team debate in the form of two-hour meetings interspersed by individual checking of the categories against the data, five categories of description. (See Appendix A: Table 8.)

The question arose as to how we would think and make informed decisions about the relationality between categories. There was no inherent hierarchy evident here. My inclination then was to assume that there were no relationships between the categories. However, the use of conceptual mapping based on transcript evidence revealed that there was a two pronged relationship among the categories. This was taken to the team for discussion and we re-drew the concept tree until we felt that we had exhausted possibilities sufficiently and that the mapping worked for the data. This was a new experience to me. Had I worked alone, I would have omitted this crucial aspect of the work. (See Appendix A.)

Looking back at the team, issues of trust were never far from the surface. For team processes to work there needs to be some agreement about ways of working, such as how to give critical feedback and how to handle putting yourself on the line with a new way of representing the data without fear of attack. Explicit talk about such issues can occur as the team becomes established in its ways of working, but these matters need to be noted at the outset and returned to throughout the project. There also needs to be compliance to agreed schedules of work so that momentum can continue.

While there are phenomenographers who work alone on their analysis, I would argue that a team option would normally be preferable. There was a high level of intellectual engagement, critique and rigorous checking of data within such team dynamics. The question of

rigour, for me, by the end of the research processes had been more than answered. I turn now to this issue at the close of the chapter as a means to reflect on the research journey and to emphasise that any early doubts or concerns had faded into history.

Rigour

What counts as rigour in phenomenography varied substantially from the fairly prescriptive list of trustworthiness criteria (credibility, transferability, dependability, confirmability) that is found within Lincoln and Guba's (1985) seminal text. While space prohibits full discussion of these criteria one by one, I will elaborate on a few aspects for illustrative purposes. For instance, the strategies related to credibility, including those listed in the table shown below, are discussed in terms of relevance to phenomenography as we practised it in our project.

Credibility (Gr een, 1995)	**Relevance to our phenomenographic pr oject**
Prolonged engagement: Substantial time and involvement in the field Context r elevant	*Slice of time:* data collection in a confined period Context not r elevant except in setting up the inter view schedule and selecting par ticipants
Persistent observation: Relates to the above Looking for patter ns	Not r elevant Inter views sole data collection method
Triangulation of data methods and of sources: For purposes of checking data and sour ces	Checking occurs thr ough strict adher ence to the data within the inter view transcripts
Peer debriefing: Discussing the r esear ch with a critical but a disinter ested peer in or der to keep the r esear cher honest	The r ole of critical peers is given a place within team analysis
Negative Case Analysis: Search for data that contradicts the findings	This occurs thr ough the checking of data and through the devil's advocacy pr ocesses
Member checking: Taking the data back to participants for verification	Inappropriate in that individual voices ar e not presented in the findings. Instead findings, in the for m of categories of description supper ted by excerpts, go acr oss individuals.

While I have only outlined one of the four aspects of trustworthiness, it seems unnecessary to go any further. The rigour of our phenomenographic project lies in the following:

- preparation for interviewing
- open-ended but focused interviewing technique
- strategies to avoid as much as possible unplanned researcher impact during interviewing (e.g., prompts without adding a new concept, re-phrasing that does not alter the words of the interviewee)
- interviewing: strategies for consistency, discarding tainted data
- strict adherence to the data
- admitting to inconsistencies within transcripts rather than trying to constrain data to appear consistent: that is, refraining from squeezing people into categories
- going back to the data and reading the context, the exact phrasing and so on …
- processes of re-reading and re-reading of the data as a whole
- the iterative nature of the development of categories
- the team processes: critical debate, devil's advocacy, sum of the team being greater than the individual, peer debriefing
- presentation of data: categories of description, carefully considered relationality where relevant, illustrative excerpts from the transcripts.

What emerged from this phenomenographic journey was a strong conviction with respect to the rigour of the approach as well as a profound experiential base and a significant substantive outcome far in excess of the categories that arose out of the numerous iterations. This journey enabled me to add another methodological string to my bow or, in other words, extended my methodological repertoire. Consequently, when I need to find a way to answer a given problem or shed light on a problem at hand I have other ways to contemplate in terms of method. Opportunity for the use of phasing of various methodologies within one project or the use of mixed methods is now more available to me than previously.

At journey's end

The question arises as to where was this naturalistic inquirer positioned at the end of the phenomenographic journey? While previously (even preciously so) aware of the methodological 'baggage' that

I brought to the project, by the end of the journey I had undergone something akin to a methodological conversion. My previous ways of working had been extended to ways anew, and my new passion and preferred mode of researching was located strongly and without apology in phenomenography – so rigorous was the journey.

CHAPTER 4

Interpreting interpretation: A phenomenological perspective on phenomenography

Robyn Barnacle

> Hermeneutics is the integration of the experience of a text into the self-understanding of a person. (Hans-Georg Gadamer)

I came into this study of researcher's perceptions of success in research with a background in phenomenology (primarily through Heidegger and Gadamer) and Continental philosophy more broadly. Phenomenography was new to me; in fact, doing empirical research per se is fairly new to me. As my background is in philosophy, specifically theoretical inquiry, I am still familiarising myself with the ways in which phenomenology gets translated from the realms of ontology into empirical research. I have an interest in the forms that phenomenology takes as a methodology for undertaking empirical research, and I am also interested in what happens to phenomenology in the translation from one realm into the other, the speculative to the applied.

These are the interests that I brought with me to this project. My specific focus was on the nature of phenomenography as a method, its clarity and rigour, and whether I would be able to use it with confidence. In what follows I reflect on these issues, provide an account of my experience of using phenomenography in this study, and examine the questions that it raised for me as a research methodology. Bear in mind that my involvement in this study was limited to the analysis phase, as Pam Green conducted the interviews.

Background: Phenomenological hermeneutics

Coming into this study I felt a broad sympathy with the phenomenographic approach as it seemed to me to be broadly consistent with what I had learnt about meaning and interpretation from my background in the phenomenological and hermeneutical traditions. One

element of this tradition that marks it out as different from other – particularly positivistic – approaches to inquiry is that it foregrounds interpretation and understanding as inherently problematic. Interpretation is considered to involve inherent tension and struggle if, that is, what we are seeking to do is learn something different from what we already know. The implication for those who are seeking to understand the phenomenal experiences of others is that there is a need to challenge one's own familiar ways of thinking and open up to the unfamiliar – the experience of another person.

Within the phenomenological and hermeneutic traditions, specifically the work of Hans-Georg Gadamer (1989; 1976), interpretation does not aim at overcoming difference, but rather dialogue with difference. The reader and text, or interlocutors, must both give – in the sense of giving oneself over, or offering oneself – and also of making room, or transforming, through what is understood. Interpretation should not be about making familiar, but rather, transforming, or challenging the familiar. Interpretation – and therefore understanding – to truly be such, involves crisis[1].

This process is amplified when interpretation is undertaken in a team. Dialogue multiplies, occurring between text and interpreter and between interpreter and interpreter. Meaning is contested. The process of team analysis highlights the crisis involved in all interpretation: the challenge of realising difference, or bringing it to the fore. But within a team situation this is also amplified because it is not just agreement between text and interpreter that is sought, it is agreement between text and multiple interpreters. In order to reach consensus, one must convince others of the credibility of one's interpretation. A case needs to be made and defended.

Formulating categories of description

Our primary concern in the analysis process within this project was to formulate categories of description, or concise accounts of the various perceptions of research success as elucidated within the transcripts. This was an iterative process, involving presenting and discussing cases from the transcripts in an attempt to formulate categories agreeable to the team as a whole. The key directive we followed as a team was that of staying with the transcript. That is, ensuring that the transcripts themselves generated the categories of description rather than any of our pre-conceived conceptions. It is perhaps surprising how long this process took and the number of iterations that were required before the team as a whole was satisfied. Also surprising is the extent

to which the categories were transformed with each of the iterations. Reading is invariably partial, but the process of analysis undertaken in this project demonstrated to me just how partial it can be. This is certainly one of the benefits of working in teams, in that the interpretive process is enriched by being subjected to team analysis and critique.

There is no doubt that the rigour of phenomenography as a method is tied to the imperative to stay with the transcript. The multiple iterations that occurred in composing categories of description within this project testify to this. The reliability of phenomenographic analysis is ensured through the researcher engaging in an iterative dialogue with the text and not predicting outcomes in advance by imposing categories of description. But the extended iterative process is also testimony to the difficulty of staying true to what is said. Phenomenography, as we understood it, seeks to describe, through interpretation, the different ways in which phenomena are experienced (see Bowden & Walsh, 2000; Marton, 1986b). The way that we did this was through identifying relevant passages in the transcripts and interpreting their meaning. This required identifying specific utterances relevant to the research question, all the while remaining vigilant against abstracting specific comments from the context in which they belonged. But the formation of categories of description cannot be achieved without also relating a particular transcript to other transcripts. Every time we moved between transcript and category, the specificity of meaning contained within the transcript inevitably underwent a transformation. The challenge is to look for relationships between transcripts while maintaining the integrity of each phenomenal experience, as well as accounting for the commonality as well as diversity of experience.

Moving from transcript to category of description requires patience and attentiveness. All transcripts need to be read and re-read and determinations need to be made regarding how many categories are needed, whether two categories are in fact one, etc. One thing that I struggled with, despite my best intentions, was that of imposing my own language on the category rather than letting the concepts and terminologies of the interviewees speak for themselves. This was particularly challenging when the transcript itself lacked clarity. It is tempting to draw on ones' own, familiar, terminologies in an effort to clarify poor expression, for example. I found the process of team analysis, however, was a particularly effective way of ensuring that terminologies were not imposed inappropriately. A lack of conceptual clarity, however, is more difficult to deal with in the analysis process. As it is not possible to consult with the interviewee during the analysis

process, it is dependent on the interviewer to address any issues during the initial interview. This makes the interview phase absolutely critical for resolving any clarity and consistency issues. It is inevitable, however, that, despite best intentions, some moments will remain in the transcripts where it is difficult to make sense of what is being said. This is particularly apparent when the speaker digresses repeatedly, as often happens in conversation, or when the same phenomenon is described in multiple, and occasionally conflicting, ways. Clearly the complexity of the subject matter is a key factor in this regard. I found that in such instances the analysis process benefited from the team perspective and the additional diligence that it enabled.

Potential misunderstandings

Within the phenomenographic approach, as we saw it, categories of description are not intended to necessarily correspond to the perception of any particular individual. Rather, they are compositions, formed out of an aggregate of similar perceptions. As a consequence, we treated the transcript as maintaining a certain independence from the speaker and attended to the various accounts of phenomenal experience contained within the texts as a group, rather than to the singularity of individual experience. As a consequence, any one transcript could contribute to a number of the categories that we formulated, and even potentially conflicting ones.

At times, I, and other members of the team, struggled to come to terms with this aspect of our approach. It is easy to confuse, or equate, the category with the individual. That is, mistakenly believe that a single category should equate fully with the perception of a single individual. While this may occur, if, for example, only one participant in the study expresses a certain perception, this is the exception. Instead, our aim, in using a phenomenographic approach, was to find similarities across the perceptions expressed by a group of individuals. Our focus of attention was on the characteristics of the perceptions rather than that of the individuals.

I also struggled with another aspect of the category formation process. I had a concern that peoples' perceptions were, wrongly, being made to look neat and coherent. An important feature of the phenomenographic approach, as we saw it, is that participants are asked to describe, rather than defend, their perception of something. The anecdotal and reflective expression that this elicited invariably lacked the coherence and organisation of structured argument. By contrast, however, our aim in formulating categories of description

was the creation of neatly and coherently structured phenomenal descriptors. I believe a misunderstanding can occur if the coherence of the categories of description is taken as suggesting that peoples' perceptions are always coherent or conform neatly to unitary or singular categorisation.

This is a problem that is not unique to phenomenographic analysis, and can be dealt with in the way that the findings of a study are framed and introduced. However, it is important that researchers using this approach are clear about what phenomenographic categories of description are. That is, that they are not determined in advance of textual analysis, but neither are they representations of individuals' perceptions. Instead, phenomenographic categories of description are situated somewhere between these two dimensions. They are generated by the transcripts and are indicative of the unique range of perceptions expressed within a group of transcripts. As each category is usually an amalgam, inconsistencies, or a lack of coherency within individuals' perceptions, will often remain concealed.

The interpretive process

The interpretive process in the phenomenographic approach is devoted to the task of formulating categories of description. I found engaging in this process within a team context to be particularly interesting and stimulating. Fortunately, the team who participated in the study seemed, like me, to be fascinated by this as well. We probably devoted too much attention at times to discussing not only the merits of a particular interpretation, but also the nature of interpretation as such. My understanding of the meaning-making process has been greatly enriched by this experience, and I am most grateful for the generosity of my colleagues in this regard. Perhaps it is a luxury that researchers can rarely afford, but being able to discuss epistemological and other issues during a process of textual analysis is, I believe, of great value. Most particularly, I found the process of team analysis provided a rare opportunity to gain insight into, as well as critique, my own interpretive habits. This may have made the analysis process longer than it might otherwise have been, but it was certainly more rewarding.

During the project, my attention was drawn to a particular aspect of the interpretive process. This was the seduction of the text, or the way in which certain terms or ideas snag, or attach themselves, to certain readers. For me, it was the references in some of the texts to

serendipity and luck as factors leading to successful research outcomes. I was captivated by such admissions for they seemed to me to point to that which is beyond the control of the researcher and also outside of the sanctioned research process. To my mind, such references reveal what lurks, as well as beckons, alongside the otherwise planned and controlled research process. Serendipity introduces a wild card, with potential benefits as well as pitfalls. How does the researcher negotiate this wild card, i.e., hedge themselves against bad luck as well as be ready to respond to, or take up, good luck? To what extent does success in research depend on a researcher being able to do this? What is the relationship between successful research and serendipity?

Nobody addressed this issue explicitly in the interviews, indeed, participants in the study were discouraged to theorise about or speculate on what constitutes successful research. Rather, they were requested to describe examples of successful research and it was on the basis of those descriptions that we, as interpreters, developed accounts of how successful research is perceived. As discussed above, the analysis process involves moving from what participants described as successful research to the creation of categories of description that each constitutes different examples of how successful research is perceived: the nature of successful research as a phenomenon. And herein lays a key issue for textual analysis, broadly, but also for approaches informed by the phenomenological hermeneutic approach in particular. For, what is the relationship between what is said and what is meant? We all know from a very early age that the two are not the same – sometimes 'yes' means 'no' and 'no' means 'yes'. This is also something with which phenomenological hermeneutics has also had to deal. As Gadamer says:

> [Revealing what is unfamiliar] …also means apprehending what is said to us, which is always more than the declared and comprehended. …Understanding speech is not understanding the wording of what is said in a step-by-step execution of word meanings. Rather, it occurs in the unitary meaning of what is said – and this always transcends what is expressed by what is said (1976, pp.100-101).

The question of the relationship between meaning and what is said is particularly pertinent when using a phenomenographic methodology that implores the interpreter to 'stay with the transcript' or, in other words, to remain true to what is actually said in the text.

Having a phenomenological hermeneutic background made me both open to and suspicious of such a directive, precisely for the reasons suggested above. For what *is* the text, where does it begin and where does it end? Must we, as phenomenographic interpreters, strictly adhere to individual words, mining each for every skerrick of potential meaning? If meaning is not reducible to individual word meanings, as Gadamer explains above, then what does it mean to stay with the text; to remain true to what is said? How is it possible to discern between what is said and *what is said*?

The role of the question

For Gadamer, a text is not a dumb or empty receptacle to which meanings are applied. Instead, it is an active player in the interpretive process, asserting itself through withholding or resisting easy assimilation into an interpretive scheme. At the same time, however, a single text can allow for multiple legitimate interpretations. What makes the difference in terms of what counts as a legitimate interpretation of a text is often what questions we ask of it – what we want to find out.

The role of the question in determining what is read, or what counts as legitimate reading, was particularly apparent in this study. Our reading of the transcripts was explicitly directed from the beginning by the key question: How do researchers perceive of successful research? This meant that much of what participants spoke about was treated as, and remained, peripheral in that we searched for, and focused on explicit references to success. This troubled me. Not because of an urge to attend to all possible stories within the text, in an effort to ensure that nothing was ignored or remained unattended to, a sort of ethics of reading. Rather, what troubled me was our treatment of what was not said explicitly; the fact that we did not attend to shadows. Luck or serendipity is one such shadow. While luck was only occasionally spoken of directly in relation to successful research, it was often alluded to. Was serendipity the hinge between success and failure? Finding the answer to this question is not what interests me here, so much as the question of why we did not ask such questions in our analysis. Was it just a matter of interest, of time etc, or was it a result of the methodology?

The focus on explicitness

It is clear to me that the directive to 'stay with the transcript' is the key strength of the phenomenographic approach. But this directive also

has limitations. It is limiting, for example, in that the analysis is restricted to that within the text which is made explicit. Elements of shadow, or aspects of phenomenal experience that are ambiguous and undefined, are not attended to. This is how I felt about the fact that serendipity was not explored within our analysis. We debated the issue during the analysis process, but the team felt that there was not enough evidence within the relevant transcripts to suggest that serendipity is a condition for success, rather than just an element of the research process. It would have meant 'reading *beyond* the lines' and speculating about the implications of what was said, rather than just attending to what was actually said. I feel, however, that our project would have benefited from doing this. It would have enabled engagement with some of the richness of the transcripts that a focus on explicitness leaves unexplored. Such an analysis, however, would necessarily have taken us beyond phenomenography and would therefore have required an alternative methodology.

Whether a secondary analysis of this kind is undertaken following phenomenographic analysis or not, I feel that some recognition is required of the ambiguities contained in the transcripts that the phenomenographic method leaves unexplored. I am concerned that if shadows and implications are left unacknowledged, a false impression can occur, suggesting that perceptions of phenomena can always be made transparent or even admit to transparency. In isolation, the neatness of the categories can suggest this. Coupled with a discussion of some of the ambiguities that come through, however, the categories can be more fully situated in the complexity of the transcripts. In this way, inquiry benefits from both what admits to clarity and what does not. While the former may offer the most direct insight into a phenomenon, the latter can be suggestive for further research. It can also be food for thought, promoting a deeper understanding of the complexity of human understanding and perception.

Going beyond the transcripts

I don't intend my comments to necessarily signal a reservation with the phenomenographic approach. Indeed, it has to be recognised that the production of categories of description does not necessarily signal the end of the research process. There are questions that this process will not answer and that can only be asked once the categories have been established. Along with questions like those above that may emerge out of the transcripts, the researcher might also ask, for example:

- How effectively did the participants describe what they do?
- Have important elements been omitted?
- Did the participants sanitise, exaggerate or embellish their descriptions of what they do?
- How do participants' descriptions accord with or depart from conventional accounts of the same phenomena?

The process of textual analysis will not answer these questions but it will provide a basis on which these types of questions can be pursued. Addressing these questions will require going beyond the transcripts and reflecting on the findings in relation to the broader context. It is important that this part of the research process is not overlooked.

Conclusion

I learnt a number of things from this project, both about phenomenography and the research process broadly. What appealed to me most about phenomenography as a method of doing textual analysis is that it ensures that the transcript remains an active partner in the interpretive process and that the phenomenal descriptions that are elicited emerge out of this two-way, or dialogical, exchange. This is both challenging and stimulating for the researcher, in that one at times struggles to stay with the data but also benefits from gaining genuine insights.

The element of the phenomenographic approach that I most struggled with was that of understanding the implications of the imperative to stay with the text. The questions that this provoked for me during the interpretive process remain, although I do not expect that they will ever be fully resolved. Moreover, I am grateful for this struggle – interpretation should be fraught!

Overall, I recommend the phenomenographic approach for formulating rigorous and insightful categories of description. I would also recommend, however, that researchers using the approach do not forget those ambiguous aspects of phenomenal experience that do not readily lend themselves to categorisation. A study can only be enriched by also attending to these.

Note

[1] For a useful discussion of 'the crisis of interpretation' see Michelfelder & Palmer, 1989, on the 'Gadamer-Derrida encounter'.

CHAPTER 5

Phenomenography as seen by an action researcher

Nita Cherry

Introduction

I approached this research task as a relative novice in relation to phenomenography. I had previously undertaken to check some categories (developed by another researcher) against a set of transcripts, but without much knowledge of the assumptions built into the method. The invitation to participate in this project was unexpected and very welcome.

We were invited to recount our experience of the process as a journey and this journey was intellectually stimulating and challenging – as well as being a really worthwhile process of professional development as a researcher.

My research experience has been focused for many years on the approaches and thinking of action research. The things that I most associate with that tradition are its intent and values in relation to collaboration between researchers and the research question (there are no 'subjects'); its concern with the iteration and close connection of experience, reflection and learning; its keenness to explore the nuances and diversity of unique individual experience (and framing of that experience), as well as to track the full range of collective experience; its comfort with emotional content; its capacity to incorporate texts that are not purely verbal; and its active quest to explore the 'thinking behind the thinking' of those involved.

All of these things coloured my initial engagement with phenomenography because they set up 'criteria' through which I found myself assessing it. I couldn't help asking questions like: 'Under what circumstances would I use this approach or recommend it to others? Can it be used in the context of action research, or is it completely 'different'? What skills and mindsets are needed to use it effectively?' As it turned out, these questions were pretty much like the ones suggested to us to structure this chapter.

It became clearer to me that my questions originally came because I was an action researcher trying to get to grips with the

differences in approaches; but that as our research project went on, I was really wondering about how this approach might be used in the context of action research itself.

It seems to me that action research processes generate a very wide variety of data in very diverse ways – and that once generated, they bear examination in diverse ways, provided that the processes of reflection on data are collaborative, socially contested, involve 'critical' subjectivity, and lead to further action as well as the development of theory. Can phenomenography be used as a method for engaging with data in the context of action research? My answer to that question would be 'certainly'. And this chapter really describes how I came to that conclusion.

Some key assumptions underpinning the approach

The first questions that popped up for me were around some of phenomenography's ontological and epistemological assumptions. For example, I wondered how best to represent the character of the categories we were developing. They are the result of a very particular social activity during which a small number of people discuss, debate and finally agree on a set of descriptions which make sense to them in a very particular way.

And they are not necessarily categories with which any one person in 'real life' would identify. Nor are they meant to be. They are constructions which incorporate key elements from the statements of a number of people. I noticed that one of the members of our team had a particular aptitude for what struck me as 'elegant' phrasing of categories – phrasing that was not overly long, but seemed to capture the essence of an idea very neatly. And I soon experienced a keen intellectual satisfaction in the process of developing and refining the categories.

Nonetheless, I found myself asking the question: What do those categories really represent in the context of lived experience? Now I think those are legitimate questions and they could be answered in several ways. For my present purpose, the issue is whether, in an action research setting, there are times when developing categories in this way could be helpful. And I can think of several. For example, this would be a very useful approach if a team of people wanted to detach themselves from their very particular 'local' or 'unique' perspective – and construct a different kind of 'knowing', a way of seeing the world that makes sense at a different level, is more consciously and deliberately socially constructed, and may create options for being, doing and learning that are richer and more helpful.

In action research projects, there are many times when the parties might want to stand back and rigorously consider what we all just 'said' or 'wrote', in a way that detaches us from our own individual lived experience for a while. That happens when there are a number of stakeholders or involved parties who are passionate about, or very committed to, a range of very different viewpoints, but who recognise the need or opportunity to build something together that can incorporate or synthesise these complex alternatives.

It should happen whenever action researchers take seriously one of the major aims of action research, which is to stimulate critical thinking about the deep assumptions which drive thinking, feeling and action. If we look at the text we create individually and collectively in the research discourse, our words can be subjected to the kind of analysis which reveals patterns that we might otherwise be unaware of. Phenomenography is one way of helping to surface and consider the meta-themes that – while not the true story of any one of us – at some level help to define the story of all of us. Seen in this light, the meticulous construction of categories can be framed as a particular kind of collective reflection, a particular way in which shared meaning is created.

The experience that I was able to share in this project was very interesting in this respect. In order to construct categories and check them against the text, each participant in the process ideally needs to be able to do something paradoxical: that is, at times 'let go' of ownership of a particular idea or approach so that the team can create something different and more comprehensive; and at other times, be prepared to vigorously play devil's advocate and prosecute the case for or against a viewpoint. This is a complex reflective task because it requires having a sense of when 'enough is enough' and when to hold to an argument. It also asks that one has the capacity to stand back and develop some 'meta-awareness' of one's own intentions and needs in the debate. A desire to win an argument or prove a point for the sake of it is not always easy to spot in the middle of a vigorous conversation. If the dynamic is not spotted in real time, it could distort the process.

Issues of rigour

My subsequent reading of descriptions of the method has strengthened my perception that each person or team who uses this method constructs their own very particular logic process and, if a team, the social process of discussion and negotiation in order to develop and test the categories. In its very crudest and most obvious form, the pos-

sibility for 'group think' to emerge is an issue, especially if one person is dominant in developing the first draft of categories.

The social dimensions of the process suggest to me that rigour in the process demands complete transparency as to the way that the categories are framed and reframed, and recognition and articulation of the logic and social processes which drove the framing. That deconstruction is a significant piece of work in its own right, requiring not only transparency or reporting, but also critical awareness of the generating processes. Again, it struck me that this sort of critical awareness or critical consciousness fits very well with the action research perspective.

Another issue which intrigued me was the way that the oral text is treated as having an independent 'life of its own', detached from the people who generated it and the circumstances under which it was generated. That challenged me because of my previous familiarity and comfort with the collaborative values of action research. I certainly accept that it is perfectly appropriate as a research method to take text and analyse it without further reference to the people who generated it. This is particularly clear for me in relation to linguistic or aesthetic analyses of text. However, where the research method is intent on extracting meaning from the text in the sense that it somehow describes or explains human behaviour and the intentions behind it, I found myself thinking that it is important to pose very clear questions to those interviewed, and to play back to the person the way they have answered the question, so that they can add to it or qualify it. If they must become disconnected from their data at that point, at least the data is as complete as they wish to make it.

In an action research context, it would be an important part of the reflective process to see if respondents 'recognised themselves' in the categories. If people don't just simply fail to recognise themselves in the categories but are actually confronted by them – as can happen in the development of grounded theory – it is possible that the process taps into meta-patterns of thinking that were not in the conscious awareness of the people who generated the data. For action researchers, the presentation of categories constructed through the phenomenographic process could act as a powerful trigger for such meta-reflection.

I would now be a great deal more confident in a rigorous and transparent category system developed through phenomenography than in more ambiguous methods which do not track how themes or constructs were constructed. A characteristic that really stands is the thoroughness of phenomenography; its requirement that several people subject the categories they are developing to sustained cycles of scrutiny, debate and testing against the data.

Clarity of the method

I had tried to read about the method before participating in the process, but did not readily grasp it. I found I could only really understand it by doing it, and having questions answered as we went along. Some of my questions reflected my action research 'mind set' but many were genuinely open-ended questions about 'how do we do this?'

We seemed to develop a helpful pattern of working in a reasonably short time, and it seemed to be clear what the immediate task was – or at least, how we were proceeding. I have since had the experience of reading other people's accounts of the method and the choices they made in crafting their own particular approach, and found their descriptions very difficult to follow. This reading also alerted me to the fact that there are different ways of going about the process and that these differences are hard to understand in the abstract. I'm not sure how easy it is to describe it – either in general or in particular terms – without literally setting out side-by-side all the iterations in the development of the categories. I would strongly recommend that in order to learn about it, one has to have a go at it.

The influence of past experience

The 'arm-in-arm' approach of action research is of great importance to my mind set and I kept stumbling over it here. As already indicated, I constantly found myself thinking that I would be happier with the method if the owners of the data were involved in the creation of categories. And I kept bumping into my own world view that there is more to me and others than the sum total of my verbal text would suggest. In that sense, text is interesting to me because of the dialogue (whether with self or others) that it starts, and because of what lies behind it.

One of the frames we adopted when examining the transcripts for purposes of phenomenographic analysis was to treat text as a 'snapshot' rather than try to speculate about the motives, intentions, 'mind-maps – and 'journeys' – that might have produced the data. The latter kind of inquiry is second nature to me because of the reflexive inquiring stance required of action researchers. I was also used to the narrative and story-telling style that field notes and journaling can be about in the action research context – and such text is often thick with 'meta-reflection' and self-interrogation, along the lines of 'What were my real motives here? Why am I describing things in this way?

What is my language telling me about the paradigms and prejudices I brought to this encounter or situation?'

So I found the snap-shot stance very challenging. It was also an early introduction to the differences between this method and other text-based methods which actively encourage deliberate speculative inquiry about 'deeper meaning', grounded theory, and critical but unacknowledged assumptions in the text.

Even once I had managed to 'take the people out of the equation' and think of the categories as constructs in their own right, I faced a further challenge. We were asked to stay close to the words in the text and not to form categories out of ideas or constructs out of things that came from our own experience and understanding, so I had to put on hold a tendency to want to inquire about what the categories themselves 'meant' in any psychodynamic sense.

Major changes in thinking

As mentioned earlier, despite all my intellectual challenges and reservations about some aspects of the process, I quickly found that I really liked the 'polishing' of the categories which finally emerged – this involved constant iteration between text and categories, considering different perspectives, and finding ways to both focus and enrich the central ideas.

If done in a highly transparent and iterative way, in the company of others and with rigorous testing against the data, the careful and methodical working and re-working of the data that this method invites is very powerful. I particularly valued these dimensions of rigour, given my disquiet with processes which invite individual researchers to simply immerse themselves in their data and see what themes emerge intuitively, without a subsequent process of critique and review by others. As a result, I would encourage anyone working with complex data, from a large number of people, to seriously consider using some of the protocols of phenomenography.

Devil's advocacy and the cost benefit analysis of the repeated readings and discussions

As a personal experience, my preference for the 'arm-in-arm' dynamics of action research meant that I really enjoyed the collaborative nature of the team process itself and the disciplines of listening and engagement. While we had some very vigorous debates at times, the tone of the conversation was never confrontational. In other words, I

didn't feel myself getting hooked into wanting to win an argument for the sake of it. On the other hand, nor did I feel inhibited in pursuing a line of argument in the spirit of playing 'devil's advocate'.

Our mentor commented several times that we were being very pleasant to each other and that he had experienced teams which became a lot 'hotter'. I could speculate that we all wanted this to be an enjoyable experience, and that we wanted our professional relationships to be at least as strong when we finished as they were at the start. I think we also found, quite quickly, conversational ways in which to suspend judgement, hold open a line of inquiry, and agree to disagree.

On the downside, I think we wasted a lot of time because we enjoyed the process of being together and talking together. It was also very frustrating when people were unable to attend meetings at the last minute and we had to keep stopping and starting. That generated other tensions. While we managed to have robust debate without creating interpersonal conflict, I'm not sure that the team had much patience for really sustained challenge. Time pressures resulted in a fairly constant desire to get to closure of some kind. And that's possibly an inherent problem with something that by definition is time consuming.

When and why would I suggest using phenomenography?

I would really recommend phenomenography to anyone who wishes to bring a high level of rigour to the construction of meaning from text. I would also encourage action researchers to consider how the approach offers another form of collective reflective practice – one that is particularly appropriate for engaging with complex, controversial or deeply help issues and viewpoints.

As suggested earlier, this seems to me to be a very useful approach when people wanted to 'unhook' from deeply owned perspectives and experiment with a different way of 'knowing' and understanding. Sometimes the more passionately committed we are as stakeholders, the more powerful the circuit-breakers needed to help us un-hook. I'm also very attracted to phenomenography as a way of integrating or synthesising complex conceptual alternatives and stimulate critical thinking about the deep assumptions which drive thinking, feeling and action.

To repeat myself, phenomenography is one way of helping to surface and consider the meta-themes that – while not the true story of any one of us – at some level help to define the story of all of us.

CHAPTER 6

Learning about phenomenography: Interviewing, data analysis and the qualitative research paradigm

Gerlese Åkerlind

My induction into phenomenography occurred primarily through my doctoral work, undertaken late in my career. My research background prior to that was primarily quantitative in nature, coming from a positivistic experimental psychology framework – which forms an interesting contrast to the backgrounds of the other contributors to this book. Unlike the other contributors, the greatest barrier for me to overcome in the transition to phenomenographic research was the change in world view associated with a qualitative research paradigm, a paradigm of which I had been completely unaware within my previously positivistic world.

Moving to a qualitative research paradigm

The positivist paradigm associated with quantitative research has historically been the dominant research paradigm, with qualitative research a relative newcomer to the field and still traditionally less prestigious than quantitative research. Over time, I came to realise that this makes it quite easy for those working within the positivist paradigm *not* to realise that there are alternative ways of viewing knowledge, research and reality – at least, it did for me. Qualitative research is then judged by such researchers from a positivist world view, without realising that legitimate alternative research criteria exist. I well remember, some 15 years ago, being involved in rejecting a paper by a well-known phenomenograper because I thought the sample size was too small (N=10). Subsequently, I remember arguing with a similarly well-known phenomenograper that it was impossible

to derive any meaningful results from such small sample sizes because the outcomes couldn't be generalised. 'The responses of even *one* individual would be meaningful', he claimed (a claim I would now fully endorse); 'But what could one individual tell us about how most people respond', I exclaimed!

In contrast, it is very difficult for qualitative researchers, representing the research 'underdog', to be similarly unaware of alternative epistemological and ontological research paradigms. Qualitative researchers will inevitably have had some introduction to the concepts of objectivity, facts, truth, validity, reliability, generalisability, replicability, measurement and control. Quantitative researchers on the other hand are far less likely to have occasion to develop an understanding of the concepts of intersubjectivity, multiple interpretive perspectives, relational meaning, co-constitution of meaning, thick and thin descriptions, intentionality, lived worlds, shared journeys and defensible knowledge claims.

The experience of moving between research paradigms has given me additional insight into the experiences of minority groups in society who, it seems, must almost inevitably experience contact with more dominant cultural views, but without the dominant groups necessarily experiencing meaningful contact with minority views. From a phenomenographic perspective of expanding awareness based on variation in experience, it seems feasible then that minority groups are more likely to experience a broader understanding of various aspects of key social phenomena than are more dominant groups. This is reflected in my experience of becoming a qualitative researcher.

So, how did I come to move to phenomenography, when the journey was so challenging? First, I was strongly attracted by the phenomenographic focus on investigating *variation* in understandings of the same phenomena. Trying to understand how people can interpret the same events and situations so differently (while commonly being highly confident that their interpretation is the only reasonable one) has been a life-long interest for me. Formalising that interest through my approach to research has helped me feel much more integrated in my professional and life concerns.

Second, I thought that I was already engaged in qualitative research! For some years previously, I had been conducting primarily survey-based research, involving content analyses of open-ended items in questionnaires and semi-structured interviews. The trouble is, these analyses were all carried out within a positivist framework. Although an interpretive research paradigm is commonly associated with qualitative research, there is not a complete correspondence

between the two. (See Kvale, 1996, pp.3–4 for a comparison of a positivist versus interpretivist approach to interviewing, using a miner versus traveler metaphor, respectively.) Indeed, the fact that it is possible to engage in positivistic qualitative research, e.g., traditional content analysis and grounded theory, further obscures for positivist researchers that alternative epistemological and ontological assumptions underlie most qualitative research – it certainly had for me.

Learning to conduct phenomenographic interviews

While my extensive prior experience in conducting semi-structured interviews had given me some useful interviewing skills, such as knowing how to put the interviewee at ease and avoiding leading the interviewee towards particular responses, it also acted as a barrier to learning about phenomenographic interviewing, per se. In phenomenographic interviews, we are trying to elicit underlying meanings and intentional attitudes towards the phenomenon being investigated. Typically, we do this through exploring concrete examples of the phenomenon provided by the interviewee. However, we are not interested in the details of the example per se, but in using them as a *medium* for exploring the way in which the interviewee is thinking about or experiencing the phenomenon, that is, those aspects of the phenomenon that they show awareness of. This entails going beyond 'what' questions ('What did you do?') to 'why' questions ('Why did you do it *that* way?').

With my previous approach to interviewing, the focus was on 'what' questions. Learning to move to 'why' questions was a challenge, especially as interviewees also generally feel more comfortable with 'what' questions. Despite all of my in principle understanding of phenomenographic interviews before I commenced interviewing, when I examined my pilot interviews it was clear that I had used primarily 'what'-focused follow-up prompts when it came to practice. Fortunately, I had two experienced phenomenographic supervisors available to illustrate the kind of prompts I could have used.

For anyone new to phenomenographic interviewing, conducting pilot or mock interviews and using them to analyse your interview technique (hopefully in conjunction with an experienced phenomenograper) is essential. In my opinion, the follow-up prompts in a phenomenographic interview are often more important in eliciting underlying meaning than the primary questions. As you need to frame these prompts on the run, it is vital to 'get this right' and feel comfortable and confident with the process. I have heard other novices comment on the benefits of analysing their interviewing skills based on

transcripts of their first interviews, which can also pick up generic interviewing issues, such as ensuring that you do not lead the interviewee or spend more time talking during the interview than they do.

This difference between what I have called 'why' and 'what' questions also addresses a common criticism of phenomenographic interviews (and other self-report methods). In discussing phenomenographic research on conceptions of teaching and learning, for instance, I have often heard people comment that these studies are of limited value because they don't tell you what the interviewee would actually do in practice – the interviewee may be describing ideal practice, for instance. These sorts of comments show a lack of awareness of the purpose of phenomenographic interviewing and the distinction between 'what' and 'why' questions.[1] If the interviews were focused on eliciting descriptions of interviewees' *practice* ('what' questions), the criticism would have validity, but where the focus is on eliciting interviewees' *awareness* or understanding of the nature of teaching or learning ('why' questions), this understanding should emerge irrespective of the particular practice described. What is important in a phenomenographic interview is not the examples of practice per se, but the way that the interviewee thinks about those examples, i.e., what they think the examples illustrate about the phenomenon being investigated. Interviewees' ways of understanding teaching and learning must then inevitably be related to their actual practice, because how can one operate outside one's understanding?

Having worked out how to go about probing in a phenomenographic interview, the second biggest problem is working out when to stop, i.e., recognising when you have elicited underlying meaning from the interviewee. In chapter 8 of this book, I present a lengthy excerpt from one of my interview transcripts, illustrating how I probe in interviews and also when I decide to stop probing. In practical terms, my best description of what it feels like to be satisfied that I have elicited underlying meaning is that I have an 'ah ha' response. That is, I feel that I now have some sense of how the interviewee is experiencing the phenomenon, even though I couldn't possibly verbalise it. Indeed, until analysing the group of interview transcripts as a whole, it is not possible to even begin to describe the meanings encountered in individual interviews, because each transcript only takes on meaning in relation to the others.

Undertaking phenomenographic analysis

My first experience of undertaking a phenomenographic analysis was based on analysing written comments in response to an open-ended

questionnaire item (one of those I had previously content analysed). It is a common myth that phenomenographic research is always based on interview data. This is certainly the typical and perhaps richest source of data, but a range of other data types is also accepted. Using written comments enabled me to come to terms with the aims and processes of phenomenographic research without simultaneously having to come to terms with the sheer amount of data involved in analysing interviews. It is a method that I recommend to novice researchers and have used successfully in workshops on undertaking phenomenographic analysis (Åkerlind & McKenzie, 2003).

One of the challenges of phenomenographic research is the large amount of data to be interpreted. In the case of my doctoral research, for instance, I had 28 interview transcripts to come to terms with, each 25–35 pages in length. I explored more than one phenomenon in the interviews, and for each separate phenomenon it took me 3–18 months of analysis (part-time) to reach a set of outcomes that I was happy with. Indeed, the fact that I found some phenomena much more complex and time-consuming to analyse than others was unexpected. For instance, in my thesis I explored academics' ways of experiencing growing and developing, both as a university teacher and as an academic holistically. My final outcomes for academics' ways of experiencing development as a university teacher included *three* categories constituted around *one* key dimension or theme of expanding awareness (Åkerlind, 2003a, ch.5; 2003b). By contrast, my final outcomes for ways of experiencing development as an academic holistically included *six* categories, constituted on the basis of *five* key themes of expanding awareness (Åkerlind, 2003a, ch.6; 2005a, 2005b). This variation between phenomena in complexity of outcomes is an issue that I have not seen discussed elsewhere.

As indicated above, one of the first issues to be dealt with in phenomenographic analysis is how to make the data manageable. This has been approached in different ways by different researchers. Emphasising an iterative process, in which the data are examined from different perspectives or foci at different times, is the most common approach (see descriptions of practice in Bowden & Walsh, 1994; 2000). Exploring the data from a series of different perspectives enables one to help illuminate various aspects of the categories of description in turn, each aspect leading to further clarification of the whole. Some researchers also start the analysis using a preliminary sample of 5–10 transcripts before bringing in the full set of transcriptions (Prosser, 1994; 2000; Trigwell, 1994; 2000; Dahlgren, 1995). The preliminary analysis is then reconsidered in the light of the

additional transcripts. Selecting excerpts that seem to exemplify meanings present in the larger interview transcript, while removing perceived irrelevant, redundant or unhelpful components of the transcript, is another approach that has been used to help make the data more manageable (Svennson & Theman, 1983). A reasonable restriction on the number of interviews is also recommended as a data management strategy (Trigwell, 1994; 2000).

In my case, I conducted a preliminary analysis of the first 17 of my 28 interviews before incorporating the additional 11 interview transcripts. I started working with the transcripts themselves, then at a certain point in the analysis I made a series of summary notes of each transcript and worked with these for a while before returning to working with the transcripts again. I physically sorted transcripts (and summaries of transcripts) on the floor using a spatial representation of my sense of the degree of similarity/difference between them, while *not* demanding of myself that I could verbalise what was similar or different about them. Then I attempted to describe similarities and differences post hoc, after the sort. As is common practice, I tried to co-constitute meaning and structure through constant iteration between focusing on each of them, rather than trying to focus on both simultaneously. At the same time, I alternated between focusing on developing my descriptions of categories and relationships, and checking these developments against the original transcript data that inspired them.

Learning about phenomenographic theory and practice

I commenced serious study of phenomenography at a good time. Phenomenography as a research approach began in the mid-70s and came from a strongly empirical rather than a theoretical basis. The first extensive treatment of epistemological and ontological assumptions and a theoretical basis underlying the approach did not appear until 1997 (Marton & Booth, 1997). I was fortunate enough to be given a pre-print copy of this book to read in 1996, when I was making final decisions about enrolling for my PhD. Reading that book was absolutely convincing in terms of my decision to undertake phenomenographic research, and not simply to use it as a research method for my thesis, but to become a phenomenographer!

In addition to the lack of theoretical literature until the mid to late 90s, there was a similar dearth of literature describing appropriate methodological requirements of phenomenography, beyond the initial journal articles that introduced phenomenography to the larger world (Marton, 1981; 1986b). An exception here was a book written

by Bowden and Walsh in 1994 (subsequently revised as Bowden & Walsh, 2000) that contained descriptive methodological stories from a number of people undertaking phenomenographic research. This was a god-send for anyone wanting to better understand what phenomenographers actually did during data collection and analysis, and I have undertaken a detailed comparison of phenomenographic principles and practices described in that book in my thesis and other publications (Åkerlind, 2003a, Ch. 3).

These landmark publications (Bowden & Walsh, 1994; Marton & Booth, 1997) have since been supplemented by other books addressing theoretical and methodological aspects of phenomenography, in particular: Dall'Alba & Hasselgren, 1996; Bowden & Marton, 1998; Marton & Tsui, 2004 and a special issue of HERD, Vol.16, 1997. Prior to this, however, learning about phenomenographic research was completely dependent upon finding an experienced researcher to work with, in a master-apprentice way. This had the danger of potentially reducing incoming researchers' awareness of variation in approaches to phenomenographic research. Although, in my case, the differences between the two well-known phenomenographers that I had as doctoral supervisors (Mike Prosser and John Bowden) were so obvious that clarifying the variation in approaches to phenomenography became an area of interest for me in my thesis.

I would like to highlight three key areas of variation in phenomenographic practice that I have noted and that seem relevant to this current book:

- the emphasis placed on collaboration with other researchers during the analysis process
- the amount of each transcript considered at one time, and
- the relative priority given to meaning and structure in constituting outcomes.

In terms of *the emphasis placed on collaboration with other researchers*, most phenomenographic researchers work in relative isolation during their data analysis. However, some researchers argue for the importance of bringing in additional researchers during the analysis to encourage greater open-mindedness and awareness of alternative perspectives (Bowden, 1994b; 2000b; Walsh, 1994; 2000). This issue is explored in detail in this book, as my research was undertaken as an individual research project and the other contributors' research as a team-based research project, allowing for fairly direct comparison of these approaches.

At this point, let me argue that the large number of existing phenomenographic doctoral theses indicates that high quality phenomenographic research can be accomplished as an individual researcher working largely on one's own. It is also relevant to acknowledge here that any outcome space is inevitably partial, with respect to the hypothetically complete range of ways of experiencing a phenomenon. (This is discussed in more detail later in this chapter.) So, what we are considering when we talk about better or worse outcomes is more or less *complete* outcomes, not right or wrong outcomes. Thus, an individual researcher can, at the least, make a substantial contribution to our understanding of a phenomenon, even if team-based research might have taken that understanding further. Furthermore, there are ways of gathering feedback from others on your preliminary outcomes, even when ostensibly working alone. I describe the methods I used in chapter 8 of this book.

In terms of *the amount of each transcript considered at one time*, practice varies from considering the whole transcript (Bowden, 1994a; 2000a; 1994b; 2000b), or at least large chunks of each transcript related to a particular issue (Prosser, 1994; 2000), to the selection of smaller excerpts or quotes seen as representing particular meanings (though these are still initially interpreted within the larger interview context – Marton, 1986b; Svennson & Theman, 1983). In the latter approach, the smaller chunks are separated from the transcript and combined for analysis in one decontextualised 'pool of meanings' (Marton, 1986a). This variation in practice is not explored in this book, as both projects used a whole-of-transcript approach. However, it is discussed further in my thesis and publications (Åkerlind, 2002; 2003a, Ch. 3).

In terms of *the relative priority given to meaning and structure*, it is important to note that, from a phenomenographic perspective, the meaning and structure of human awareness are seen as dialectically intertwined, in that they mutually constitute each other. Consequently, all phenomenographers should emphasise both meaning and structure in their analysis of ways of experiencing a phenomenon. This is reflected in the phenomenographic iteration between clarifying categories of description (regarded as focusing primarily on meaning or, more precisely, the referential aspect of meaning) and clarifying logical relationships between the categories (regarded as focusing primarily on structure or, more precisely, the structural aspect of meaning) during the analysis.

However, within this agreed practice, there is variation in the relative emphasis placed on constituting meaning versus structure. In

more concrete terms, this often translates into variation in how quickly the researcher moves from considering the transcript data *only* in constituting categories of description to also considering the logical structuring of relationships between categories *as part of the process* of constituting those categories. My doctoral supervisors approximated opposite ends of the spectrum of practice on this issue, and I have taken a different position to both of them. So, this is an issue that will be explored and illustrated further in this book.

The issue has also been raised by Walsh (1994; 2000), who discusses variation in views among phenomenographic researchers as to the degree to which the logical structure of the outcome space needs to emerge as directly as possible from the data, and the degree to which it may more explicitly reflect the professional judgement of the researcher. This is a question of degree only, as the final outcome always reflects both the data and researcher judgements in interpreting the data – in phenomenographic terms, the outcomes are constituted as a relationship between the data and the researcher(s). Nevertheless, the issue has led to some criticism of phenomenographic research, with the suggestion that focusing on structure too early in the analysis process carries the potential danger of the researcher imposing a structure on the data, rather than allowing it to emerge from the data (Bowden, 1996; Ashworth & Lucas, 2000). Conversely, I would argue that focusing on structure too late in the analysis carries the potential danger that meaning and structure will not be adequately *co*-constituted in the final outcome space.

Knowing that the other contributors to this book are tending towards emphasising the meaning end of this particular spread of phenomenographic practice, let me start by saying why I believe that a strong emphasis on structure is vital in phenomenographic research:

- it is an epistemological underpinning of phenomenography
- it increases the potential for practical applications from the research
- it provides a simultaneous focus on variation and commonality.

The assumption of logical relationships between different ways of understanding is one of the epistemological assumptions underlying phenomenographic research (Marton & Booth, 1997). The researcher aims to constitute not just a set of different meanings, but a logical structure relating the different meanings. The categories of description constituted by the researcher to represent different ways of experiencing a phenomenon are thus seen as representing a *structured*

set. I regard this as one of the strong points of phenomenography, because it provides a way of looking at collective human experience of phenomena *holistically*, despite the fact that such phenomena may be perceived differently by different people and under different circumstances.

Phenomenography espouses a non-dualistic ontology: 'There is not a real world 'out there' and a subjective world 'in here'. The world [as experienced] is not constructed by the learner, nor is it imposed upon her; it is *constituted* as an internal relation between them' (Marton & Booth, 1997 p.13). The phenomenographic proposition that ways of experiencing represent a relationship between the experiencer and the phenomenon being experienced, leads to the expectation that different ways of experiencing will be logically related *through* the common phenomenon being experienced. Thus, a core premise of phenomenography is the assumption that different categories of description or ways of experiencing a phenomenon are logically related to one another (Marton & Booth, 1997). These relationships are commonly expected to form a structural hierarchy of inclusiveness, with some ways of experiencing being more complex than others, but including aspects of awareness constituted in less complex ways of experiencing. The inclusive nature of such relationships makes some ways of experiencing not only more complex, but more *complete*, than others.

Let me conclude this discussion by talking about the pragmatic value of emphasising structure in phenomenographic outcomes. Phenomenographers are explicit about not attempting to represent the full richness of variation in experience of a phenomenon, but just those aspects that seem critical in distinguishing qualitatively different ways of experiencing. This focus on critical aspects allows structural relationships to be highlighted in a way that would not be possible if the analysis focused on every nuance of meaning. At one level, each individual's experience of a phenomenon is unique. But a simple descriptive collection of such unique ways of experiencing would be of little power or usefulness in guiding educational change. By contrast, the phenomenographic researcher tries to make the variation in experience meaningful, by searching for structure and distinguishing aspects of variation that appear critical to distinguishing qualitatively different ways of experiencing the same phenomenon from aspects that do not. The aim is to describe variation in experience in a way that is useful and meaningful, providing insight into what would be required for individuals to move from less powerful to more powerful ways of understanding a phenomenon.

In summary, I feel that the focus on constituting a structure of meaning is part of what makes phenomenography unique, part of what makes it useful, and part of what makes the analysis so hard to do! Meanwhile, with one supervisor who was constantly asking me to return to the transcripts, while the other was constantly asking me to hypothesise about structural relationships, I believe I have combined a strong commitment to structure with a strong concern for seeking empirical evidence of that structure, as described in later chapters and illustrated in my thesis and subsequent publications (Åkerlind, 2003a, ch. 5; 2005a, 2005b).

Note

[1] Other issues of relevance to this criticism are the context-sensitive nature of individual experience and that phenomenography seeks to investigate the collective range of ways of understanding a phenomenon across a group of individuals, not the complexity of understanding of any one individual.

CHAPTER 7

Learning to do Phenomenography: A reflective discussion

Gerlese Åkerlind, John Bowden and Pam Green

What is it like to learn to do phenomenographic research? What helps and hinders? These are the questions addressed in the preceding stories, from the perspective of five individual researchers. In order to help readers integrate the individual stories and the range of response to these questions within them, all of the authors met to have a discussion of their reactions, as a team. Key highlights of that discussion are presented in this chapter, which also draws liberally on relevant sections of the individual stories.

During the course of the team discussion, the purpose of presenting individual stories was reaffirmed. The stories focus on individuals' experiences of doing phenomenographic research, especially for the first time. In that sense, the stories are intended to be strongly experiential and practical in nature. They are not intended to provide authoritative accounts of phenomenographic practice or theory (such accounts are available elsewhere in the literature, such as Marton & Booth, 1997; Bowden & Walsh, 2000). Indeed, some of the story authors emphasised that they did not feel expert in phenomenography (inevitable when doing it for the first time) and would feel very uncomfortable if their stories were read as expert accounts. The variation in the language used by the authors to describe phenomenography and phenomenographic practice is an illustration of this, often reflecting their methodological background more than standard phenomenographic terminology.

In line with the practical focus of this monograph, the remainder of this chapter is divided into a discussion of the following issues:

- how different methodological backgrounds can help and hinder learning to do phenomenographic research
- phenomenographic practice at the macro level

  - common difficulties experienced by novices
- phenomenographic practice at the micro level
  - key practices in phenomenographic research
  - key questions that phenomenographic researchers need to answer for themselves.

How different methodological backgrounds can help and hinder

Given that the RMIT team members came from quite an array of methodological backgrounds, early meetings of the research team often focused on comparisons between research methods. Although all came from a basically similar research paradigm or theoretical position that could be roughly labelled as 'interpretivist', each brought differences with respect to specific approaches and methods used previously.

In his story, John Bowden describes a shift among novices over time, from trying to understand phenomenography externally (by focusing on the ways in which it is similar to, or different from, the research approaches with which they are more familiar) to trying to understand phenomenography internally by focusing on internal consistency within the approach. This shift occurred for the team, but the comparisons with the other methods were significant in terms of being able to take a stand on how (and why) to conduct phenomenography. Further, the comparisons may well be of interest (and perhaps use) to others contemplating phenomenographic research.

Naturalistic inquiry

In her story, Pam Green writes from the perspective of a naturalistic inquirer and describes her adjustment to phenomenographic research as facilitated by the shared interpretive stance that is foundational to both research approaches. This stance is based on the notion of multiple legitimate interpretations or realities, in which 'the transactions between the researcher and the research participants create understandings that are value-mediated or subjective'. (From a slightly different perspective, a phenomenographer would describe multiple realities in different terms, as existing in the relationship between the perceiver and the phenomenon perceived, between the researcher and the data analysed.)

Other similarities between naturalistic inquiry and phenomenography from Pam's viewpoint included the common focus on inductive processes, where the research findings arise from a bottom up process grounded in verbatim texts, rather than a top down deductive process of testing *a priori* hypotheses. The use of purposive sampling (in the case

of phenomenography with the aim of maximising variation), rather than random or broadly representative sampling, was also a familiar notion from her research background. In addition, the common focus between developmental phenomenography and naturalistic inquiry on achieving practical outcomes from the research ensured an overlap for her in the underlying purposes of the research conducted.

Differences in terms of how rigour is established formed the greatest contrast between phenomenography and naturalistic inquiry. While naturalistic inquiry is quite prescriptive with respect to rigour (there is a substantial list of criteria for trustworthiness), particularly in the use of a range of data sources and methods of data collection, phenomenography typically uses one data source and only one round of data collection. This difference arises because in phenomenography the researchers' data interpretations are made on a collective, not an individual interview basis. The aim is not to capture any particular individual's understanding, but rather to capture the range of understandings across a particular group. In other words, the analysis goes across and between all of the interview transcripts so that the categories of description that are yielded reflect not individual meanings or conceptions, but rather conceptions from a pool of meanings. The interpretation is, thus, based on the interviews as a holistic group, not as a series of individual interviews.

The rigour of phenomenography, from Pam's viewpoint, lies more in the iterative process by which interpretations are assiduously checked against the transcript data at each stage of the analysis process. Furthermore, during the processes of team analysis, agreement between researchers was reached through discussion and mutual critique of the data.

Phenomenology

For Robyn Barnacle, with her background in philosophical phenomenology, her introduction to phenomenography was facilitated by a shared focus on human meaning as the research object. As with Pam, the overlap in epistemological assumptions between phenomenography and her background research approach substantially eased the transition, in particular, the shared assumptions of meaning as a contested space, where there are multiple legitimate interpretations of a single text or set of transcripts. Any interpretation, however, needs to be justified or supported with evidence. The process of interpretation is viewed as seeking agreement between interpreter(s) and the text/transcripts, and interpretation or understanding is seen as a

process of mutual transformation, with the text as an active player. (In phenomenographic terms, much of this overlap in assumptions would be described in terms of interpretation occurring as a relationship between the transcripts and the researchers).

Robyn voiced a concern with the apparent 'neatness' of the categories of description, when individual experience is not neat. Nita Cherry echoed this concern. The apparent neatness of phenomenographic categories of description arises out of the research focus on constituting key aspects of collective experience, rather than the rich detail of individual experience. This leads to categories that are described in terms of critical qualitative similarities and differences, though there is room within these descriptions to include some of the non-critical variation in experience that is perceived.

Action research

Nita Cherry describes her action research 'mindset' as initially presenting a challenge in trying to come to terms with phenomenographic research. She was, at first, particularly concerned about the lack of involvement of the interviewees in the data analysis process. In her view, this lack of member checking seemed to 'take the people out of the equation' – the very antithesis of action research. Nita was concerned initially that this might mean that we 'think of the categories [of description] as constructs in their own right'. This meant that Nita, in her journey into phenomenography, was particularly concerned about phenomenographic rigour, given that processes for establishing rigour in action research were not appropriate for phenomenography.

Previously in her research work, member checking (or taking the interpretation of an individual transcript back to the relevant research participant for checking) was used as a key aspect of rigour. Normally (that is, in her work as an action researcher), she would 'have a concern about taking data away from the 'owners' of the data in any research method that involved detached 'coding' of other's material'. However, given that phenomenography seeks meaning *across* individuals' stories or examples of their experiences, that is, at a collective level rather than an individual level, member checking is not appropriate. Instead, phenomenographers rely on the iterative process of rigorous checking of interpretations against verbatim transcripts, continuing until the rate of change from each iteration reduces, and the description of categories stabilises.

Nita describes phenomenographic categories of description as 'elegant constructions', reflecting the sense of neatness to which Robyn also

referred. While Nita described this 'elegance' as intellectually satisfying to create, this elegance for her as an action researcher also carried connotations of an intellectual 'word-smithing' exercise divorced from the messiness of real-world experience. It seems clear that the phenomenographic focus on describing key aspects of collective experience, not the richness of individual experience, involves quite a conceptual leap in terms of the move from action research to phenomenography.

The area of greatest overlap between action research and phenomenography for Nita lay in the tracking of the analytic steps involved in arriving at the descriptions of each category. She commented: 'I would now be a great deal more confident in a rigorous and transparent category system developed through phenomenography than more ambiguous methods that do not track how themes or constructs are constructed.' This tracking helped address a major concern for her with the rigour of the process, that is, that the team constitution of the categories of description was inevitably a social process, and that the process of social negotiation should be adequately acknowledged.

Furthermore, Nita's experience of phenomenography as a collaborative, team approach was consistent with her action research experience (even though the collaboration was with other researchers rather than with the interviewees), and aided the transition to phenomenography. However, this also means that if Nita had experienced phenomenography as a lone researcher, she perhaps would have found it even more difficult to come to terms with. In contrast, Robyn, with her background in philosophy, felt quite comfortable with a subsequent experience of individual phenomenographic research, following her team research experience.

Quantitative research

Gerlese Åkerlind, with her background in experimental psychology, describes the converse of Pam and Robyn's experience of the transition to phenomenography being facilitated by shared epistemological assumptions. The objectivist stance of experimental psychology meant that the transition to a qualitative research paradigm was the greatest barrier to be overcome for her in undertaking phenomenographic research.

Gerlese's previous interviewing experience formed as much of a barrier as an aid in undertaking phenomenographic interviewing. On the one hand, while others have emphasised the challenge of learning to avoid leading questions in a phenomenographic interview (outside

of the structured questions), this is common practice in psychological research, so Gerlese was already well experienced in this regard. However, when conducting interviews as part of psychological research it is typical to focus on what she terms 'what' questions (that is: 'What did you do?'). This contrasts quite sharply with the focus in phenomenographic interviews on what she terms 'why' questions (that is: 'Why did you do it that way?'). This difference required some practice for her to come to terms with.

Like John and Pam, Gerlese emphasised the importance of pilot interviewing in learning to conduct phenomenographic interviews. She also found that undertaking a phenomenographic analysis of written comments, before undertaking an interview-based analysis, provided a useful learning experience. Part of the transition process for her, in learning to do phenomenographic research, involved coming to terms with the large amount of qualitative data inherent in a set of verbatim interview transcripts. Practising first with a set of written comments enabled her to separate learning about the aims and processes of phenomenographic research from the extra complexities of working with the large data set typically involved.

In phenomenography, small sample sizes with maximum variation sampling, that is, the selection of a research sample with a wide range of variation across key indicators (such as age, gender, experience, discipline areas and so on), is traditional. For the other researchers, such purposeful or purposive sampling (the selection of research participants for a given purpose), and the selective sampling of a relatively small number of participants (commonly 20–30 in phenomenographic research) with the intention of gaining depth of meaning fitted well with the research practices of their methodological backgrounds. However, Gerlese, with her prior background in quantitative approaches, was more accustomed to large samples selected randomly.

This section has highlighted the perceptions of the researchers of the differences between phenomenography and other research methods with which they had been more familiar. The remainder of this chapter deals with specific aspects of phenomenographic research methods.

Phenomenographic practice at the macro level: Common difficulties experienced by novices

As would be apparent from the preceding section, researchers experienced in other research methods find some aspects of

phenomenographic research challenging and, at times, difficult to understand and reconcile with their previous research experience. Many of these difficulties are also shared by new researchers and in this section we discuss a number of aspects of phenomenographic research that novices (those new to the method irrespective of other experience) might find puzzling.

Interviewing

John highlights the nature of phenomenographic interviewing as a common difficulty for novices. Phenomenographic interviews are semi-structured, with the researcher clearly setting the interview topic(s) through the use of a number of set questions, but then making substantial use of unstructured follow up questions to further investigate interviewees' responses to the questions. However, during the unstructured part of the interviews, it is important that the interviewer not raise any ideas around the topic(s) that have not previously been introduced by the interviewee. This contrasts with both more structured and less structured approaches to interviewing, as mentioned in Pam's story, where she describes being used to having greater freedom to exchange comments during interviews.

Gerlese highlights the importance of distinguishing 'what' from 'why' questions as an interviewer, particularly when following up on participants' responses to questions. When interview participants provide examples of their experience of the phenomenon being investigated (for instance: examples of going about learning, teaching, researching, or whatever the phenomenon of interest is), it is easy for novices to inappropriately focus their follow-up questions on eliciting more details about *what* the participant does when learning, teaching, researching, etc. A more useful follow-up question for eliciting participants' intentional attitude towards the phenomenon (and thus the underlying meaning of the phenomenon for them) is to ask *why* they go about it in the way they describe. The aim of the latter type of question is to explore the interviewee's underlying intentions or purposes with regard to the phenomenon. However, exploring the underlying meaning is the key issue and the formal inclusion of the word 'why' in the question is less important than actually finding out why the interviewee sees the phenomenon in a particular way.

To help newcomers to phenomenography become familiar with phenomenographic interviewing, John, Pam and Gerlese all strongly recommend pilot interviewing, both to provide an opportunity to

develop the required skills and also to refine the planned questions so that they do in fact catalyse appropriate discussion about the phenomenon.

Understanding the phenomenographic focus on collective, not individual, experience

Robyn describes part of this difficulty in her story:

> At times, I, and other members of the team, struggled to come to terms with this aspect of our approach. It is easy to confuse, or equate, the category with the individual. That is, mistakenly believe that a single category should equate fully with the perception of a single individual. While this may occur, if, for example, only one participant in the study expresses a certain perception, this is the exception. Instead, our aim, in using a phenomenographic approach, was to find similarities across the perceptions expressed by a group of individuals.

Phenomenographically, not only is a category of description not equivalent to the meaning expressed in any one transcript, but the meaning expressed in a transcript is not equivalent to the meaning experienced by the interview participant, due to the context sensitive nature of experience. The meaning of the phenomenon for any one participant may vary under different circumstances. Consequently, the interviews attempt to elicit the meaning of the phenomenon for each participant at the particular time and in the situation in which they were being interviewed. Thus, meaning may vary within individuals as well as between individuals, but the range of variation within individuals is likely to be encompassed by the range across individuals. The set of transcripts as a whole represents a snapshot of the ways of experiencing the phenomenon by a particular group of people at a particular time and in response to a particular situation.

The phenomenographic focus on participants as a collective group, rather than as a series of individuals, also makes member checking inappropriate as a validity check for phenomenographic analyses. As described by Robyn, any one transcript is unlikely to correspond precisely with any one category of description, because the categories have been constituted from an analysis of all of the transcripts, as a group. From this perspective, no one transcript can be understood in isolation and can only be interpreted in comparison with the rest of the group of transcripts.

Searching for both variation and commonality in the transcripts

John highlights the danger of novices focusing on variation in meaning more than commonality in meaning as they analyse the interview transcripts. This can lead to focusing on the multitude of surface details on which transcripts inevitably differ, in a way more appropriate to content analysis. By contrast, the phenomenographic aim is to constitute a smaller number of more holistic meanings, with a focus on key aspects of experience which link and separate the different categories of description.

Too strong a focus on details can also lead to going off on tangents during the analysis, where the primary purpose of the research project, in terms of the stated research question, is lost during the course of following interesting sidelines. (Perhaps this is illustrated in Robyn Barnacle's story when she talks about her desire to explore the role of serendipity in the research phenomenon.)

Distinguishing between critical and non-critical variation in experience

Both Robyn and Nita expressed discomfort with the 'neatness' of the categories of description, when individual experience is not neat. The analysis focused on key aspects of the collective experience, expressed as categories of experience, rather than on the detail of individual experience. The descriptions of each category may, however, include some non-critical variation; that is, the category is focused around a particular common theme that distinguishes it from other categories, but with a range of different perspectives about some non-critical aspect.

Thus, a key challenge in the interpretive process is drawing a distinction between critical and non-critical variation in experience. 'Critical' variation is that which distinguishes one meaning or way of experiencing a phenomenon as qualitatively different from another. 'Non-critical' variation in meaning is that which occurs within a particular way of experiencing, and does not distinguish between different ways.

Phenomenographic practice at the micro level: Key practices in phenomenographic research

In the previous section, the issues discussed are mostly at the macro level. They represent characteristic principles that have to be under-

stood if a researcher is to undertake phenomenographic research. In this section, the discussion is more at the micro level of detailed method. For example, given the purposes of semi-structured interviews highlighted above, how do you actually go about conducting them and how did the different members of the research team experience those processes?

Interviewing

As phenomenographic research commonly uses interviews as the sole source of data, it is crucial that they are conducted rigorously. This is essential so that the researchers can feel confident about the integrity of the data with which they are working. It also provides vital external rigour, for those outside of the research process. John argues that being as faithful to the data as possible implies that it is not acceptable during the analysis to infer what else might have been said by participants if it was not actually said during the interview. (Sometimes, this argument is erroneously confused with the idea that one can only work with what is said explicitly and not the implicit implications underlying the words used – as illustrated in Robyn's story, and discussed further later in this chapter.) Thus, if the analysis is to be comprehensive, it is essential that the interview process be undertaken properly in the first place. Pam also emphasised the importance of getting the interviews right in the first place in her story when she discussed the frustration of being unable to discern the meaning expressed in a particular transcript because the interviewee had not fully articulated their views.

INTERVIEW PROCEDURES

Appropriate phenomenographic interviewing procedures are discussed within the individual stories of John, Pam and Gerlese, and these stories should be re-read with this issue in mind. Pam conducted all of the interviews for the team research project, after she and John had jointly prepared the interview scenarios and prompts, and piloted the interviews. As a sole researcher, Gerlese engaged in the same set of processes for her research project. Issues of participant selection and how many to interview are mentioned above and discussed further by John in his story. The nature of the interview scenario, follow-up prompts, and other pointers for interviewing are raised within Pam's story, while Gerlese emphasises ways of focusing the interview towards eliciting underlying meaning.

John's story also refers to the need never to abuse the trust of those being interviewed. He describes their particular vulnerability in a process designed to get them to reveal everything possible about how they see a particular phenomenon. He suggests that almost always interviewees reveal something about themselves that they would never have expected they would. It is important that they feel comfortable at all times and that their willingness to cooperate is never abused. One public aspect of that is that no published material should ever contain information that could identify any interviewee. That is a matter of trust.

PILOTING

While pilot interviews are strongly recommended for novices to provide an opportunity to develop the required skills, they also represent an important aspect of any phenomenographic study – in order to check that the scenario or question(s) set actually do yield information on the intended phenomenon in a way that is useful to the study at hand. As Pam noted in her story, the trialing of interview questions was vital for fine-tuning the interview scenario. The consequent addition to the interview questions of the phrase 'in some way', for instance, enabled participants to be freed from trying to label their experiences of success in research as being totally 'successful' or totally 'unsuccessful' to something a little more blurred and thus more realistic.

MAINTAINING FOCUS ON THE CENTRAL RESEARCH QUESTION

As described by Robyn:

> The role of the [research] question in determining what is read, or what counts as legitimate reading, was particularly apparent in this study. Our reading of the transcripts was explicitly directed from the beginning by the key question: How do researchers perceive of the conditions for successful research? This meant that much of what participants spoke about was treated as, and remained, peripheral in what we searched for, and focused on, that is, explicit references to success.
>
> In John's story he argues that the need for constant focus on the research question or phenomenon applies throughout all aspects of the phenomenographic research process. He points out that, in the analysis, you need to read transcripts from a particular perspective.

> If the interviewee is saying this about X or Y, what must the phenomenon mean to them? If they are now saying Z as well, does this change my analysis of how they are seeing the phenomenon? It is possible to become distracted and to begin to analyse the various ways of seeing X, for instance. There is a greater danger of losing focus in this way if you cut the interview transcripts into pieces and re-assemble the similar pieces from different transcripts together… Anchoring all analysis to the transcripts alone, reading forward and backwards around key statements and using the devil's advocate process, all assist in maintaining focus during the analysis.

Any one interview may address a number of phenomena, both deliberately and accidentally. Consequently, the same transcript can be read searching for ways of experiencing different phenomena. However, this would occur across different readings, with only one phenomenon in focus for any one reading. Otherwise, it is possible to accidentally attempt to incorporate descriptions of related phenomena from the transcripts into your interpretation of the primary phenomenon, in effect contaminating the data. As Robyn describes:

> During the project, my attention was drawn to a particular aspect of the interpretive process. This was the seduction of the text, or the way in which certain terms or ideas snag, or attach themselves, to certain readers. For me, it was the references in some of the texts to serendipity and luck as factors leading to successful research outcomes… To what extent does success in research [the primary research question] depend on a researcher being able to do this? What is the relationship between successful research and serendipity?
>
> …We debated the issue during the analysis process, but the team felt that there was not enough evidence within the relevant transcripts to suggest that serendipity is a condition for success, rather than just an element of the research process.

Faithfulness to the transcripts

John has made the argument that the only evidence that can be used in analysis is what is in the transcripts, and that the categories of description constituted by the researcher(s) should always be justifiable in terms of the transcripts. Pam reinforces that by providing examples of the kinds of questions the research team asked of itself

throughout the analysis, questions such as: Where did this term come from? What is missing? What else might this mean? What does this not mean? What is different about this category?

Pam explains these processes as being based on faithfulness to the transcript data and she gives an illustration in her story of an episode in which recourse to the transcripts prevented an error in analysis. For a time the team misled itself in describing one category in a particular way only to find that a re-reading of the transcripts showed the error and a new description was developed that was more faithful to the transcripts. Pam saw that experience as underlining the rigour of the phenomenographic research process:

> We re-read and re-read data so much that our heads swam with complexities. The critical component of such team processes meant that we argued the point, left no stone unturned, grew weary with semantic play, discarded ungrounded descriptions and shared in the joy and satisfaction when forms of clarity finally emerged.

Focusing on meaning vs words in the transcripts

In her story, Robyn expressed concern over 'staying with the transcripts' because she understood this to mean checking all interpretations against the words in the transcripts. Her concern was that what people say is not necessarily the same as what they mean.

> It is clear to me that the directive to 'stay with the transcript' is the key strength of the phenomenographic approach. But this directive also has limitations. It is limiting, for example, in that the analysis is restricted to that within the text which is made explicit. Elements of shadow, or aspects of phenomenal experience that are ambiguous and undefined, are not attended to. This is how I felt about the fact that serendipity was not explored within our analysis.

In fact, phenomenographers make a very explicit attempt to distinguish purely linguistic differences in what interviewees have said from differences that represent variation in underlying meaning (such as Bowden, 1994b; 2000b; Prosser, 1994; 2000; Svennson, 1997; Trigwell, 1994; 2000). This includes the aim of looking as much as possible beyond the particular words chosen by the interviewee to

their underlying intentional attitude towards the phenomenon they are describing.

This aim is what underlies the common phenomenographic practice of asking interviewees to provide concrete examples to illustrate their comments. While Robyn was concerned that conceptual interpretations were based on descriptions of examples provided by participants, it is through these examples of actual interaction with the phenomenon being investigated that interviewees' experiences of the phenomenon can best be interpreted. As Gerlese says:

> In phenomenographic interviews, we are trying to elicit underlying meanings and intentional attitudes towards the phenomenon being investigated. Typically, we do this through exploring concrete examples of the phenomenon provided by the interviewee. However, we are not interested in the details of the example per se, but in using them as a *medium* for exploring the way in which the interviewee is thinking about or experiencing the phenomenon, that is, those aspects of the phenomenon that they show awareness of. This entails going beyond 'what' questions ('What did you do?') to 'why' questions ('Why did you do it *that* way?').

Robyn draws an important distinction between meaning and what is said, and it is just that distinction that is at the heart of John's use of the term 'staying with the transcript' in phenomenographic analysis. The emphasis when reading transcripts is to discern the fundamental meaning of the phenomenon as expressed in the transcript. The categories of description should be faithful to the meanings in the transcripts. This may mean using in the categories particular words from the transcripts, but that would be a consequence and not a goal of searching for meaning.

Interpretive rigour in the iterative process of analysis – establishing validity

Once the interviews have been conducted and then transcribed verbatim, the researcher(s) need to read and re-read the interview transcripts. This leads to a series of iterative cycles between the transcript data, researcher interpretations of the data, and checking of interpretations back against the data. It is in the conduct of this iterative process that phenomenographers most clearly establish their interpretive rigour. Also, if there are any occasions within a transcript in

which it seems that the interviewer has led the interviewee, then the remainder of that section of the transcript should be excluded from the data analysis.

TEAM ANALYSIS

Nita indicates that a characteristic which stands out for her in team phenomenographic research is the rigorousness of the requirement that several people subject the categories they are developing to sustained cycles of scrutiny, debate and testing against the data. Similarly, Pam says:

> The power of working within a team of academics who were committed to constructive but critical debate was undoubtedly the greatest strength of this approach. I am convinced that by working as a team we engaged in robust and at times potentially confronting discussion that moved us to develop rigorously considered categories. For instance, Nita Cherry tended to raise questions that ensured that we were explicit about why we were doing what we were doing under the umbrella of phenomenography. While this slowed the process at times, it did mean that we were all clear about the purpose behind our actions as well as the implications for rigour and for other methods. John Bowden frequently played, without orchestration, but more through his own natural inclination, the role of devil's advocate. This meant that we were frequently challenged to justify the ways in which we framed the categories. We had to go back to the data constantly and check for accuracy.

Robyn saw the iterative process, the use of members of the research team as devil's advocates for each other, and the constant re-reading of transcripts as category descriptions developed, as forming important sources of the rigour she came to see in phenomenographic analysis. 'The reliability of phenomenographic analysis is ensured through the researcher engaging in an iterative dialogue with the text and not predicting outcomes in advance by imposing categories of description.' Robyn was a little surprised by the time and number of iterations required, but felt that slightly changed meanings in the transcripts emerged on each re-reading, especially when different transcripts were compared.

However, Robyn also emphasised that teams can be self-affirming, going down tangential paths together. To help avoid such groupthink, John highlighted the importance of maintaining clear roles within the

team, where someone is explicitly nominated to play a devil's advocacy role on each occasion. Nevertheless, Nita maintained that any team research would be inevitably more socially constructed than grounded in the data, no matter how rigorous the analytical procedures employed.

Both Pam and John refer in their stories to the issue of trust between team members in the team analysis approach. Pam refers to the need for agreement about ways of giving critical feedback so that members feel confident to put forward new ideas without fear of personal attack. John highlights the vulnerability one can feel, especially in the beginning – he makes the distinction between intellectually understanding the devil's advocacy process and emotionally handling it. Explicit talk about such things at the beginning is essential in Pam's view, but these issues also need to be returned to throughout the analysis. John reiterates that point and emphasises the need for everyone to be sensitive to their colleagues' feelings, without undermining the process by backing off from being critical. Getting on with the analysis while also taking care of each other's feelings seems to summarise the position taken by both Pam and John.

INDIVIDUAL ANALYSIS

While individual analysis may seem inevitably less rigorous than team analysis, Gerlese highlighted ways of acting as your own devil's advocate during individual analysis. This included taking substantial breaks during the analysis so that you could return to it with an open mind. Such breaks normally occurred spontaneously, due to the pressures of other work, but should be engineered if they do not happen naturally. Also, when checking tentative outcomes against the transcript data, it is important to consciously and actively look for negative examples as well as supporting examples. Further, there are ways of gathering feedback from others on your preliminary outcomes, even when ostensibly working alone, which she describes in her story.

VALIDITY

Of course all of the above discussion of rigour is directly linked to the issue of establishing validity. John argues that the validity of the outcomes is related to the processes that are used at all stages of phenomenographic research. He emphasises the importance of a common focus through the planning phase (including working out whom to interview), data collection (in this case interviewing), analysis and interpretation. He argues strongly for consistent interview

frameworks with no leading questions except for the planned interventions, team analysis with continual devil's advocacy, delay in labelling categories and in looking at relations between categories until analysis of the categories is complete, using the transcripts as the only source of evidence in the analysis, and focusing on meaning by taking the 'whole of transcript' approach. He has argued (especially in Bowden, 2000a) that you can mount a consistent argument for all of these choices and that if you carry them out, you maximise the validity of the outcomes. He sees the validity in qualitative research lying largely in transparent processes that can be argued for within a coherent framework. Many examples of the rationale behind each of the process aspects are to be found in his story in chapter 2.

Pam contrasts phenomenography with naturalistic inquiry in terms of the different criteria used to establish interpretive rigour. In her story she describes those differences in detail. Naturalistic inquiry emphasises triangulation of data sources, checking data interpretations with original interviewees, and prolonged engagement in the field, with emerging hypotheses leading to further inquiries through follow up interviews. By contrast, phenomenography typically uses one data source and one round of data collection only, and member checking is generally not regarded as an appropriate validity check for this research approach.

Nita suggests in her story that:

> Rigour in the process demands complete transparency as to the way the categories are framed and reframed, and recognition and articulation of the logic and social processes that drove the framing. That deconstruction is a significant piece of work in its own right, requiring not only transparency or reporting but critical awareness of the generating processes. Again, it struck me that this sort of critical awareness or critical consciousness fits very well with the action research perspective.

In team analysis, agreement between researchers is reached through discussion and mutual critique of the data and of each researcher's interpretive hypotheses. This provides a way of balancing the perspective of a single researcher and providing a check on the possibility of prejudiced subjectivity. For a single phenomenographic researcher working alone, rigour lies more in the critical attitude taken towards the interpretations made, that is, how individual presuppositions have been made. Further rigour pertains to the checks and balances that the researcher has employed to help counteract the impact

of one's particular perspective on the outcomes of the analysis. The documentation of the interpretive steps, by fully detailing the steps and presenting examples that illustrate them (Sandberg, 1996; 1997; Kvale, 1996; Åkerlind, 2002), is part of this process. Seeking feedback on one's interpretations from other researchers and from representatives of the population interviewed are also common procedures.

Phenomenographic practice at the micro level: Key questions that each researcher needs to answer for themselves

As with any research approach, there are key areas of variation in practice as well as commonalities in practice among phenomenographic researchers. That means that, in addition to coming to understand and implement the agreed core research practices of phenomenography, each researcher also needs to make a reasoned decision on areas of variation in practice.

When should the analysis begin?

John Bowden argues strongly that the phenomenographic analysis should not begin until all of the interview transcripts are ready for reading as a whole. This view is based on the need to keep the nature of the interview constant throughout all interviews. He suggests that if analysis occurs in parallel with further interviewing there is a danger that the interviews will be altered in some way, either explicitly or unconsciously. This may relate to his focus on developmental phenomenography – he is as interested in what the categories are used for after the analysis as he is in development of the categories themselves. So he is concerned with the credibility of the outcomes in the eyes of non-phenomenographers. Reproducibility is important to him so that he can clearly claim that the categories of description finally developed are related to a particular set of inputs across all of the interviews.

Gerlese argues for the practical value of analysing a preliminary subset of interview transcripts before analysing the whole. This provides a means of making the sheer amount of data collected more manageable. As described in her story, this is a common concern among phenomenographic researchers, often faced with some 20–30 transcripts of 20–30 pages in length.

An alternative and more effective answer might be to combine the two approaches, that is, to conduct all of the interviews before any analysis has begun, but then to do a preliminary analysis on a subset of the transcripts, followed by an analysis of all of the transcripts.

Should the analysis be of the whole transcript or pooled excerpts?

While all of the contributors to this monograph have taken a whole-of-transcript approach to data analysis, Gerlese commented in her story about the varying practices that exist in the amount of each transcript considered at one time during phenomenographic data analysis. Practice varies from considering the whole transcript or large chunks of each transcript related to a particular issue, to the selection of smaller excerpts or quotes seen as representing particular meanings, although these are still initially interpreted within the larger interview context (Marton, 1986a; Svennson and Theman, 1983). In the latter approach, the smaller chunks are separated from the transcript and combined for analysis in one decontextualised 'pool of meanings' (Marton, 1986b).

The argument for the 'whole of transcript' approach is that the larger interview context is needed to help the researcher(s) faithfully interpret the meaning of particular comments in the transcript. The argument for the 'pool of meanings' approach is that greater decontextualisation facilitates the phenomenographic focus on collective meanings, and away from individual meanings.

Should phenomenographic analysis be done individually, or as a team?

The relative confidence one could feel in the outcomes of individual versus team phenomenographic analysis was explicitly discussed by the contributors to this monograph during the team meeting mentioned at the start of this chapter. Although the decision on this issue is often made as much on practical grounds of feasible research resources as on logical argument for the 'best' approach.

Both Gerlese, with her extensive experience of individual analysis, and Robyn, who was currently involved in conducting primarily individual analyses arising out of the team project, expressed confidence as individual researchers. One of the advantages they experienced as individual researchers was becoming more deeply familiar with the data than was possible for each member of a team research project. Furthermore, as an individual researcher, one can still seek feedback from others during the analysis, and both had done so. Nevertheless, because such feedback would be more regular and systematic with team research, it seems likely that team research might be more rigorous, in general.

Robyn suggests that:

> The process of team analysis highlights the crisis involved in all interpretation: the challenge of realising difference, bringing it to the fore. But within a team situation there is also more because it is not just agreement between text and interpreter that is sought but agreement between text and multiple interpreters. In order to reach consensus one must convince others of the credibility of one's interpretation. A case needs to be made and defended. …
>
> … I found the process of team analysis provided a rare opportunity to gain insight into, as well as critique, my own interpretive habits. This may have made the analysis process longer than it might otherwise have been, but it was certainly more rewarding.

While team analysis may seem inevitably more rigorous than individual analysis, Gerlese highlights in her story that 'the large number of existing phenomenographic doctoral theses indicates that high quality phenomenographic research can be accomplished as an individual researcher working largely on one's own'. She also points out that 'any outcome space is inevitably partial, with respect to the hypothetically complete range of ways of experiencing a phenomenon'. Consequently, the contrast between different phenomenographic approaches should not be considered in terms of what is most likely to produce right or wrong outcomes, but rather, more or less complete outcomes.

> Thus, an individual researcher can, at the least, make a substantial contribution to our understanding of a phenomenon, even if team research might have taken that understanding further.

When have you reached an appropriate endpoint in your analysis?

During the team meeting, all contributors explicitly discussed what gave each of them a sense of confidence in their research outcomes. In fact, there were varying views among different members of the research team as to the confidence they felt in the validity of the final research outcomes that they shared. Some felt that they had been through a rigorous analytic process of iterating to the point of exhaustion, while others suggested that the pressure to complete inevitably meant that not enough time had been put into the iterations. However, all agreed that this stage of the analysis was a very time

consuming one, and that there was no way to predict in advance how much time it would take.

However, researchers must always be wary of closing the analysis too early. As John points out in his story, reading the transcripts again can bring new insights:

> Something that I have observed every time I have undertaken a phenomenographic analysis remains a source of joy and a motivation to continue with repeated analyses of interview transcripts. The observation is that as you proceed with the analysis, each new reading of the transcript brings new insights. What you see when you read something is affected as much by what you bring to the task as it is by what is in the transcript you are reading. I am sure literary scholars and others would be able to explain that in more enlightened ways than I can, but the observation leads me to conclude that going through five, ten or fifteen versions of the categories of description is necessary. I do not believe you could read the transcripts once and then write the final categories of description. After the first reading, with the draft categories written, you read the transcripts again with different eyes. The draft categories guide your reading, but you are looking for evidence to undermine that draft representation – to test the coherence of a category description or to question the difference between two different draft categories. Aspects of the transcripts that were not seen as significant before become significant now. You see them afresh. Despite having read the transcripts many times, it seems like you are seeing that aspect for the first time. Every new reading of the transcripts is a new experience. Perhaps when it ceases to be like that is when you've reached the last version.

So, how do you manage simultaneously not to exhaust yourself and not to distort the research outcomes? Pam and Nita referred back to their previous research experience as a source of guidance on when enough iteration is enough. In naturalistic inquiry, closure of the analysis is reached when data saturation or redundancy is reached. In phenomenography, Pam felt that the same principle applied. Analytic closure was reached when nothing new emerged from continuing iterations. Nita explained that in action research, closure is reached very quickly, whenever the researcher felt confident to act. But this was a state of preliminary closure, with one cycle of data, analysis and action leading on to another cycle. Furthermore, this confidence and

subsequent action was reached in collaboration with the parties concerned, re-emphasising the significance raised earlier of collaboration in generating a sense of confidence for Nita.

John emphasised a sense of maximising difference, as when one tentative category is confidently separated into two. An illustration of this was the separation between Categories A and B that emerged in the shift from version 3 of the outcome space for the research success project to version 4 (see Appendix A). John described this as 'seeing a separation', that is, seeing a separation between two qualitatively different ways of experiencing, when previously they were seen to be the same. Gerlese described an 'ah ha' response; the point at which confusion becomes clarity. Pam also emphasised a sense of being able to see a difference, and the feeling that 'this is a difference that's real and not simply something that we want to happen'. The example Pam provided in her story of when the team experienced great confidence in generating a particular category description, only to conclude in the next iteration that the description was not in accord with the transcript data, provides a negative illustration of her point. It illustrates a time in the analysis when she felt a particular outcome was reached more because the team wanted it to happen than because it was 'real', and how the iterative process subsequently exposed this.

Structural relationships between categories of description

Reports of phenomenographic research studies often contain three aspects. The first is a description of the 'outcome space', that is, a picture (in either prose or graphic form or both) of the categories and their relation to each other. The second aspect is the detailed elaboration of the categories of description. The third aspect is the detailed analysis of the relationships among categories. In practice, most outcome spaces show some form of hierarchical relationships among categories.

The nature of the hierarchical relationships commonly posited between categories of description in phenomenographic research is frequently misunderstood. The hierarchy is not one based on value judgements of better and worse ways of understanding, but on evidence of some categories being inclusive of others. Thus, the structural relationships searched for in a phenomenographic outcome space are ones of hierarchical inclusiveness. This does not mean that a linear hierarchical structure (such as in Gerlese's outcome space in Chapter 10) need emerge; forks and branches in the hierarchical structure (such as in the other contributors' outcome space in Chapter 9) are also common.

Novices might also question whether it is necessary to posit structural relationships at all. However, the very notion of an 'outcome space', rather than simply 'outcomes', implies structure, and Gerlese describes in her story why searching for structure as well as meaning derives from the theoretical underpinnings of phenomenography:

> Phenomenography espouses a non-dualistic ontology: 'There is not a real world 'out there' and a subjective world 'in here'. The world [as experienced] is not constructed by the learner, nor is it imposed upon her; it is *constituted* as an internal relation between them' (Marton & Booth, 1997 p.13). The phenomenographic proposition that ways of experiencing represent a relationship between the experiencer and the phenomenon being experienced, leads to the expectation that different ways of experiencing will be logically related *through* the common phenomenon being experienced. Thus, a core premise of phenomenography is the assumption that different categories of description or ways of experiencing a phenomenon are logically related to one another (Marton & Booth, 1997). These relationships are commonly expected to form a structural hierarchy of inclusiveness, with some ways of experiencing being more complex than others, but including aspects of awareness constituted in less complex ways of experiencing. The inclusive nature of such relationships makes some ways of experiencing not only more complex, but more *complete*, than others.

Nevertheless, Nita expressed a philosophical objection to searching for structure, as she felt it would inevitably encourage the imposition of researcher views on the data. Pam indicated that, while the team did not search for structure as part of the team research process (due to these different views in the team), she and John constituted structural relationships post hoc. She found this process unexpectedly useful:

> The question arose as to how we would think and make informed decisions about the relationality between categories. There was no inherent hierarchy evident here. My inclination then was to assume that there were no relationships between the categories. However, the use of conceptual mapping revealed that there was a two-pronged relationship among the categories. This was taken to the team for discussion and we redrew the concept tree until we felt that we had exhausted

possibilities sufficiently and that the mapping worked for the data. This was a new experience to me. Had I worked alone, I would have omitted this crucial aspect of the work.

Robyn felt that structuring inevitably occurs, at least implicitly, in the constitution of the categories, otherwise there would be a different category for each transcript. From her perspective, the analysis reached a point where structure became apparent, even though the team had not explicitly constituted the categories with structure in mind.

The dialectical relationship between meaning and structure

In phenomenography, it is not enough to simply constitute categories of description; one must also consider the structural relationships between the different categories. This is typically regarded as representing the dialectical relationship between the content, or referential aspect, of meaning (represented by the categories of description) and the structure, or structural aspect, of meaning (represented by a mapping of the inclusive relationships between categories).

While John and Gerlese both see structure as critical in a phenomenographic outcome space, they differed in their approach to constituting these relationships. In her story, Gerlese made clear her view that meaning and structure should be co-constituted contemporaneously, using a mixture of logical and empirical evidence. She argued that this was because structure formed part of the theoretical basis of the phenomenographic approach, part of what made the approach unique, and part of what made the approach useful. John reaffirmed that structure was important, but argued that it should be constituted only after the categories of description are finalised, based on a logical analysis of the empirical outcomes. His argument is that waiting until the end of the analysis to search for structure reduces the chances of researcher bias. Thus, while both emphasised the importance of structure, it seems that from John's perspective, structure acts to extend the meaning of the categories of description, whereas from Gerlese's perspective, structure is an integral part of the meaning of the categories of description.

HOW BEST TO INTEGRA TE STRUCTURE AND MEANING IN THE OUTCOME SP ACE

As Gerlese noted in her story, there is considerable variation in practice in terms of the extent to which structural relationships are constituted on

logical versus empirical grounds. John argues strongly for the final structure of a phenomenographic outcome space being justified entirely empirically, solely in terms of the content of transcripts. On this basis, any suggestion of inclusiveness must be evident in the transcripts. Gerlese emphasises an iterative process of alternating between logic and data in constituting structure. She felt that active empirical support for the proposed structure was the ideal to aim for, but allowed in principle for the possibility of some researchers proposing a structure that could not be demonstrated in the data, as long as it was not contradicted by the data. (It would also be essential for the researcher to make the absence of active empirical support clear when describing the proposed structure.)

At one level, however, the variation in practice is primarily one of timing. All researchers start their analysis with the data. Neither categories of description nor structural relationships are anticipated in advance of the data. So, a secondary question is, how quickly do you move from considering only the transcript data in forming categories of description to also considering their logical structure as part of the constitution of categories? The 'success' project, following John's lead, took the extreme position of completing the categories of description before looking for the relationships among them. Others include a search for structural relationships from the beginning of the analysis. John argues that the latter approach has the danger of categories of description being derived as much from the researcher's ideas as from the data.

Gerlese describes in her story how she has taken a position that is different from both of the extremes. She discusses this issue at length and readers should go to her story to examine her arguments.

What did we all get out of the experience?

What makes phenomenography worth using in one's research?

Different researchers highlight different benefits from using phenomenography. Nita valued the focus on balancing commonality and difference in experience of the same phenomenon. She also valued the elegant descriptions of experience that emerged. With more detailed descriptions, such elegance is impossible – indeed, thick descriptions deliberately challenge the notion of simplicity and elegance. Gerlese valued the ability phenomenography provides to look at variation in experience holistically, through the simultaneous focus on constituting the range of ways of experiencing a phenomenon and structural relationships between the different ways of experiencing. John

emphasised phenomenography's distinctive focus on the collective experience, rather than individual experience, although individual experience can subsequently be mapped against and explicated by collective experience. Pam highlighted phenomenography's basis in variation theory, while Robyn highlighted the method of analysis, which ensured that:

> The transcript remains an active partner in the interpretive process and that the phenomenal descriptions that are elicited emerge out of this two-way, or dialogical, exchange. This is both challenging and stimulating for the researcher, in that one at times struggles to stay with the data but also benefits from gaining genuine insights.

All saw potential for using phenomenography again in the future, with Nita's comment representing the general response:

> I quickly found that I really liked the 'polishing' of the categories which finally emerged – this involved constant iteration between text and categories, considering different perspectives, and finding ways to both focus and enrich the central ideas if done in a highly transparent and iterative way, in the company of others and with rigorous testing against the data. The careful and methodical working and re-working of the data that this method invites is very powerful. I particularly valued these dimensions of rigour, given my disquiet with processes which invite individual researchers to simply immerse themselves in their data and see what themes emerge intuitively, without a subsequent process of critique and review by others. As a result, I would encourage anyone working with complex data, from a large number of people, to seriously consider using some of the protocols of phenomenography.

Looking back

Learning 'to do' phenomenography is not a journey with a distinctive beginning and a clear end. While this section has presented five different perspectives of experience in working with phenomenography, it does not purport nor even support the idea that any of us might be at the end of our individual (and/or collective) learnings about phenomenography. However, we have learnt much from our collaborations. We have argued the point and tried to reconcile our differences. Where we

have not agreed, we have presented our various positions and the accompanying reasoning. In other words, these accounts represent just a snapshot or reflection upon our uniquely positioned experiences. We have deliberately tried to present not a white-washed, consensus-based view of phenomenography, but rather a multiplicity of complex views that have been individually influenced by various methodological experiences and preferences. In so doing we have attempted to allow the reader 'in' with respect to phenomenographic matters at both macro and micro levels. Thus, what remains now is for readers to consider whether or not to embark on a phenomenographic journey and, if so, to raise their own methodological questions, make appropriate and informed choices, and reflect upon their own phenomenographic journey(s). The following chapters contribute further to this consideration and the decision-making that might flow. The next chapter outlines comprehensively the methodological details pertaining to a phenomenographic study on understandings of growth and development as an academic, as well as understandings of being an academic. As such it provides further food for thought for the reader who might then move to the outcome chapters relating to both of the studies noted in this chapter and the preceding stories.

PART II

METHODS AND OUTCOMES

CHAPTER 8

Phenomenographic methods: A case illustration

Gerlese Åkerlind

This chapter serves two purposes. Its primary purpose is to provide a detailed case study of phenomenographic methods in practice. As such, the chapter is substantially based on the methodology chapter in my doctoral thesis (Åkerlind, 2003a), chosen because the examiners described the chapter as an unusually comprehensive and reflective account of phenomenographic methods. At the same time, it provides a description of the methods used in arriving at the research outcomes reported in chapter 10 on Ways of Experiencing Being a University Researcher. While these outcomes were constituted following my doctorate, they were based on the same set of interview transcripts. So, the methods described here are directly relevant to that chapter.

Selection of the interview sample

The research outcomes presented in my thesis and chapter 10 are based on interviews with academic staff at the Australian National University (ANU). The ANU is a research-intensive university in the capital of Australia. From the population of ANU academics, only those on teaching and research appointments within the Academic Classification Levels A-C (from a system-wide classificatory range of A-E) were selected for interview. However, within these parameters, the academics I interviewed were selected to represent as much variation as possible, being from varied disciplines, cultural backgrounds and gender, with varying levels of experience as an academic, and on varying conditions of appointment (see below).

The point of selecting for as much demographic variation as possible is to increase the chances of there being as much variation in experience of the phenomena being investigated within the sample as possible. This is a standard goal of phenomenographic research, given that the aim of the research is to investigate *variation* in the meaning of a phenomenon. To the extent that the variation within the sample

reflects the variation within the desired population – in this case, university academics – it is expected that the *range* of meanings within the sample will be representative of the *range* of meanings within the population.

DEMOGRAPHIC VARIATION WITHIN THE SAMPLE

Appointment – 12 tenured/tenureable appointments, 12 fixed-term (3–5 years), 4 short-term (12 months)

F/T-P/T status – 2 part-time, 26 full-time

Academic experience – a few months to approx. 35 years

Discipline – 6 from social sciences, 2 from economics/commerce, 8 from natural sciences, 8 from humanities/languages, 4 from information sciences

Gender – 18 men, 10 women

Age range – mid-20s to late-50s

Language background – 20 native English speakers (including some from North America and New Zealand), 8 from non-English speaking backgrounds (4 European/Russian, 2 Middle Eastern, 2 Asian)

Classification – 5 Level A appointments, 12 Level B, 11 Level C

The sample selected here is limited by the fact that the participants are all on traditional academic appointments, requiring both teaching and research activities. They do not include academics appointed at Levels D or E, and they are drawn entirely from one institution in one country. However, some limitations on the sample were required to make the research manageable within the scope of a doctoral thesis.

Interview design

The primary aim of the interview was to encourage participants to reveal their ways of understanding their own *growth and development* as an academic. A secondary aim was to encourage participants to reveal their ways of understanding *being an academic*, as it was felt that the range of ways of experiencing growing and developing as an academic could best be understood within the context of the range of ways of experiencing being an academic, and that a better understanding of each phenomenon would inform our understanding of the other.

Interviews were semi-structured (see below), asking academics what being an academic and what growing and developing as an academic meant to them, how they went about it, what they were trying to achieve, why they did things that way, etc, but working primarily off illustrative examples elicited from the interviewees during the course

of the interview. The interviews typically took 60–90 minutes, resulting in 25–35 page transcripts.

INTERVIEW QUESTIONS

Introduction, purpose of project, use of data…

Confidentiality, use of tape/transcription….

1) First, by way of context, can you tell me what your cur rent appointment is and a little about your histor y as an academic?
2) Based on your experiences so far , what does it mean to you to be an academic? (*If they ask for further explanation*: What sor t of things do you do as an academic? What ar e you tr ying to achieve as an academic?)
3) Can you give me a concr ete example of something you do as an academic? (*Probe on both teaching and research if they don't come up spontaneously.)*
   Probes:
   – Why do you do that?
   – What wer e you hoping to achieve
   – Why did you do it that way?
4) Do you envisage what you'r e doing as an academic changing over time?
5) This raises the issue of academic gr owth or pr ofessional development – Can you tell me, what does gr owing and developing mean to you, as an academic?
6) Can you give me a concr ete example of something you've done to help you develop or gr ow as an academic?
   Probes:
   – How did you go about that?
   – Why did you do it that way?
   – What did you gain or hope to gain fr om it?
7) Do you have an example fr om other ar eas of your work?
   (Ensure that each of the areas raised in response to Q. 2 & 3 are mentioned. Probe on both teaching and research if they don't come up spontaneously.)
   Probes:
   – How did you go about that?
   – Why did you do it that way?
   – What did you gain or hope to gain fr om it?
8) How do you judge that something that you've done to gr ow or develop has been successful?
9) I'd like to star t r ounding up now. Early on I asked you what gr owing and developing as an academic means to you. At that stage, the question came out of the blue, and since then we've been talking about some specific examples of what you do. Now that you've had a chance to think about it, I'd just like to step back for a moment and ask you to summarise for me what gr owing and developing as an academic means to you.
10) Before we finish, is ther e anything you would like to add that you haven't already mentioned?
    Generic probe: Is there anything else you'd like to say about… before we move on?

The structured questions consisted of contextual questions and primary questions. The *contextual questions* were designed to set the scene for the primary questions, start the process of encouraging the participant to reflect on their experience of the phenomena being investigated, and make the transition between questions seem more natural and conversation-like. This helped to generate a comfortable and relaxed atmosphere that would encourage frank discussion. The *primary questions* were of two forms: open questions about the meaning of the phenomena for participants; and questions asking participants for concrete examples illustrating the phenomena from their own experience.

The *open questions* took the form of: 'What does [the phenomenon] mean to you?'. They always followed a contextual question or set of questions to ensure that the participant had already had some chance to reflect on the phenomenon before being asked the open question. The aim of the open questions was to give participants the opportunity to initially focus on whatever aspects of the phenomenon appeared most significant to them.

The questions requesting *situated examples* took the form of, 'Can you give me a concrete example of something you do/have done [to illustrate the phenomenon]?'. An individual's experience of a phenomenon is always embedded within a particular context, and a different context may bring different aspects of the phenomenon into awareness. Consequently, the aim of the questions requesting concrete examples was to clarify any particular context that the interviewee had in mind and to explore his/her understandings of being an academic and growing and developing as an academic *within* that particular context.

The *unstructured follow up questions* were used to encourage further elaboration of the topic or to check the meaning that interviewees' associated with key words or phrases that they used. These questions commonly took the form of, 'Could you tell me a bit more about that?', 'What do you mean by that?', 'Could you give me an example?', 'Why did you do it that way?', 'What were you hoping to achieve?', 'Why was that important to you?'. In many cases, the follow up questions were more important in eliciting underlying meanings than the pre-determined questions. However, the aim at all times was to provide opportunities for the interviewees to reveal their current experience of the phenomenon as fully as possible without me, as the interviewer, introducing any new aspects not previously mentioned by them (except for the planned introduction of topics according to the research design).

When the interviewees were asked to provide examples of their experiences of being an academic and growing and developing as an

academic, initially no guidance or leading was given. However, if they did not spontaneously mention at least one example involving teaching and one involving research over the course of the interview, they were prompted to do so. This was to ensure that the data collected included the traditional breadth of foci of academic activities. Interview questions of direct relevance to ways of experiencing being a university researcher, presented in chapter 10, are Questions 2 and 3, but only as pertains to research.

Developing phenomenographic interviewing skills

An initial set of questions was trialed in three pilot interviews and then refined for the final interviews. I conducted and transcribed the pilot interviews, and then read the transcripts in conjunction with my two doctoral supervisors. The focus of the readings was on whether the interview questions were eliciting variation in views across the pilot interviewees. As the three of us were satisfied that variation was being elicited, the final interviews were conducted with only minor changes to the interview questions used, and refinement of interview prompts and follow up questions. However, the total number of questions was reduced to make the duration of the interview more manageable. The pilot interviews were *not* included in the final sample.

The reading through of the three pilot interview transcripts by my supervisors and myself also provided an opportunity for checking and refining my approach to interviewing before undertaking the final interviews, as recommended by Ashworth and Lucas (2000). As part of the interview preparation process, I practised interviewing one supervisor while being observed by another and they demonstrated interviewing each other while I observed. We each had a different style of interviewing, and this opportunity to observe different approaches in practice helped to highlight the importance of the following components: the significance of the follow up questions and prompts; the need to continue questioning and prompting until a sense of the interviewee's underlying intentions towards the phenomenon being discussed were elicited; and finally, the importance of not leading the interviewee in terms of introducing ideas about the phenomenon not previously mentioned by her or him.

Conduct of interviews

In one sense, the interviewer plays an active and leading role in phenomenographic interviews in that she/he defines the phenomenon

being discussed and also the focus taken to that discussion, that is, the elicitation of underlying meanings and intentional attitudes towards the phenomenon. However, within these parameters, the interviewer takes as non-leading a role as possible, following only those ideas raised by the interviewees, and developing a repertoire of follow up prompts that invite the interviewee to expand on what they have said without leading them to expand in any particular direction.

It is essential for the researcher to put her/his own understandings of the topic to one side as much as possible throughout the interview. An attitude that I have found important for achieving this is to stay very focused on trying to understand the meaning of the phenomenon *for the interviewee*. This involves maintaining an open attitude, while continually asking myself 'What do they mean by that?', 'How does that relate to what they said earlier?', and avoiding any attempt to classify or categorise during the interview. This involves a dialectical process of adopting an open and non-judgemental attitude to what is being expressed in the interview, while at the same time maintaining an awareness of which comments require further exploration, as described by Ashworth and Lucas (2000).[1]

Nevertheless, a directive role that the interviewer inevitably plays in phenomenographic interviews is in deciding which of the statements the interviewee has made that require further probing and which do not. Although this does *not* involve introducing any new ideas that the interviewee has not already mentioned, it does mean that the interviewer highlights and asks the interviewee to expand on some ideas at the expense of others, with an obvious potential for researcher prejudice to intrude.

My decision to probe was based on a sense that I did not fully understand the intentions underlying something the interviewee had said; that she/he had not yet fully expressed these intentions. My approach to probing typically involved selecting the word or phrase in their comments that seemed most significant or meaning-laden *for them*, and asking them to expand on that. Another way in which I sought clarification of meaning was by asking them to compare or integrate something they had expressed earlier with what they had recently said, e.g., 'How does this fit in with …, that you mentioned earlier?' In these cases, the importance of ensuring that I had fully explored what had already been said by the interviewee took priority over the possibility of biasing what they were going to say in the rest of the interview.

The decision to stop probing was based on a number of criteria. The most common criterion was that I felt reasonably comfortable

that the interviewee had expressed meaning, even though I could not articulate the nature of the meaning at that point. Other criteria were that they started repeating themselves and/or they started having difficulty answering my requests for further elaboration. Such behaviour is commonly seen as a sign that the interviewee has expressed meaning as fully as possible under the current circumstances.

The quality of the final research outcomes starts with the quality of the data collected. Consequently, I feel it is essential to provide a concrete illustration of how the data were gathered. To achieve this, I reproduce below an extract from one of my interview transcripts, which illustrates the type of data collected and how I enacted the interviewing principles described above *in practice*. This section of the interview starts by addressing the interviewee's experience of being an academic. This is the first primary question in the interview (Q.2), immediately following the opening contextual question on the interviewee's history as an academic. The interviewee's initial response focuses on teaching, which was then explored, before introducing the issue of research.

Okay, at this stage of your career, what does being an academic mean to you?

I have thought about it quite a bit. I guess to me at the moment it means teaching and supervision, I teach in the clinical stream in this department, which means that you have Masters students to supervise as well as PhD and Honours students, and the Masters students do a thesis which is passable as an Honours thesis. It means supervising. I would say that, compared to what I was doing before, which was pretty much driven by practical matters… [reference to potentially identifying information], I guess I would see being an academic as being broader than that. Not only being task-orientated but being knowledge-orientated, and I spend a lot of time trying to update my knowledge about psychology because I have really been away from it for a decade. So, I used the words knowledge and teaching so far and doing research is kind of on the periphery of my mind at the moment. You might need to prompt me a little more.

Would you like to give me a concrete example of what you do that you feel exemplifies what being an academic means to you and then we can explore that?

I think it is reading and writing lectures actually.

Okay, so what are your aims when you are doing this? What are you trying to achieve?

I guess I try and see my job as teaching; I have a strong interest in teaching. I read quite broadly across, I guess my recreational reading crosses over to my professional reading quite a lot.

Are you talking about reading in psychology [the interviewee's discipline]?

[Non-verbal agreement.] Reading for me is, I find reading quite enjoyable and I like the challenge to try and understand things. And I guess transplanting that into exposition things for the students that will, I guess, likely stimulate them and excite them about the excitement I feel about intellectual pursuits.

I am happy to follow that train of thought through. How do you go about exciting students and why do you want to excite them?

I guess because, it is a personal history thing. I grew up in a working class family and I hadn't read a book by the time I had left school. There were no books in my home. I did really badly at school and I left school early and I did a number of terrible jobs and realised I was kind of stuck, unless I did something about it. So, I went back and did my Higher School Certificate at Tech College. I had been told all the time at school I was very bright, but I think I doubted that. I did very well at the HSC and got in to university.

There were then a couple of years when I did other things before I went to university. It was a bit hard for me to believe that I was going to go to university, and when I got there I think I was intellectually fascinated. I worked and I was curious and I just found it an enjoyable experience to go to lectures, and if the lecturer was good I just found it fascinating and enjoyed it. I have thought about that a bit when I went to prepare lectures. I find myself going back to what they did. I think they were passionate about what they were doing. I am actually teaching some lectures on Freud next term. I was taught by Freudians and that was greatly interesting to me then, although in the broader perspective there is much more. I am kind of thinking about how to present his work in a way that would show them how interesting it is as a set of ideas.

So, you are trying to interest students, and the example you gave is your lectures and you try to interest them. [Non-verbal agreement.] Why?

Well it is getting them engaged.

Yes – Why? I am trying to get you to home in more clearly on why you want to interest them.

It is getting them engaged. I guess, if you think of it as an educational thing, if you are getting them engaged then they will educate themselves by attending and reading more. I guess it is a very personal thing about what I enjoy and what I would like to think. I have certain educational objectives to get across a certain amount of material, but I guess I would like them to take something more away with them, maybe raise a few questions, get them to think, get them interested in the life of the mind of knowledge.

What would happen to students if they were interested? What would happen if they weren't. I am trying to get an idea of why you want to interest them.

I have not thought deeply about that; I haven't had the time.

[interjects] No, why should you?

I have just taught a course to the Masters students, a small group of students, a combination of lecture and workshops, and that went really well. I did not want to evaluate my first course, so I just gave out the forms myself. But, it was independently evaluated by the course coordinator; and there was an even better response. So, it went really well. But that is a really good group of students. They are highly motivated. They all have [Honours] Class 2 or 1 or better, and they are doing jobs that they want to do. To say that they were interested; I was teaching them a course on [course topic]. And I think that psychologists have tended to ignore it because it is too difficult, and I wanted to get them interested and show that they could treat these disorders, so they are as successful or unsuccessful with these as they are with anything else. So, I wanted to get them interested in that topic, I guess for pragmatic purposes – for it is a belief I have, me and a lot of other people in the [course topic] area, that psychologists should be more involved.

That is kind of different to undergraduate lectures. I am a kind of wandering lecturer. I haven't done a lot of undergraduate lecturing. So far, I gave a series of five lectures on [course topic], I am teaching a first year series next semester, and I will be doing more the semester after that.

Do you have the same aim of interesting students at the undergraduate level?

I think of what my aim is for the course. There are certain departmental objectives that have to be met. And I am

teaching a course in [course topic], so there are certain topics that have to be covered and [course topic] has not been taught in this department for a while in any extensive form. That seems to be how I am going to translate my job into something. I have opted to take on this course. And so I guess my aim in the course is to give them a proper overview of what [course topic] psychology is, as it is understood in this particular time in history. But, I would have to say that many students study psychology for reasons that are thwarted quite quickly. They are interested in people's character so that they can understand themselves, or they are inquisitive about human nature – most people. And most of the course is to actively tell them that that is not what psychology is about. It is about science, and statistics, and perception and stuff like that. And everyone in the department is aware of this, and the [course topic] course is thought to be very important because it is like what they expected. So, I am looking forward to teaching it. And it is in that sense that I don't think that psychology has to be about experimental procedures. I mean I am pretty much committed to a research paradigm, but I think that interesting the students, I don't know, getting them excited, I must implicitly believe that I think it is important for people to be intellectually curious.

Let me take you back to another question, if that helps. What would happen if a student is excited?

When they are excited they will be enthusiastic about the course. They will be interested to read the textbooks, to go and figure out the extra reading, maybe discuss it with their peers. They will think about it more broadly; think about themselves, who they are. Coming to university, especially for the younger students and for the older students – it certainly was for me – part of a developmental thing. In a way, you go in at one end and when you come out at the other end you have changed in some way. If they are more curious about the topic that I am teaching, at a first level, if they are not interested they will not engage in the topic, so if they are bored they will not do any reading. So, at a very pragmatic level, if it is presented in a way that can ignite their interest, they will be engaged in the topic. An example is that the … course was taught last year by a visiting fellow and it was the only course that was evaluated, and it was the

course that they complained about because the person who taught it turned it into more experimental; apparently achieved making what is an interesting topic into something else.

That gives me a better feeling for it, thank you. Now, I would like to bring research back into it, to whatever extent that you think is relevant…. [on to next topic]

This extract illustrates how I framed questions during the interviews, what sort of comments I decided to probe on further (as well as the sort of comments I did not explore further), my selection of meaning-laden words and phrases from the interviewee's comments to follow up on, and the stage of the discussion at which I chose to stop probing on a particular topic. The way in which short extracts from such sections of the interview transcripts were later selected to illustrate particular categories of description when describing my results is also illustrated later in this chapter.

During the interviews, I did not always ask the pre-set questions in precisely the same words or same order. It seemed more important to me to keep the interview as comfortable and conversation-like as possible, in order to facilitate a frank exploration of the topics with the interviewee. In terms of consistency between interviews, the requirement in a phenomenographic interview is to ensure that interviewees are all talking about the same phenomenon. However, any resulting suggestion that as many questions as possible should be phrased in precisely the same way comes from an objectivist paradigm, where one can assume that if interviewees are presented with the same stimulus they will then be responding to the same object or phenomenon.

From a non-dualistic perspective, we can assume that interviewees will interpret the same question in different ways, constituted as an internal relationship between them and the interviewer, the setting and the question. Once again, this emphasises the importance of the follow up questions in achieving the desired exploration of the phenomenon being discussed. I do not mean to indicate that I would support the idea of random variation in approach to interview questioning, merely that some interview aims, such as creating the desired atmosphere, may be more important in achieving the ultimate aims of the interview than maintaining absolute consistency in the phrasing of questions.

In my opinion, phenomenographic interviews are more robust than many styles of interview in terms of their ability to overcome

occasional leading on the part of the interviewer, as long as it does not happen in a consistent, prejudiced way. The active searching for intentions and meanings underlying interviewees' comments, combined with regular requests for them to give concrete examples of what they are talking about, reduces the impact on the final interview outcome of occasional over direction on the part of the interviewer. As unintentionally illustrated by Säljö (1996, p.20), discourse that does not correspond with the individual's own understanding of a phenomenon is easily penetrated as representing little meaning for the person.

What vs why questions in interviews

Participants' comments on *why* they engaged in described behaviour, or why they thought particular behaviour and opinions were important, were more significant in the search for meaning in the transcripts than were simple descriptions of behaviour and opinions. The focus taken in phenomenographic interviews on eliciting descriptions of participants' intentions, rather than their behaviour or opinions, means that any comments designed to please the interviewer typically become sidelined during the interview, due to their likely lack of integration with and illumination of the interviewees' intentional attitude toward the phenomenon.

In common with other researchers (e.g., Prosser, 1994; 2000), I found the interviewees much more ready to talk about *what* they did, in terms of providing a list of academic development activities that they had engaged in, than to talk about *why* they did those things, in terms of describing their developmental intentions in engaging in these activities. However, some authors suggest that follow up questions should not take the form of 'Why' questions, only 'What' or 'How' questions (Uljens, 1996; Sandberg, 1994). The idea behind this is that 'Why' questions will elicit causal explanations and phenomenography is not concerned with these. However, phenomenography *is* concerned with experiential or intentional explanations, and my underlying intention in asking questions beginning with 'Why' is to elicit the interviewees' intentional attitude towards the phenomenon they are describing, not to elicit causal explanations (as illustrated in the preceding interview extract). I have found 'Why' questions very successful in this regard and propose that the intentional attitude with which the interviewer poses a question is more significant in eliciting desired responses from interviewees than the linguistic phrasing of the question.

Creating a relaxed atmosphere

Phenomenographic interviews are potentially uncomfortable for interviewees, in that they invite them to reflect deeply and attempt to integrate issues that they have often not reflected on or attempted to integrate before. Questions about how their aims for growth and development are enacted in practice, asking them to explain why they do things in a certain way, and asking them to integrate different statements that they have made at different times, are often questions that they have not experienced before with regard to the phenomenon being discussed.

This is sometimes exciting for the interviewee, and I have certainly had interviewees comment that they found the interview process a valuable and energising opportunity to clarify their thoughts in this area. On the other hand, interviewees sometimes find the challenge of the interview an uncomfortable one. Being asked to explain why they thought something was important or why they did things in a certain way often required self-reflection and analysis at a level that was effortful and potentially tiring. Furthermore, sometimes interviewees could not express an explanation of the 'why' at a level that they felt satisfied with, which was also uncomfortable for them. As described earlier, participants were typically more comfortable talking about what they did rather than why they did it, and a major part of my interview process was to lead them from one type of comment to another.

The idea that phenomenographic interviews may be uncomfortable for the interviewee is well accepted (Svennson & Theman, 1983; Trigwell, 1994; 2000; Marton & Booth, 1997; Bowden, chapter 2 in this monograph). Nevertheless, I regard it as part of my ethical obligation to make the interview as pleasant as possible for the interviewee. Apart from my efforts to create a pleasant, conversational atmosphere (outlined below), I employed a number of strategies for reducing any potential discomfort on the part of the interviewees in response to repeated probing. If they appeared to be becoming uncomfortable or frustrated, I would reassure them that people often had difficulty with the questions, as I was asking them to reflect on issues they had probably never been asked to reflect on before; I would try expressing the question in a different way that might be easier for the interviewee; and I would let the question remain unanswered at the time, returning to it later in the interview in the hope that the interviewee would feel more refreshed.

For participants to comment frankly on the phenomenon being investigated, it is important to create a situation of empathy and trust.

Consequently, it was important to ensure that they felt as comfortable and natural as possible in the interview situation, and confident that their comments would be treated confidentially. To help create a relaxed and informal atmosphere, the interviews were held in participants' offices unless they preferred another location. I typically arrived with a take-away cappuccino, or equivalent, as a small gesture of appreciation and to help enhance the sense of engaging in an informal conversation, 'over coffee' as it were. The semi-structured nature of the interviews also helped to create a strong conversational effect, as most of my questions were a response to comments made by participants, and thus very interactive. It is in this way that being willing to vary the precise wording and order of questions in the way I described earlier in this chapter becomes important, as it allows for a more natural flow between interviewer questions and interviewee responses, thus creating a more comfortable and conversation-like effect.

Conduct of the analysis

Interviews were recorded and transcribed verbatim. Ideally, I would have transcribed all interviews personally, in order to increase my familiarity with the data. However, research always involves a compromise between ideals and practicalities, and for a part-time doctoral candidate simultaneously holding a full-time academic position, the time involved in transcribing was prohibitive. Consequently, I transcribed the first three interviews, in order to become familiar with the process, but subsequent interviews were transcribed by a professional transcriber following my written instructions, which were based on my experiences in transcribing the first three interviews.

Given the financial costs of transcribing, I did not require transcribers to represent every minor linguistic or emotional aspect of the audiotape. However, all transcriptions were checked by me against the tape recordings, any meaning-relevant errors were modified, and any significant shifts in emotional tone during the interview noted if this had not already been done. However, I was not concerned with correcting minor typographical or word errors that did not impact on the meaning of the comments being made or were in response to contextual questions or other sections of the interview that were not relevant to the phenomenon being investigated.

Given that the interview transcripts were 25–35 pages in length, a preliminary analysis was done on the first 17 transcripts produced. This decision was in line with the recommendation of other phenomenographic researchers, that 10–15 interview transcripts form the ideal

to maximum number that can be analysed at any one time (Trigwell, 1994; Dahlgren, 1995). After a set of tentative categories of description and dimensions of variation emerged from the preliminary analysis, the remaining transcripts were then intensively consulted in order to refine and modify the final outcome space. The aim was to integrate the additional transcripts with the preliminary set, not to recommence the analysis from scratch. However, I expected the additional data to modify my preliminary interpretation of the first 17 transcripts, and actively searched for data that would lead to a reconstitution of the existing categories of description and the relationships between them, as well as for data that might lead to the positing of different categories of description not obvious in the first 17 transcripts.

I followed the model more common in Australia of analysing the transcripts as a whole initially, and then in large chunks incorporating all responses to the specific questions about the phenomenon I was investigating. Responses to contextual questions and questions relating to other phenomena were not focused on after the first one or two readings, but every other part of the transcript was read as a whole whenever the transcript was consulted. Inevitably, some comments within the transcripts seemed more meaning-laden than others, and I would often underline these statements in the transcripts. Nevertheless, the designated sections of the transcript were always read as a whole, so that these underlined sections were never read out of context or focused on to the exclusion of other parts of the transcript.

This is in contrast to the approach more common in Sweden of selecting key descriptions of the phenomenon from transcripts and analysing these as small chunks of meaning. The greater context provided by the whole of transcript approach was seen as presenting greater opportunities for interpreting the underlying meaning or intention associated with particular words and phrases used by the interviewee. The potential danger with this approach is the possibility it provides of placing too much emphasis on the view of individual interviewees. Consequently, this was a question I regularly posed to myself during the analysis, 'Am I focusing too much on the individual?'. It was also important to be open to the possibility that more than one way of experiencing a phenomenon may be represented within one transcript.

Constituting structural relationships

I have already emphasised in chapter 6 the importance of constituting a logically structured outcome space in phenomenographic research.

However, as indicated in that chapter, there is variation in practice among phenomenographers in the relative weight placed on empirical and logical support in constituting structure. Based partially on published reports of practice (Bowden and Walsh, 1994; 2000) and partially on personal communication with phenomenographic researchers, it seems to me that the two extremes of this position are:

- that the structure of the outcome space is best constituted with a priority given to producing a *logically structured* outcome space, given the epistemological assumptions of the research approach and the inevitable limitations of any data collected; vs
- that the structure of the outcome space is best constituted with a priority given to *empirical evidence* grounded in the transcript data, given the empirical nature of the research approach and that the transcript data are what we, as researchers, have to work with.

The first view may be justified on the basis that phenomenographic research aims to capture the range of views present within a group, collectively, not the range of views of individuals within the group. Consequently, there is no expectation that there will be a one-to-one relationship between transcripts and categories of description. This makes the empirical data an imperfect source of evidence for the outcome space as inadequacies in the data may mask, or not highlight, structural relationships. The second view may be justified on the basis that phenomenography is an empirical research approach, distinguishing it from other, more philosophically reflective approaches (such as phenomenology). On this basis, the empirical aspect of the analysis should be given priority, even if this means constituting a less tightly structured outcome space. This approach is also seen as reducing the potential for researcher prejudice by encouraging the researcher to stay as faithful as possible to the data.

My practice was to place equal weight on the need for both logical and empirical support in constituting structural relationships. This emphasis on satisfying both sets of criteria is seen as strengthening the resulting outcomes base, although it lengthens the analysis process. Placing equal emphasis on the empirical content of the transcripts and considering such large chunks of the transcript at any one time requires being especially sensitive to the fact that any one transcript may not represent any one category of description. That is, I was careful not to assume that a transcript necessarily corresponded to one particular way of viewing the phenomenon, both in the sense that

any one transcript may represent only a fragment of a view and also that any one transcript may represent more than one view. Indeed, I interpreted this as being the case with a number of the transcripts from my sample.

The positing of hierarchically inclusive relationships between categories and the ordering of categories within the hierarchy emerged through an iterative process, involving an interactive alternation between searching for logical and empirical evidence of inclusiveness. That is, my hypotheses about likely orderings and inclusiveness sometimes originated from logical argument and sometimes from the content of transcripts, but in all cases needed to be confirmed by the transcription data before being regarded as a viable interpretation.

A number of authors have warned against foreclosing too early on the search for holistic meaning in favour of the search for structural relationships between meanings (Ashworth & Lucas, 2000; Bowden, 1996). Consequently, it is important during the analysis to undertake certain safeguards to ensure that the search for structural relationships does not unduly influence the constitution of the categories, as this may lead to a less complete outcome space. In my case, a key safeguard that I employed was to prioritise the search for meaning over the search for structure during the early stages of the analysis. This meant that during the early readings of interview transcripts, preliminary groupings of transcripts and hypothesising of categories, my primary focus was on a search for holistic meaning, as well as for commonalities and differences in meaning. It was only at a later stage of analysis that the search for a logical structure was more strongly emphasised, at which point I alternated between explicitly focusing on both meaning and structure in constituting the categories of description. At this stage, each focus was seen as equally important as each informs the other.

A second safeguard that I employed was to set a requirement that the structure of the outcome space that I proposed be *confirmed by* the data, as mentioned above. This may be contrasted with both the *less* rigorous criterion for empirical support often employed in phenomenographic studies, that the proposed structure of the outcome space be simply *not contradicted by* the data, and the *more* rigorous criterion that the proposed structure be *derived solely from* the data and not simply supported by the data. My requirement for empirical confirmation of hierarchical inclusiveness was evidence that, for each category of description, at least some of the transcripts from which the category was constituted showed some reference to aspects of the phenomenon present in categories lower in the hierarchy, but not vice versa.

An illustration of what I regarded as empirical evidence of hierarchical inclusiveness is presented in chapter 10. Hierarchical relationships between categories need not form a simple linear sequence, so I also allowed for the possibility of non-hierarchical relationships between *some* categories of description, as illustrated in version 3 of the outcome space presented in chapter 10 (see Appendix B), even though the structure of my final outcome space in chapter 10 is a linear one. However, I do not allow for the possibility of *no* inclusive relationships between categories, as this would contradict the assumptions underlying phenomenography.

The iterative process

The approach to analysis that I undertook may be summarised as involving a continual process of iterating between a focus on *parts* and on *wholes*, plus the attempt to integrate the outcomes of these two foci over time. To illustrate:

- within *individual transcripts*, particular statements were interpreted within the context of the whole transcript
- within *groups of similar transcripts* (tentatively representing a category of description), individual transcripts were interpreted within the context of the whole group of transcripts, plus
- groups of transcripts (or individual categories of description) were interpreted within the context of the *total set of all transcripts* (or categories of description) as a whole.

I initially read the preliminary set of 17 transcripts as a whole. My focus was on similarities and differences between transcripts, so the sense of what was significant within each transcript would emerge out of the context of what was present in the set of transcripts as a whole. On the first reading, I simply read with a sense of openness towards what the set of transcripts might contain. On the second reading, I started to home in on the questions related to the phenomenon of interest, and marked any passages that addressed unrelated phenomena, to reduce future reading time. On the third reading, I started to make notes on each transcript, summarising key issues and themes that were emerging within it based on my preliminary sense of the whole set. These notes were written on separate sheets of paper, not on the transcripts themselves. The use of notes was an attempt to come to terms with the amount of data in the transcript set, and represented an interim stage of the analysis. At a later stage I returned to

reading the transcripts only, without the use of notes. However, during the interim stage, I alternated between reading the transcripts as a set and reading my notes on the transcripts as a set, with a focus on similarities and differences running through them.

At this point I started literally to place the transcripts (and/or summary notes on the transcripts) in piles on the floor, placing those that seemed more similar closer together and those that seemed less similar further apart. This initial placement was based on a fairly unarticulated and imprecise sense of the similarity and differences in meaning conveyed within each transcript. Consequently, this preliminary grouping was in no way tidy, nor was it intended to be. Transcripts that seemed most similar were placed on top of each other, ones that seemed less similar but not to belong to another pile were placed nearby, ones that seemed to fall between two piles were placed between them, and transcripts that did not seem to fit into any pile were placed to one side. I then re-read the transcripts in these piles, focusing on similarities and differences within and between piles, leading to a rearrangement of the groups of transcripts.

Then began a lengthy process of regular re-reading and re-grouping, which continued over some months (3–18 months part-time for each outcome space, varying with the particular phenomenon being investigated). During this process, I alternated between searching for similarities and differences in the overall meaning conveyed by the transcripts and searching for 'dimensions of variation' in meaning that ran across transcripts. I approached this by looking for 'themes of expanding awareness' running throughout the set of transcripts as a whole, where each theme linked a set of different dimensions of variation (as described further below).

At the same time as I alternated between looking for the holistic meaning conveyed by the transcripts and for dimensions and themes running through the transcripts, I also alternated between reading the transcripts per se and reading my notes on the transcripts, with the same two foci in mind. This provided a way of making the amount of data that I needed to be aware of at any one time manageable.

In summary, in trying to understand the transcripts, I was working on several different fronts at once: reading the transcripts; reading my notes; working with individual transcripts and with preliminary groupings of transcripts; asking myself what was similar and what was different between transcripts and between tentative groupings of transcripts; focusing on similarities and differences in terms of a sense of more holistic meanings that emerged for me from the transcripts (these meanings were not necessarily clearly articulated or based on any clear sense of structure);

and looking for dimensions and themes that would provide the basic structure or structural relationships between the different ways of understanding that were emerging. More separated in the early stages of analysis, these different perspectives became increasingly integrated over time.

Dimensions of variation and themes of expanding awareness

My initial search for dimensions of variation in awareness focused on identifying different aspects of the phenomenon that were referred to in some transcripts but not in others. In this way, I started to tentatively identify dimensions that appeared critical in distinguishing between transcripts and between emerging categories of description.[2]

At the same time, I looked to see whether these tentative dimensions of variation could be systematically grouped into themes of expanding awareness running through *all* of the transcripts, or at least through all of the groupings of transcripts (where groupings represent tentative categories of description). In doing this, I went beyond standard phenomenographic practice, which normally stops at a search for dimensions of variation in awareness. What I have called 'themes of expanding awareness' may be seen as representing structural groupings of dimensions of variation, highlighting the structural relationships between different dimensions. To be accepted as a theme, I required empirical as well as logical evidence of inclusive awareness of each dimension comprising the theme (as illustrated in chapter 10).

In the final constitution of each theme, I required that it be apparent in *each* category of description constituted, and that different levels along the theme (where each level typically represented a dimension of variation) *distinguish between* different categories of description in an *inclusively ordered* way (e.g., see Table 1, chapter 10). The consistent occurrence of a theme across all transcripts or categories was used as my primary criterion for identifying variation that appeared *critical* to distinguishing qualitatively different ways of experiencing. This criterion was also seen as important in ensuring useful outcomes, in terms of providing insight into what would be required to facilitate the transition from one way of experiencing to another.

My constitution of critical dimensions of variation and themes of expanding awareness involved *systematically* looking through each transcript and preliminary groupings of transcripts for themes or dimensions I had tentatively identified on earlier readings, as well as for the different forms or levels that variation along these themes may take. For instance, with the themes that I have labelled 'research aims' and 'research outcomes' in my analysis of ways of experiencing being a uni-

versity researcher (see chapter 10), it was apparent from early on that at least one transcript in the data set represented research activity in terms of external outcomes, and another in terms of internal outcomes. However, whether this variation would emerge as critical, what the various manifestations or levels of the variation would be, whether it would remain as a single dimension or split into a number of themes, and whether 'research aims' and 'research outcomes' was the best way of describing the variation was not clear until later on in the analysis.

Another outcome that was not clear from the beginning, but emerged through the iterative process, was the relative ordering of the different levels of each theme, in terms of which levels were inclusive of others. The final ordering emerged based on both logical and empirical evidence. That is, based on logical argument for which level along each theme seemed to involve greater breadth of awareness than others and on empirical evidence from the transcripts that some levels included awareness of earlier levels, but not vice versa.

For instance, continuing with the example of the 'research outcomes' theme mentioned above, this theme of expanding awareness was finally constituted as four inclusive stages or levels along the theme. These levels involved an expanding focus on university research as leading to (1) concrete products, (2) academic credibility, (3) personal understanding, and (4) benefits to a research or social community. However, my final ordering of these levels involved both logical and empirical support, and was not immediately apparent on logical grounds alone.

As the analysis progressed, I began to ever more actively integrate my search for overall meaning and for structural relationships between different meanings, in terms of themes of expanding awareness and associated dimensions of variation (see Appendix B). These had started off being somewhat separate and alternating activities, again as an attempt to make the data more manageable. However, as each perspective illuminates the other, it was essential to integrate over time these different ways of looking at the range of meanings of the phenomenon. The aim was to constitute a set of categories of description of different ways of understanding the phenomenon, where each category represented both a holistic meaning and a *unique combination* of different dimensions of awareness.

Presentation of research outcomes

It is important to draw a distinction between researchers' interpretations of data and their description of that interpretation when writing

up the research findings. There are many decision points along the way, in terms of how best to describe the data and interpretations. I aimed to achieve a description that provided a *faithful* representation of my interpretation, presented the data in as *understandable* a way as possible for the reader, and was as *persuasive* as possible in support of the interpretations I had made.

In presenting my interpretation of the data, I largely separated my description of structural relationships between categories from my description of the meaning represented by each category (see chapter 10), even though they were constituted in an interrelated way. I believe that focusing on different aspects of the variation in experience at different times provides a way of helping the reader to come to terms with the complexity of the data.

When describing the categories of description (focus on meaning), I emphasised the *differences* that emerged between the categories, by concentrating on the primary foci of each way of experiencing. Whereas, when describing inclusive relationships between categories (focus on structure), I placed as much emphasis on *commonalities* as on differences between the categories, by focusing on the patterns of variation that linked and separated them.

After describing the key aspects of each category of description, and any within category variation, I illustrated each category using extracts from relevant interview transcripts. While it is impossible for brief extracts to fully illustrate all aspects of the categories described, they provide a more concrete sense of the nature of each category than would be possible from an abstract description alone, and thus play a persuasive role.

The way in which I selected extracts from the larger transcript was based on a number of criteria, the need to provide an illustration of the category that was representative, convincing and parsimonious. The selection process is illustrated below, with an extract drawn from the section of transcript presented earlier in this chapter, and used in my thesis. A comparison between the extract below and the larger section of transcript above allows the reader to evaluate the way in which I selected extracts from transcript data to illustrate particular categories of description.

> I guess I try and see my job as teaching; I have a strong interest in teaching. I read quite broadly across, I guess my recreational reading crosses over to my professional reading quite a lot… I find reading quite enjoyable and I like the challenge to try and understand things. And I guess transplanting that into exposition things for the students that

> will, I guess, likely stimulate them and excite them about the excitement I feel about intellectual pursuits.
>
> *…How do you go about exciting students and why do you want to excite them? … I am trying to hone in more clearly on why you want to interest them.*
>
> …It is getting them engaged. I guess, if you think of it as an educational thing, if you are getting them engaged then they will educate themselves by attending and reading more. I guess it is a very personal thing about what I enjoy and what I would like to think. I have certain educational objectives to get across a certain amount of material, but I guess I would like them to take something more away with them, maybe raise a few questions, get them to think, get them interested in the life of the mind of knowledge.
>
> …When they are excited they will be enthusiastic about the course. They will be interested to read the textbooks, to go and figure out the extra reading, maybe discuss it with their peers. They will think about it more broadly; think about themselves and who they are. Coming to university, especially for the younger students and for the older students – it certainly was for me – part of a developmental thing. In a way, you go in at one end, and when you come out at the other end you have changed in some way….

In describing structural relationships between categories, I use a tabular approach as well as more extended descriptions (see Table 1, chapter 10). I use tables because they provide a simple visual outline of the hierarchical relationships between categories, in terms of the increasing complexity or breadth of awareness across categories. They also allow a holistic perspective on collective experience of the phenomenon, illustrating the variation within the whole. I have seen other researchers use diagrams to similar effect. Bowden et al (chapter 9 in this monograph) use both.

Checks on interpretive rigour

My primary approach to ensuring the rigour of my research outcomes was through the attitude of interpretive awareness that I took towards my research design, data collection and analysis. I have attempted to document this attitude in the preceding sections of this chapter.

In addition, I placed a strong emphasis on communicative validity and dialogic reliability checks (Kvale, 1996) throughout the

research process. This involved taking every opportunity to seek feedback on my preliminary and final results for each outcome space. Over the course of my candidature, I presented eight research seminars, six conference papers and submitted three papers to refereed journals – all now accepted for publication. There were four main audiences for my work: academics across a range of disciplines; academic developers; educational researchers; and phenomenographic researchers. As many of these presentations occurred before finalising my outcome spaces, I was able to take any feedback into account in finalising the analyses.

I also undertook intensive consultations at key stages of the analysis process with a small number of phenomenographic researchers who were also working in academic development, i.e., my doctoral supervisors, Mike Prosser and John Bowden, and a fellow full-time academic/part-time PhD candidate, Jo McKenzie. As each of these 'critical friends' was an academic, an academic developer, an educational researcher and a phenomenographic researcher, each one represented all of the four potential audiences for this research. Their role as critical friend included their reading a number of whole transcripts from the data set, playing a devil's advocacy role towards my constitution of categories of description, and discussing other possible meaning-structure outcomes with me.

Being a part-time candidate also increased my ability to play a devil's advocacy role towards my own interpretations. As I was working as a full-time academic throughout my candidature, I was regularly obliged to put my analyses to one side for months at a time. This meant that when I returned to the analysis, it was with an open mind. Often, I would have forgotten what point I had reached in the analysis as well as my arguments for current groupings of transcripts or positing of dimensions of variation and themes of expanding awareness. So, as I reviewed the current state of play in my analysis, it would be without any sense of commitment to the hypotheses about meanings and structure that I had been proposing when I had paused the analysis several months earlier. This also meant that every previous argument was re-checked against the transcripts, as my familiarity with the data had to be re-established.

The inclusion in my thesis research of an analysis of the range of ways of experiencing being a university teacher also provided a validity check, as this has been the topic of numerous interpretive studies, including phenomenographic studies. This allowed my outcome space for this phenomenon to be compared with the results of other studies. The substantial overlap in key themes that emerged (Åkerlind,

2003a; 2003b; 2005a,, 2005b) provides cross-study support for my outcomes. This reflects not only on my outcomes for ways of experiencing being a university teacher, but on my outcomes for the larger doctoral study as a whole, as well as for chapter 10, as essentially the same research procedures were employed for the constitution of each outcome space.

Notes

[1] This requires a similar skill to that required in my experience as a personal crisis counsellor. That is, a dialectical requirement to understand the situation as much as possible from the perspective of the client, and thus to deeply attend in a non-judgemental way to what they are expressing, while simultaneously being open to contradictions or unexamined assumptions in their thinking on which it may be helpful to challenge them. Indeed, phenomenographic interviews have been likened to therapeutic interviews or sessions (Svennson & Theman, 1983; Marton & Booth, 1997).

[2] It is important to note that such explicit reference to dimensions of variation in awareness in constituting the structure of an outcome space is relatively recent in phenomenographic research. The key role played by dimensions of variation was first highlighted in the phenomenographic literature in 1997 (Marton & Booth, 1997). Since then, it has become an increasingly frequent aspect of phenomenographic practice. Unfortunately, however, there are still relatively few examples of such practice available, as at this stage of the development of phenomenography, explicit delineations of dimensions of variation is still largely confined to research theses and conference papers.

Furthermore, there is some ambiguity in the description of dimensions of variation in Marton and Booth's account, which has led to variation in interpretations of what constitutes a dimension, and thus variation in practice. To address this, I draw a theoretical distinction in my thesis between 'dimensions of variation' (Marton, 2002) and what I have labelled 'themes of expanding awareness', consisting of groupings of logically related dimensions of variation. However, at one level, themes of expanding awareness may simply be regarded as more complex dimensions of variation, so I do not think this level of distinction needs to concern us here.

CHAPTER 9

Academics' ways of understanding success in research activities

John Bowden, Pam Green, Robyn Barnacle, Nita Cherry and Robin Usher

Introduction

The purposes of this 'researching the researchers' project were to examine the range of ways that RMIT researchers saw their research activities and to feed the results back into training activities for researchers and research supervisors. The particular aspect of the project reported here is the analysis of what the recipients saw as success in research. What constituted a successful research project? (In each interview the question was framed as follows: 'Firstly, I would ask you to tell me about some research that you have been engaged in that you view as being successful in some way'. Interviewees were also asked by the interviewer 'to tell me about some research that you have been engaged in that you view as being unsuccessful in some way'.)

In earlier chapters, the personal stories of members of the research team described various aspects of the research process. The chapter on phenomenographic research methodology by Gerlese Åkerlind has provided a critical and comprehensive analysis of the method used in this study. In this chapter we will provide a brief summary of the research processes and then a detailed description of the research outcomes.

Research processes

First of all, we were a research team. Two of us collaborated in planning the interview schedule and one of us undertook all of the interviews, which were audio-taped and later transcribed. All subsequent analysis by the research team used those interview transcripts as the only data to be considered.

The normal procedure for team meetings was for one of us to have read the transcripts in detail and to have provided a summary of the aspect under investigation. In the first instance this summary was of a tentative draft of possible categories of description evident in the transcripts. On most other occasions, the summary was a re-writing of one or two categories according to the changes that earlier discussion by the research team had suggested. The task of the other members of the research team was also to read the transcripts, but with a view to playing the devil's advocate role – to search for deficiencies in the proposed statement, using the transcripts as evidence. Aspects of the statement not able to be substantiated by the evidence of the transcripts would be modified and relevant aspects evident in the transcripts but not incorporated in the revised statement would be added. The roles rotated among members of the team from meeting to meeting.

The purpose at every stage was to move towards a set of categories of description that encompassed all of the transcripts, that had coherence within each category and that differentiated between categories.

Our way of working was that each of us would read transcripts and take notes according to whether we had the lead role or a role of devil's advocate at the next meeting. We agreed to meet weekly for about two hours but, in order to preserve continuity of discussion, we abandoned meetings when one of us was unable to attend. On average, we probably met for a couple of hours three times a month during the analysis reported in this chapter. What went on in those meetings, our way of working, is best addressed by reading the four individual accounts in earlier chapters.

Key findings

After an exhaustive (and exhausting) six months of analysis, the team reached its final (eighth) version of the categories of description. There were five categories and they are elaborated below. Before moving to the categories, however, it is worthwhile commenting on the context of the study. This will help interpretation of the findings.

The 24 academics interviewed were all members of staff of RMIT University. RMIT was a former Institute of Technology and it traces its history back to the Melbourne Workingman's College of the nineteenth century. This link to the workplace remains today and RMIT has styled itself in recent years as a 'University of the Real World'. One might expect therefore that either by attracting staff with similar val-

ues or through an absorption of those values upon arrival, the RMIT culture might be seen in academic staff ideas about teaching and research.

Another likely impact on RMIT academics' views of research is the fact that university status was achieved in the early 1990s. Subsequently, new appointments played greater attention to research experience than had been so in the past and long-serving RMIT academics have experienced a good deal of encouragement over the past decade to engage successfully in research activities. One might expect different effects on attitudes to research between long-serving and recently-appointed academics.

Finally, while RMIT is a University of Technology, it has within it a fair range of disciplines. At the time the research reported here was undertaken, the faculties were Applied Science, Art Design & Communication, Biomedical & Health Sciences, Business, Constructed Environment, Education Language & Community Services, and Engineering. It was an open question as to whether views of success in research would reflect discipline variation.

Categories of description for success in research

The five categories of success in research are elaborated in turn below. Their short labels are Satisfaction, Management, Development, Publication and Usefulness. Note that all of these categories are from the analysis of the responses of the 24 academics when asked to give examples of successful research they had undertaken and some that was not so successful. They were all asked why they chose those examples. The first category (short label 'satisfaction' category) is as follows:

> *'Satisfaction' category.* Research is successful if the researcher finds it satisfying or exciting to do. This may be because of the inherent interest of the activity and the various feelings of being thrilled, challenged or exhilarated by successfully tackling complex issues. The satisfaction or the excitement may be linked to a number of achievements, including being able to meet clients' needs, being able to confirm one's own prior hypotheses, and participating in the act of discovery. The researchers may feel proud of what has been produced and excited by the attention they receive.

This is very much an internalised perspective on success. Its central premise is that success depends on whether or not the experience was satisfying or exciting. If it was satisfying, then it was successful. For example:

> '… one thing that made it successful for me personally was what I found interesting … it was complex, there were lots of twists in it, there were lots of different categories, people make interesting decisions, so it's inherently intellectually stimulating.' (*transcript 5*)
>
> '… very excited. The best thing about it is that all the pieces … into place, there were no funny bits that stick out … it all fell into place exactly which is relatively rare.' (*transcript 6*)
>
> 'I really enjoy research, it's a joyful thing to do.' (*transcript 7*)
>
> 'I do this job largely because, amidst all the other things we do, you do find some level of intellectual gratification. Those processes of exploration and discovery, I think, are really exhilarating; I really enjoy that.' (*transcript 22*)

The satisfaction or excitement may come not just from the activity itself, but from the interest the research engenders in others. But again, the interest of others is internalised. For example:

> 'I loved it, it's fantastic … you had people who were hanging on it, we had embargos and it's really quite thrilling. People actually paid attention to your findings … people wanted to know what you were researching and they were eagerly awaiting the results. So there was actually a demand for it …' (*transcript 13*)
>
> 'It was very satisfying to be able to show that – a lot of ego comes into it, it's fun to be able to show that your hypothesis was right to what had previously been thought of was – let's say not wrong but not so right.' (*transcript 16*)
>
> 'It was rated as cutting edge research, that was very exciting, and I won an award for it as well, so it was all very encouraging, very exciting.' (*transcript 19*)

The next category has a focus on managing the research process effectively as a measure of research success (short label 'management' category).

'*Management' category.* Research is successful if the researcher feels satisfied with having steered the project through some or all of the complex steps (such as establishing active teams or acquiring project funding) they believe to be necessary to get the project completed. This may be related to the researcher's satisfaction simply with getting the project finished or the sense of closure that derives from research outcomes being implemented.

There are many excerpts that illustrate this category, as follows:

> 'That's the difference between them … there's a sense of completion, a sense of arriving at some point.' (*transcript 2*)
>
> 'It's also successful because I've got it done … we came almost down to the line because … there were constraints from getting the designer and the printing done to get it over to Madrid in time.' (*transcript 3*)
>
> '…I've considered something that has happened this year that got finished and clean and vroom, and a team of people working on it and it's over … and this other one that seems to have been going on forever.' (*transcript 9*)
>
> 'I think that's a relatively successful one in terms of its integrity … it started, it had a middle and we finished it. So, integrity in the sense of being complete.' (*transcript 10*)
>
> 'Well, the successful ones are the ones that we have been funded because they've enabled us to do the full project that we put up.' (*transcript 12*)

The third category can be seen to be consistent with an organisation newly created as a university. Success in this category is focused on the development of the organisation and its members (short label 'development' category).

'Development' category. Research is successful if it results in the development of the researchers and their organisations. This may be by pushing back boundaries and learning new techniques and methods, inducting novices into the research process, assisting new researchers to complete higher degrees, developing constructive links with stakeholders, feeding outcomes back into teaching and increasing the capability of the organisation through all or any of the above. Satisfaction may also derive from the further research and career opportunities that are created. It may be that, as often happens, the researcher learns something from the experience even if in every other respect the research is regarded as unsuccessful; such a researcher may still see the research as successful.

This development can be seen to occur in a number of different ways:

> 'So I guess what it taught me about research was that doing the research in a rigorous way was in one sense only part of the process. You have to do the research so that your audience for the research actually owns the research and is part of the

process; it's not just the participants of the research. We'd never really had that successful participation from the people who commissioned the research before … I feel actually quite good about it. As I said, it stretched me. … I've done more academic … research before … instead of talking about technology all the time we have to see how the story changes when the user within his or her social cultural context is based at the centre of it.' (*transcript 1*)

'It's positive … in that it's feeding back into our teaching, which is nice if that can all be tied in together … It's also successful because we've got a good post-doc who's working on it, … a student that's now doing a PhD in the area, we've got another student who's interested in starting a PhD. So that kind of building of critical mass, I guess is one thing that makes it successful.' (*transcript 4*)

'It's deemed successful. Why? Well, you can judge it from a number of different outcomes; one of course was that there was a PhD on the end of it for one of the students who completed this work … So that was an outcome. There are also some other pieces of research which haven't quite come to completion yet because there's another student who is extending some of this work … She, I hope, will finish her PhD within the coming year or so. So there has been several spin-offs from it … This will potentially lead to further contracts for further development and so forth, and new issues, new algorithms and methods that would come back to RMIT. So that's the pay off and you see my premise is that the best problems are often the ones that come from industry. (*transcript 11*)

'That project has been a success, not so much in terms of the research that has been done, although that has been good, but it enabled us to bring in someone who is a good, young, bright potential future researcher who, in this case, wouldn't have contemplated leaving (another university) to come to RMIT but for that particular project. So I mean there are two stories of things I think that have been successful for reasons other than the project; they've been successful from being able to get other people involved … So I sort of felt being here and having a little bit more research experience of people that this was an opportunity to sort of take people through the research process and to say to them – look, it's actually hard yes, but it's actually not really as hard as you think and it's not actually going to be as difficult as you think and so here's what we need to do.' (*transcript 12*)

The next category sees success in a traditional way – research success linked to publication (short label 'publication' category).

> '*Publication' category.* Research is successful if it results in some form of publication, such as a book, a journal article or a conference paper. Within journal articles there is another quality measure related to the prestige with which the journal is held within its field and, overlapping with that, whether the journal is refereed or not. The number of publications is also a measure of success, as are invitations to speak at conferences or to write reviews of fields of research. This focus on publication as a criterion of success may be expressed as an internalised 'self-evident' belief or as explicit recognition of external expectations.

The examples of aspects of this category from the transcripts would be recognisable to most academics.

> 'Well. I see the ultimate aim of doing research is to get it published. If you don't ever get it published then it is unsuccessful. If you've done a halfway decent job you should get it published somewhere … I would define unsuccessful as a failure to get something published.' (*transcript 6*)
>
> '… it will have finally succeeded when we actually write the book and we're writing the book now… So that will, I guess, be the final marker of that being a successful project. … Well, there is (another) project I was working on a few years ago which didn't really come to anything concrete in terms of actually publishing good stuff from it … (Yet another project) didn't get off the ground in the sense that we didn't turn that into – you know, you can't publish a filing cabinet drawer, you have to turn it into something, you have to write it into something and that's what we didn't do. We wrote just a couple of small articles and that's all.' (*transcript 7*)
>
> '… that has got to be one sort of continual success story….we've continued to publish in very good journals … more recently we've been asked to write review articles for some of the major journals … I do things like organise international symposia.' (*transcript 16*)
>
> '… as far as your career's concerned you're sort of judged by how much you publish … getting publication is very important …you look back at 18 months of effort and just nothing out of it … and again people look back at your career and say 'oh well, there's a two-year gap … where you haven't had any publications … (*transcript 17*)

> '… she's got publications out of it with me and it's been altogether a very positive experience … and then I was invited to give the … annual memorial lecture … and this will make me write the next … and I'm very pleased I did it and they've had a great impact.' (*transcript 18*)
>
> '… that turned out to be quite successful and it was very well received when I submitted it to conferences … it was all very encouraging, very exciting … to be able to publish a paper in *Nature*, which is one of the prestigious journals, is a big deal … and we felt this particular study … was on the level of *Nature* publication.' (*transcript 19*)
>
> '… in terms of defining success I guess for an academic that is to produce something … in most cases it's a refereed journal article which is disseminated to the community of researchers and your peers … I guess the contrast really is in terms of the strategies you deploy to get an effective outcome, in terms of publication.' (*transcript 22*)

The final category sees research success focused on its effect on the world. Is it useful? (short label 'usefulness' category)

'Usefulness' category. Research is successful if it makes a difference to the world either by affecting other people's lives or by producing something new. Research outcomes should be useful and, preferably, put to actual use. One form of utility is finding solutions to problems experienced by people. Another form, often achieved by appropriate scholarly publication, is enriching the body of knowledge either in a global sense or, on a more individual level, increasing other people's awareness and helping them understand better than before. Outcomes may be in one of these two forms independently or with the two forms integrated together. The integrated perspective seeks useful but theoretically grounded outcomes.

It is clear that it includes some aspects of other categories (e.g., publication) but goes beyond them (more will be said of the relation between the categories in the next section). Some examples of relevant excerpts from the transcripts are as follows:

> '… it's something that will be really useful, as well as being publishable.' (*transcript 4*)
>
> 'Intellectually for me the interesting part was that it hadn't been done before. … The other side of what made it successful is the issue of usefulness. If I didn't think that we could come up with something useful, that could somehow – to use

a terrible term, improve people's lot or at least increase awareness, then the fact that it was inherently interesting probably wouldn't have been enough for me to spend time doing it. Like, it has to be a real life problem and the research has to be aimed to actually helping people understand the issue and then hopefully being able to recommend some actions that either individuals or organisations can take to make things better in some way.' (*transcript 5*)

' … it's a fundamental contribution to the ways in which we imagine ourselves as citizens … as well as being a contribution to understanding of social problems and social conditions. … When it all comes together and it feels successful … it's a really enjoyable exercise …' (*transcript 7*)

'… it's a fairly strong expectation to be writing an article here or an article there that is coming out of some of your research. … it was just adding another little brick to this body of knowledge … that was a positive thing from my perspective.' (*transcript 8*)

'I think my benchmark is always, did the research that we do get used? … this will potentially lead to further contracts for further development and so forth and new issues, new algorithms and methods that would come back to RMIT.' (*transcript 11*)

'It's really quite a thrill that people are actually using your work.' (*transcript 13*)

'Because basically I'm a research creature, I like creating new things. I like creating things that are better than they are now … So from a research point of view I'm just thrilled that, you know, we can do something positively, practically and it's good, it has got benefits.' (*transcript 14*)

'… there must be a higher conception of research which is to make a difference to yourself, to the world, to others … doing something that could add meaning to people and … help in a way. So useful research, applied research, but very theoretically grounded.' (*transcript 20*)

'It's something we can now do that we couldn't do before. We were the first to be able to do it … So in a sense it's a scientific advance. It's an advance for the industry as well.' (*transcript 21*)

'We wrote a number of papers, journals papers, sometimes conference papers … We created a lot of new knowledge at the centre and we did apply in an industry situation.' (*transcript 23*)

The development of the categories of description across time

The five categories of description were developed through an exhaustive process over many months. At various stages in the analysis, one of us produced a new version of the categories of description as a representation of our progress to that stage. In all, there are eight versions that were developed progressively, with the eighth version being the one that has been described in the previous section of this chapter. We thought that it may be of interest to readers to look at the progress that was made from the beginning of the process to the end.

Appendix A shows the eight versions. They won't be reproduced here, but readers might like to go to the Appendix from time to time to check the detail. Table 9.1 below depicts the relation between the first three versions and the final version.

Table 9.1

Interim category	Version 1	Version 2	Version 3
A	Early version of the 'usefulness' category	Early version of the 'usefulness' category	Early version of the 'usefulness' category, but with the notion of 'publication' added
B	Early version of the 'satisfaction' category, but with some aspects of the 'management' category	Early version of the 'satisfaction' category, but with some aspects of the 'management' category	Early version of the 'satisfaction' category, but with aspects of the 'management' category removed
C	Early version of the 'development' category	Early version of the 'development' category	Early version of the 'development' category, but with 'results in learning' added
D	Early version of the 'publication' category	Early version of the 'publication' category, but with a second part linked to 'usefulness'	Early version of the 'publication' category, but without the explicit link to 'usefulness'
E	Attention from others – higher profile	Attention from others – higher profile	Early version of the 'management' category
F		Results in learning	

Elements of all five final categories of description were evident in the early versions, but there are three distinctive differences:

1. the differentiation between categories was less distinctive in the earlier versions
2. the coherence of any one category, even if essentially the same theme remained throughout the analysis, was less in the earlier versions
3. not all of the elements are present in the earliest versions.

The evidence for the first two of these, differentiation between and coherence within categories, is found in:

- the mixing of the 'satisfaction' category and the 'management' category in versions 1 and 2 and their later separation from version 3 onwards
- the separation in versions 1 and 2 of the 'publications' category from what was later to become a part of that category, the gaining of attention from others
- the presence in version 2 of a category representing success as being linked to learning, an aspect that became part of the 'development' category in version 3
- the differentiation within the 'publications' category in version 2 between publication for its own sake and publication as leading to application, with the latter becoming part of the 'usefulness' category in version 3.

Evidence for the third can be found through a detailed reading of the various versions 1–8 in Appendix A. The major analytical work from version 4 to version 8 involved an incremental increase in the coherence within categories as well as consequential differentiation between categories as the various elements characteristic of the categories became more refined.

Relations between the categories of description

So how are the categories related to each other? Are they completely separate and unrelated or can we see some links between them? Given that the categories represent different ways of seeing the same phenomenon, links are to be expected. In fact, readers will have already seen from the excerpts used to illustrate the last category ('usefulness') that there are aspects related to other categories such as 'publication'

(e.g., excerpts from transcripts 8 and 23 above) and 'satisfaction' (e.g., excerpts from transcripts 13 and 14 above). This is an example of nesting or a hierarchical arrangement of categories. When categories are nested, each is subsumed in the others in one direction, but not vice versa. In this case, the last category contains elements of the previous one. That is, the 'usefulness' category also includes aspects that are characteristic of the 'publications' category. It also includes aspects of the 'satisfaction' category. Similarly, the 'publications' category includes aspects of the 'satisfaction' category. So, at least these three categories are related hierarchically in some way. However, a further test of whether they form a nested hierarchy is to search for characteristics of the 'usefulness' category in the 'publications' category and the 'satisfaction' category. They are not present. So these three categories do form a nested hierarchy,

The analysis of the relationships between the categories was not done in the same way as the primary analysis from which the categories were derived. Rather, one of us (John Bowden) undertook an independent analysis of the relationships, gained feedback from another member of the team (Pam Green) and then got independent feedback from outside the team (from Gerlese Åkerlind). The result was then brought back to the whole research team for discussion and confirmation.

What we did was to analyse the transcripts again, searching for evidence of any hierarchical relationships. We developed a list of themes of expanding awareness among the categories (we use Åkerlind's term 'theme of expanding awareness' [see chapter 8] because the alternative 'dimension of variation' is now used ambiguously in the literature). That is, we asked the question: On what aspects of the phenomenon 'success in research' do we get variation across the five categories? What are the major common issues that have different meaning across the categories and in what ways do they become more inclusive? We concluded that, in this study, one significant theme of expanding awareness is as follows:

- The focus of the categor y of description in ter ms of what constitutes success

What does this mean? Well, this first theme of expanding awareness is in fact the rather obvious one – the short labels for each category of description give an indication. It would be expected that a key theme is the focus of the category in terms of what constitutes success. This was the driving force of the primary analysis and produced the five categories. However, the relationship that we found was not a

straightforward hierarchy. In fact, while we found that the 'usefulness', 'publications' and 'satisfaction' categories formed a nested set as already described, the remaining two categories of description did not fit into that particular hierarchy. Rather, the remaining two formed a separate nested set with the 'usefulness' category, so that the 'usefulness' category also includes aspects that are characteristic of the 'development' category (e.g., see excerpt from transcript 11 above). As well, it includes aspects of the 'management' category (e.g., see excerpt from transcript 7 above). Similarly, the 'development' category includes aspects of the 'management' category (e.g., see excerpt from transcript 12 above). Again, the test of whether they form a nested hierarchy was applied by searching for characteristics of the 'usefulness' category in the 'development' category and the 'management' category. They were not present.

So, on the basis of that one theme of expanding awareness, a branched hierarchical structure is suggested as shown in Figure 9.1 below.

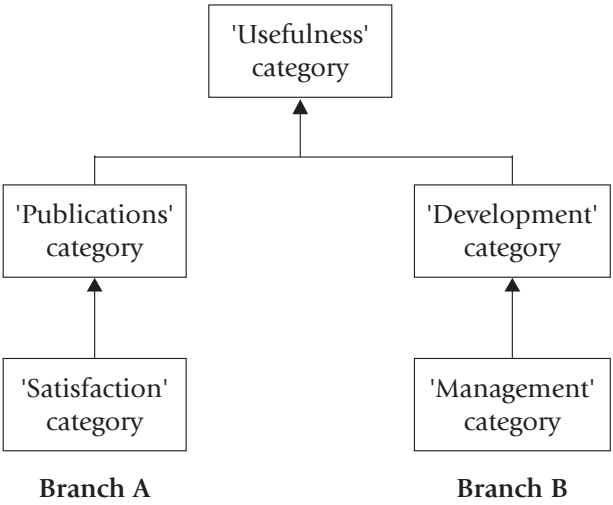


Figure 9.1: Relationship frame for 'success in research' categories (based on first theme of expanding awareness

Another theme that was common to the five categories, but was treated differently in different categories is as follows:

- Who it is who makes the judgement about success

Clearly the 'satisfaction category' involves the researcher in making that judgement alone. 'Did I enjoy it?' is the reflective question that

enables the researcher to judge whether or not the research was successful, according to this category of description. On the other hand, the 'usefulness' category of description would seem to demand some external judgement as well, as to the usefulness of the research. Similarly, publication outcomes involve judgements by others beyond the researcher. So this seemed a useful theme to explore in more detail.

A third theme common to the five categories of description, but exhibiting variation in meaning across them was the following:

- What the sour ce of satisfaction or enjoyment is

There clearly is variation on this theme from the satisfaction through simply experiencing an activity ('satisfaction' category) through the excitement of the effects of its product on other people ('usefulness' category). This theme too seemed worthwhile exploring.

For convenience, we are representing this relational analysis in two parts – treating Branch A and Branch B depicted in Figure 1 separately. Table 9.2 shows the outcome of that analysis for Branch A. The columns represent the three categories concerned and they are headed with simple statements showing the focus of the meaning of success in research (i.e., the meanings across the first theme of expanding awareness described earlier) as follows:

- the research solves real problems or adds to knowledge
- the research results in publication
- the researcher finds research enjoyable to do.

Then a matrix is formed by crossing that theme of expanding awareness with the categories of description. The theme 'Success focus for research' has already been explored in the opening paragraph of this section. For the 'Who judges research success?' theme of expanding awareness, the answer in the 'satisfaction' category is the researcher. For the 'publication' category, it is the peer group that judges the research success by agreeing to publish the outcome or not, but of course the researcher has a role in deciding whether and what to publish. In the 'usefulness' category, the researcher's perception of the usefulness of the research is relevant but is only one part of the necessary acceptance by a wider community – wider than the immediate peer group.

For the 'focus of satisfaction' theme of expanding awareness, the emphasis in the 'satisfaction' category is on the direct experience of the research activity itself. In the 'publication' category, the focus goes

beyond that direct experience and includes satisfaction with the result of peer group judgement, viz., publication, and also the associated attention that it produces. The focus of satisfaction for the 'usefulness' category goes beyond the internalised feeling, but still includes it. There is a joy in making discoveries, but the feeling of satisfaction is affected too by the impact of the work on other people. This has a broader sweep than the publication category because it goes beyond mere approval by other people of the researcher's work (still a self-reflective perspective), but involves the relation between other people and the research outcomes that are externalised.

Table 9.2

	Research is successful if		
Branch A	it solves real problems or adds to knowledge	it results in publication	the researcher finds research enjoyable to do
Themes of expanding awareness	**'Usefulness' category**	**'Publication' category**	**'Satisfaction' category**
Success focus for research	External change as a consequence of research outcome	Research product made public in traditional form	Intrinsic joy and satisfaction from participating in the research
Who judges research success?	Wider community	Peer group	Researcher
Focus of satisfaction	The joy of discovery and doing something useful for other people	Getting something published and the associated attention received	Experiencing the research activities

You can see from the previous paragraphs that, on all three themes of expanding awareness, the relationship between the three categories in Branch A is hierarchical.

For Branch B (see Table 9.3), a matrix was formed by crossing those same themes of expanding awareness in a similar way. In this case, the three categories are 'usefulness', 'development' and 'management', and their focus in terms of success in research is as follows:

- the research solves real problems or adds to knowledge
- the researcher and/or the organisation is/are developed
- the researcher feels satisfaction in getting the research steps completed.

Table 9.3

	Research is successful if		
Branch B	it solves r eal problems or adds to knowledge	the r esear cher and/or the organisation is/ar e developed	the r esear cher feels satisfied in getting the r esear ch steps completed
Themes of expanding 'Usefulness' awareness	**'Usefulness' category**	**'Development' category**	**'Management' category**
Success focus for r esear ch	External change as a consequence of r esear ch outcome	Local change as a consequence of the r esear ch pr ocess	Intrinsic satisfaction with completing steps in the process
Who judges r esear ch local success?	Wider community	Resear cher and organisation	Resear cher
Focus of satisfaction	Doing something useful for other people	Own lear ning and/or improved organisational capacity	Getting the job done

For the 'success focus for the research' theme of expanding awareness, the 'management' category is focused simply on getting the job done. The 'development' category is concerned with this, but also is focused on change at the local level that results; the 'usefulness' category again is concerned with change at an external level. These three form an ever-broadening focus for the research.

For the 'Who judges research success?' theme of expanding awareness, the answer in the 'management' category is the researcher. As before, it is the researcher who feels satisfied with the completion of the project and that is the criterion advanced to gauge success in this category. In the 'development' category, the researcher plays a role in making the judgement about whether or not the research has contributed to development in the organisation involved, but this can't be simply an internal reflection. The local organisation is involved either implicitly or explicitly and, as before, the wider community is involved in judging success in the 'usefulness' category.

As to the focus of satisfaction, it is on getting the job done in the 'management' category, on the researcher's own learning and improved organisational capacity (which necessarily includes getting the job done) in the 'development' category and, as before, impacting

on a much wider community in the 'usefulness' category. Again, a hierarchical structure can be seen in Branch B as in Branch A.

So, the final structure can be depicted as shown in Figure 9.2.

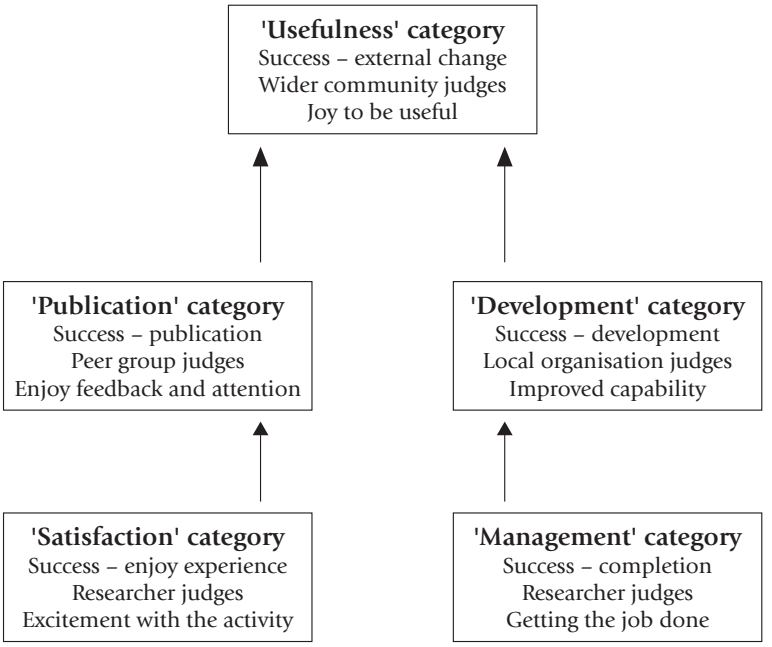


Figure 9.2: Final relational structure for the five categories of description of success in research

CHAPTER 10

Ways of experiencing being a university researcher

Gerlese Åkerlind

This chapter reports the outcomes of an investigation of university academics' ways of experiencing being a researcher. The data collection and analysis were conducted by the author as a lone phenomenographic researcher. The data were collected via interviews with 28 academics on teaching and research appointments at a research-intensive university in Australia. These data form a subset of the larger study described in chapter 8 and are based on interviewees' responses to interview questions 2 and 3 of the interview schedule presented in chapter 8, but only as they relate to the research aspect of being an academic.

As will be described, four qualitatively different ways of experiencing being a university researcher emerged from the data analysis, marked by variation along five key dimensions or themes of expanding awareness. In what follows, the outcomes are presented in two interrelated ways:

1. Descriptions of qualitatively different ways of experiencing the phenomenon in question, i.e., categories of description. These categories represent the collective range of *meanings* that make up the outcome space.
2. Descriptions of key dimensions of variation and common themes of expanding awareness running through the categories of description. These themes mark aspects of the similarity and difference between the categories, and thus between different ways of experiencing the phenomenon, and allow the inclusive relationships between the categories to be elaborated. These relationships mark the *structure* of the outcome space.

I present the categories of description first, followed by a description of the relationships between categories. In this way, different aspects of the variation in experience are focused on at different times

in this chapter, providing a way of more clearly elucidating the complexity of the data. However, it should be remembered that the distinction between these two aspects of the variation in experience, meaning and structure, is artificial (at least as I interpret phenomenography), as each illuminates the other. I separate them only to facilitate descriptive and analytic clarity.

Categories of description – critical variation in meaning

Four qualitatively distinct categories of description were constituted, representing a varying experience of being a university researcher as:

- an academic duty
- a personal achievement
- a route to personal understanding, and
- an impetus for change to benefit a larger community.

Each category is described in more detail below, with a brief illustration of key aspects of the categories through verbatim quotes from relevant interview transcripts. As will become apparent, these different ways of experiencing are seen as related to each other through an expanding hierarchy of inclusive awareness, which I also attempt to illustrate through the selected quotes.

1. Research as an academic duty

In this category, research is seen as part of academic job expectations. The primary intentions underlying the conduct of research are extrinsically focused on keeping one's job and/or being seen to appropriately fulfil one's role as an academic. Research is seen as involving a process of identifying and solving a problem, using a set of specific research procedures or skills – it is only in this category that interviewees describe the particular steps involved in undertaking a research project as part of their experience of research. This is then seen as leading to concrete outcomes, such as the solution of a problem or completion of a grant, doctorate, publication, etc.

Unlike the following categories, where it is important for the researcher to be able to set his/her own research topic, there is little concern in this category with whether the research topic is defined externally, through particular project funding for instance, or by the researcher him/herself. With respect to publication of research, there is again a focus on the extrinsic benefits which may arise, such as

establishing academic credibility, meeting job requirements, and increasing one's chances of receiving external funding. Feelings associated with research range from apparent neutrality to a sense of satisfaction associated with doing a good job.

To illustrate:

> *Engineering, male, Level A* – 'Oh well, doing a good job in research is generating lots of papers. So, I think you need to meet that criteria to stay in your job. … let's say that I have a grant for three years, an ARC grant in one area. So, doing a good job is basically planning ahead, planning … and getting the job of reading done and writing the final report at the end, so that you establish your credibility for next time you ask for funding for research. So, completing what you promised to complete, basically. …
>
> … I can basically sit at my computer and do research on my own and produce very little. Or I can get funding from ARC or industrial and other sources and employ PhD students or postdocs or research associates or whatever, and that means you have more outputs.'
>
> *Physics, male, Level A* – I think the basic aim is to keep my job. OK? I won't keep my job if I don't get external funding. Then the problem for me is identifying a problem that we can do, that needs to be done, and that has enough sex appeal to attract funding. So, that's not easy to fulfil those strict criteria. It's not easy. And then to actually get to the funding. …
>
> … How I would identify such a problem would be to read as much literature as I could, in a broad sense, a lot of review articles. And then try to chase down one particular aspect, a problem that has been addressed inadequately for one reason or another. I have to judge that we can address that problem with this facility and answer that problem in a year, as that is probably the most that you can ever get. Then I would chase down the particulars of that problem and see what's been done before and see if there's a way around the technological limitations.

2. Research as a personal achievement

The primary focus in this category is on research as involving the personal discovery of something new in the academic's disciplinary area. This might include a relatively modest discovery or something so

excitingly new and substantial that it would make the academic famous in their area. While acknowledging that research is an academic requirement (as in the previous category), unlike the previous category, the primary intentions underlying the conduct of research in this category are to create a sense of personal achievement. Thus, there is perceived to be a mixture of intrinsic and extrinsic benefits from engaging in research.

Research is seen as a process of discovering something new that leads to becoming well-known in the field, carving out your particular research territory or being recognised as among the top researchers in your field. Feelings associated with being a researcher vary from frustration and uncertainty to satisfaction and joy, depending on the individual's perceptions of their chances of making such a discovery in their research. Publication of research is undertaken for extrinsic reasons, in order to make one's research known to others and to gain credibility or fame among other researchers in the field.

To illustrate:

> *History, female, Level B* – 'I must admit that my ego is tied up at the moment very much in trying to get a book contract. If I get a book, I will feel a sense of achievement about that. But I'm also very suspicious about that, because I know that there is an emotional element which will mean that I've got somewhere. The book will represent something … But it's also on another level just the fun of it, just the thrill of it, the joy of it. As well as thinking that if you have got a book then that research is 'out there'. …
>
> *Interviewer: Why do you want it 'out there'?*
>
> Because it tells a story that's not well known. And some historians go searching for something and they don't find it. So, part of doing the job is to get that out, … to shift the concept in the debate. It has an impact on the debate. … and that's my voice, that's my bit. That's the bit out there already through articles, and that's the bit that you have got to carve out as your own territory, otherwise you get squashed. So, the happiness it gives you is linked to this. If you don't get the book out, you miss out, and you lose your territory.'
>
> *Computer science, male, Level A* – 'First off, it's part of my job description. Secondly, I believe that it will be good for my promotion prospects. … I think my research is more important [than teaching] to my long term prospects of being able to work [?][1]. And it's an ego thing as well. Partly because I want

> to be famous, I think, in my own particular neck of the world, which is my area. … So, I've enjoyed both coming up with the new ideas and, more than that actually, having people adopt it and recognise my name in the research.

3. Research as a route to personal understanding

In this category, there is a more intrinsic focus to the experience of being a researcher. Research is primarily seen as the investigation of questions of personal interest to the researcher, with the underlying intention of resolving a question that has been puzzling her/him. While this involves discovering something new, as in the previous category, the perceived outcomes of research are more focused on the personal.

There is a primary focus on satisfying the researchers' curiosity and enhancing their personal understanding of the issue, with accompanying feelings of enthusiasm and interest in the research. The focus on personal understanding might also form part of a long-term sense of personal growth or development over time. This focus is also reflected in the perceived purpose of publications which, in contrast to previous categories, is seen primarily in terms of gaining feedback to improve the academic's research and understanding of the issue.

To illustrate:

> *Psychology, male, Level B* – 'For me personally it has got to do with puzzle solving. … the general area I am interested in is interactions between people … so they are almost like personal existential puzzles which I try to solve in a research way. … This is just something that puzzles me about people and there is some literature that I am trying to get across at the moment … And I am looking at maybe getting into that for my personal research. And that to me is just something I am very curious about. So, for me, if I could do the research I really wanted to do, it would be to investigate the kinds of things that for what ever reason make me curious.'
>
> *Astronomy, female, Level C* – So, I just try to understand what is happening… I am just curious, I just want to know. Yeah, I just am interested. And since I was, since very young, I used to think that, well, we are living on the earth and go around the stars, and around and around the galaxy. Just, like, wanting to know what is going on in the whole wide universe, and around here. So, that is why I am happy to do research, I just want to know.'

> *Engineering, male, Level C* – 'Well, the main reason is probably just the interest, just my personality. That probably goes back to childhood. Since I was a child, I was very curious about things … For some reason, I have the capability of solving problems by myself. Maybe it was the environment, I was called 'the doctor' when I was a kid. It was a nickname for me. …
>
> … I would love to be recognised around the world for the area that I am interested in. … I would love to be able to pursue new knowledge as I progress. Also, I would love to be recognised for what I have achieved.'[2]

4. Research as an impetus for change to benefit a larger community

This category continues the focus on intrinsic benefits from research, in terms of enhancing personal understanding, but extends this to include a more altruistic focus on benefits to a larger community. The primary intention underlying the conduct of research is to make a contribution to a larger disciplinary or social group. This might include advancing a particular social cause in line with the researcher's personal ideology and values, for instance, encouraging conservation, combating racism, etc. Research is seen as a means of addressing broader social or disciplinary issues of importance to the researcher's field or to society.

Within this way of experiencing, academics approach their research with a sense of passion, hoping to produce material of value to a particular research or social community, which will lead to significant resolutions of problem areas within that community. The perceived purpose of publications is to spread the message and encourage change among the research/social community. In line with this, there may also be a focus on non-academic publications, designed to reach a broader audience.

To illustrate:

> *Law, female, Level C* – 'What I am interested in is, and I have to step back a little to explain the broader rationale of my research, which is, I think I came to study corporations because I was interested in the workings of capitalism. And I came into it as somebody who had the, I was probably a Marxist in many ways. So, I was interested to understand capitalism and how it works and particularly to understand corporate law because corporate law to me is a very critical part of how capitalism

works. … to look at how corporate law affects or creates power relationships within groups of people. …'[3]

Cultural studies, male, Level B – 'I've got myself a cultural project, which comes from my personal philosophy. Essentially I'm a humanist, and I'm devoted to that. So, my research revolves around that, understanding how cultures and religions and political thought and political philosophy and ethics are anchored in societies and cultures. As a research scholar, I discovered that orientalism is a way of life, and there are degrees of orientalism and there is positive as well as negative orientalism. I see my role as somebody equipped with the language, familiar with the cultures of the Arab and Islamic world. I see myself as having a privileged position to actually go out there and combat orientalism in a very active way and to bring out a side that orientalists have directly or indirectly overlooked.'

Archeology, female, Level B – 'For me, personally, it means that I have the freedom to pursue lines of inquiry. … It's both being able to pursue lines of inquiry that are of interest and relevance and trying to perhaps change, being able to practice your discipline in a way that will change the paradigms or parameters of the way your discipline is practiced – the world view. Which might be an ideology of practice which you try and follow. …

…Well, one of the things I do do is … work with an Aboriginal community. And my research questions are partly driven out of my interests, but also driven by community interests … to try to break out of that imposition of a research model and a research method on Aboriginal people – who did not ask me to come there in the first place … Part of the community-based approach is that you feed back material in a form that people can use in the community … I think that it's a two-way thing … the information goes in two directions. It goes back to the host community in one form and it will go back to the research community in another form. They are related and they all add up to a body of work.

Structural relationships between the categories – critical patterns of variation

The four different ways of experiencing being a university researcher are seen as related in an inclusive hierarchy, from Categories 1–4, of

increasing breadth of awareness. The relationships between categories are further elaborated below in terms of variation across the categories along five interrelated themes of expanding awareness. These themes act to logically link and separate the different categories, enabling the experience of being a researcher to be viewed both holistically and as a number of distinct ways of experiencing (see Table 10.1).

Table 10.1: Key aspects of the range of variation in ways of experiencing being a university researcher

	Categories			
Themes of expanding awareness	**1** **academic duty**	**2** **personal achievement**	**3** **personal understanding**	**4** **benefiting a community**
Research aims	Fulfil Become academic role	well-known	Solve a puzzle	Make a contribution
Research process	Identify and solve a problem	Discover something new	Investigate an interesting question	Address broad issues in community
Research outcomes	Concrete Academic products	credibility	Personal understanding	Benefits to community
Underlying feelings	Neutral to satisfaction	Frustration to joy	Interest and enthusiasm	Passionate engagement
Purpose of publication	Satisfy requirements	Make work known	Gain feedback on work	Encourage change

Illustrations of the sort of *empirical* evidence regarded as providing support for the inclusive hierarchy proposed was presented with the categories of description. Meanwhile, Table 10.1 is seen as providing *logical* evidence for the proposed hierarchy. As can be seen from the table, the expanding awareness inherent in the proposal of inclusive relationships is dialectically reflected in the five themes of expanding awareness or dimensions of variation that emerged. These themes/dimensions document a shift between Categories 1–4 from more limited to more expansive aims, processes, outcomes, feelings and purposes.

With Category 1, there is a solely external focus on the experience of being a researcher, in terms of satisfying external requirements and producing concrete, external outcomes. Emotionally, there is often limited engagement in the research process, primarily involving the possibility of a sense of satisfaction arising from the perception of a job well done.

While Category 2 is also limited to a primarily external focus on the experience of being a researcher, the intentions underlying the experience expand beyond merely meeting requirements to allowing for making substantial discoveries through research. There is more emotional engagement in the research process, in the sense that the academics' self-esteem seems to be involved. This is evident in the expressions of frustration and self-doubt associated with the prospect of *not* making substantial discoveries, and expressions of joy and self-assurance associated with the prospect of making such discoveries.

With Category 3, the external foci apparent in Categories 1 and 2 are still apparent, but move more into the background of awareness. At the same time, a focus on internal interest in and benefits from being a researcher is foregrounded. Research is seen as facilitating the academics' own understanding of issues, and there is an associated emotional engagement by way of personal interest and enthusiasm for the research.

With Category 4, the mixture of external and internal foci which mark Category 3 is also apparent, but at the same time there is a strong focus on altruistic aims and outcomes of research. The primary intention underlying being a researcher is to make a contribution to a disciplinary or social community that will lead to substantial change in the area. There is often a strong ideological commitment to such change, which leads to passionate engagement with the research activity.

Variation of a non-critical nature – within category variation

Having described consistent patterns of variation *between* categories, I would now like to describe two consistent dimensions of variation that emerged *within* the categories. This variation was found within each category, and thus did not distinguish between them. One of the themes related to whether researchers perceived themselves as working alone, or as part of a larger community of researchers. The latter view need not imply teamwork, as such, but whether the research contributions made by the individual stood on their own, or formed part of a larger debate to which other researchers in the field also contributed. This is illustrated in the first quote presented to illustrate Category 2, and a further example is presented below:

> 'I appreciate the process of subjecting myself to colleague review … because there you are also assessed, you are criticised, you get exposed to other viewpoints and other ideas. And always anything you do in research that has the advantage

> of other people's minds would always turn out to be a better piece of research than one that you did singlehandedly. Ultimately, everybody wants their name on whatever they publish, but really the input you get from various sources are present in any piece of work; it doesn't matter who writes it.'

The second theme related to whether a distinction was drawn between practical and theoretical outcomes of research, and the importance placed on achieving practical outcomes. For example:

> 'This is my highest ambition, to write a book. … I'd be very happy if I do this work … [But] maybe 200 years from now … definitely out-dated by a wealth of information. Did it help? Did this book help? […?] Definitely not. When I speak to my mother, who is as I mentioned a professional driver … and she is definitely a person of the real world, she says, it's OK … Personally in my life, I am taking academia very seriously, but I try, I hope, I still have a broader picture, to take two perspectives…'

As I said above, variation in views as to the significance of practical versus theoretical outcomes from research, and whether researchers perceive themselves as working in isolation or as part of a larger research community was found in *each* of the ways of experiencing being a researcher which emerged in this study. Consequently, I do *not* regard these themes as representing critical aspects of the variation in ways of experiencing being a researcher, as the variation was found equally in each category and did not distinguish between them. Another way of thinking about this is to regard them as sub-categories of *each* way of experiencing being a researcher, which do not contribute to the structure of the relationships between the different ways of experiencing.

Different stages in the development of the outcome space

Appendix B outlines the development of the categories of description and themes of expanding awareness (i.e., patterns of variation in awareness) during the analysis process. The categories and themes were developed through six identifiable stages, or versions. Over the course of the analysis, the preliminary categories of description reduced in number from thirteen to four, while the themes of expanding awareness increased from two to five. It was only in version three

that structurally inclusive relationships between the different categories of description were first postulated, based on increasing consistency and systemisation in the patterns of variation identified across categories.

Overall, during the course of the analysis, the outcome space improved by becoming more concisely and systematically defined, more coherent, integrated and well-structured, and better justified in the transcript data.

Notes

1 Such comments are interpreted as empirical indicators that the awareness of being a researcher represented in this category *includes* awareness of research as an academic duty, as in the previous category.

2 Such comments are interpreted as empirical indicators that the awareness of being a researcher represented in this category *includes* awareness of research as a personal achievement, as in the previous category.

3 Such comments are also interpreted as empirical indicators that the awareness of being a researcher represented in this category *includes* awareness of research as a route to personal understanding, as in the previous category.

APPENDIX A

Records of iterative processes in reaching version 8 of the 'success' categories of description

John Bowden

Categories of description

Introduction

As was discussed in chapter 2, several meetings passed before a process was established for analysis of the transcripts and, in the early meetings, several versions were produced. In the end, the version that formed the basis of future analysis is that shown in Table 1 below. That first version contained six categories and was indeed seen as a tentative first step when it was distributed prior to the next meeting of the research team. At the same time, one of the other drafts was distributed to the team so that a check could be made to discover any differences and the direction the analysis should take.

First version to version 2

At the next meeting, the author of the alternative draft was not present. Normally we would have cancelled the meeting but, given that we had a written document from the absent team member, we went ahead on this one occasion and both documents were compared and analysed. Version 1 categories A, D and E were focused on by reading each of the page references in each transcript. By that process we developed some ideas about changes in the description and new ideas that were missing. The Category A description was expanded. I agreed to produce version 2 out of that discussion (see Table 2) which would be considered at the next meeting for its adequacy in meeting the team decisions in the last meeting. Categories B and C were also designated for discussion at the next meeting, with comparisons being

made with the alternative document. At this stage, we were moving around slightly as we worked towards a stable process.

Version 2 to version 3

All categories were discussed. Category F was eliminated because it was felt that what it represented was just one example of the more general idea captured by Category C. A sentence about publication was added to Category A, there were some word changes and additions to Category B and there were some word changes to Category D. Following lengthy discussion about the evidence in the relevant transcripts, Category E was completely re-written around the notions of confidence and satisfaction with the way the research is undertaken and the potential it creates for further advancement. The latter was consistent with one of the draft categories suggested in the alternative analysis discussed in the first and second meetings. The version 3 descriptions are given in Table 3.

Version 3 to version 4

It was at this meeting that the whiteboard event referred to in Green's story (chapter 3) took place. We dealt productively with the transcript evidence in relation to the descriptions in Categories B and C and each was modified slightly (see Table 4). However, we became bogged down with Category E because the transcript evidence didn't seem to substantiate the version 3 description we'd written at the previous meeting. Eventually we went to the whiteboard and we tried to construct a more accurate description. We certainly thought that a new description was coming from the transcript evidence, but this illustrates how wrong you can be – as is described in later sections.

Version 4 to version 5

This meeting produced only some word changes in the latter part of the Category C description (see Table 5). Also, at this meeting we began to review quotes from the transcript that illustrate Category C. In addition, we began to be concerned that the Category E in version 3 could not be totally justified in terms of the evidence in the transcripts. We made some changes and resolved to continue to review that description over ensuing meetings.

Version 5 to version 6

In this meeting some of the descriptions were edited (in a literary sense) so that they accurately depicted the particular category as determined by the transcript evidence. Further changes to Category E emerged as we continued to review the interview transcripts.

Version 6 to version 7

Both Category D and Category E were modified at this stage.

Version 7 to final version 8

At this stage, some final changes to Category E were made and there was some further work on Category D.

Table 1: Draft categories of description 'success in r esearch'
John Bowden, 19 June 2002

Category	description	Transcript No. (page nos.)
A	Research is successful if it makes a dif ference to the world. Ther e should be useful outcomes. They may be in the for m of solutions to problems experienced by people or they may be changes to the body of knowledge, either in a quantitative (adding to knowledge) or a qualitative sense (understanding something better than befor e).	**4** (7); **5** (1,5,7,8); **7** (11); **8** (7); **11** (10, 11, 12,14); **14** (6,7); **18** (4, 7); **20** (4,7); **21** (4,8); **23** (10,11)
B	Research is successful if its conduct induces positive feelings within the researcher. These may be because of the inher ent inter est of the activity and the various feelings of being thrilled, challenged or exhilarated by successfully tackling complex issues ef ficiently and with high standards. The satisfaction thus engender ed may be linked to a number of achievements, including being able to meet clients' needs, being able to confir m one's own prior hypotheses, and par ticipating in the act of discover y. The r esear cher may feel pr oud.	**2** (9); **3** (23); **5** (6,8); **6** (4); **7** (7, 11); **9** (5,6); **11** (13); **13** (10); **14** (7); **15** (13); **16** (11); **17** (1,3,4,6); **18** (7); **19** (3); **20** (3,4); **22** (11); **23** (9)
C	Research is successful if it r esults in the development of the researchers and their or ganisations. This may be by pushing back boundaries and lear ning new techniques and methods, inducting novices into the r esearch pr ocess, assisting new r esear chers to complete higher degr ees, developing constr uctive links with stakeholders, feeding outcomes back into teaching, and incr easing the capability of the or ganisation thr ough all or any of the above.	**1** (3,4,7,8); **2** (10); **3** (23); **4** (7); **11** (10,11); **12** (5,6,8,11); **15** (9); **18** (4,7); **19** (6,7); **24** (4).
D	Research is successful if it r esults in publication – for which ther e is a hierar chy of value. This r elates both to quality (1st priority) that is measur ed by the pr estige with which the (almost exclusively) r efereed journal is held within its field and to the number of papers. Fur ther indicators of success of this kind include invitations to speak at conferences or to write r eviews of fields of r esear ch.	**4** (6); **6** (2,3,6); **7** (8); **8** (7); **10** (7); **16** (5); **21** (4); **22** (10); **23** (10).
E	Research is successful if it cr eates a higher pr ofile for the r esear cher in ways that pr omote inter est in the work by other people who seek out the r esear ch and/or the r esear cher. The feelings associated with these outcomes include thrill at the attention r eceived as a consequence and happiness with the pr ospects it engenders for new resear ch grants and overall car eer enhancement.	**2** (22); **9** (5); **20** (3, 4,7); **13** (8,9); **17** (3,4); **19** (4); **20** (3,4).
F	Research is never unsuccessful. No matter what the outcome, the resear cher is always able to lear n something.	**3** (1); **21** (9); **2**2 (12).

- This is a first draft aimed at covering the range of meanings. It will almost cer tainly not be accurate, but that has to be tested against the evidence of the transcripts.
- One thing omitted is the combinations that could cr eate separate categories. For example, the notion that success is a combination of aspects of C and aspects of D comes thr ough in T ranscript 22 (p.10, 12). There ar e other combinations and this kind of evidence in the transcripts would need to be addr essed in later iterations.
- Another issue for consideration is whether the par ticular clustering within each of A to F masks dif ferences that would pr oduce multiple categories.

Table 2: Draft categories of description of 'success in research'
Version 2 – John Bowden, 5 July 2002
Changes to A, D and F

Category	description	Transcript No. (page nos.)
A	Research is successful if it makes a difference to the world either by affecting other people's lives or by producing something new. There should be useful outcomes which may be in one of two forms independently or with the two forms integrated together. One form of utility is finding solutions to problems experienced by people. Another is enriching the body of knowledge, either in a global sense or, on a more individual level, increasing other people's awareness and helping them understand better than before. The integrated perspective seeks useful but theoretically grounded outcomes.	**4** (7); **5** (1,5,7,8); **7** (11); **8** (7); **11** (10, 11, 12,14); **14** (6,7); **18** (2,4, 7); **20** (4,7); **21** (4,8); **23** (10,11, 12, 16)
B	Research is successful if its conduct induces positive feelings within the researcher. These may be because of the inherent interest of the activity and the various feelings of being thrilled, challenged or exhilarated by successfully tackling complex issues efficiently and with high standards. The satisfaction thus engendered may be linked to a number of achievements including being able to meet clients' needs, being able to confirm one's own prior hypotheses and participating in the act of discovery. The researcher may feel proud.	**2** (9); **3** (23); **5** (6,8); **6** (4); **7** (7, 11); **9** (5,6); **11** (13); **13** (10); **14** (7); **15** (13); **16** (11); **17** (1,3,4,6); **18** (7); **19** (3); **20** (3,4); **22** (11); **23** (9).
C	Research is successful if it results in the development of the researchers and their organisations. This may be by pushing back boundaries and learning new techniques and methods, inducting novices into the research process, assisting new researchers to complete higher degrees, developing constructive links with stakeholders, feeding outcomes back into teaching and increasing the capability of the organisation through all or any of the above.	**1** (3,4,7,8); **2** (10); **3** (23); **4** (7); **11** (10,11); **12** (5,6,8,11); **15** (9); **18** (4,7); **19** (6,7); **24** (4).
D	Research is successful if it results in publication – for which there is a hierarchy of value. This relates both to quality (1st priority) that is measured by the prestige with which the (almost exclusively) refereed journal is held within its field and to the number of papers. Further indicators of success of this kind include invitations to speak at conferences or to write reviews of fields of research. This focus on publication as a criterion of success may be expressed as an internalised 'self-evident' belief or as explicit recognition of external expectations. (*There are also at least two ways of seeing the purpose of publication, one as an end in itself and another as a means of contributing to some community change – the latter has links to Category A above.)*	**4** (6); **6** (2,3,6); **7** (8); **8** (7) ??; **10** (7); **16** (5); **21** (4); **22** (10); **23** (10). **22** (10) for example.
E	Research is successful if it creates a higher profile for the researcher in ways that promote interest in the work by other people who seek out the research and/or the researcher. The feelings associated with these outcomes include thrill at the attention received as a consequence and happiness with the prospects it engenders for new research grants and overall career enhancement.	**2** (22); **9** (5); **20** (3, 4,7); **13** (8,9); **17** (3,4); **19** (4); **20** (3,4).
F	Research is successful if it results in learning (of a personal kind) for the researcher. (*It may be that this represents merely one specific example of the developmental process already depicted in Category C above – need to examine.)*	**21** (9); **22** (10,11,12).

Table 3: Draft categories of description of 'success in r esearch'
Version 3 – John Bowden, 22 July 2002

Category	description	Transcript No. (page nos.)
A	Research is successful if it makes a dif ference to the world, either by affecting other people's lives or by pr oducing something new . Ther e should be useful outcomes which may be in one of two for ms inde-pendently or with the two for ms integrated together . One for m of utility is finding solutions to pr oblems experienced by people. Another is enriching the body of knowledge either in a global sense or , on a mor e individual level, incr easing other people's awar eness and helping them understand better than befor e. These outcomes may be achieved by appr opriate scholarly publication. The integrated perspec-tive seeks useful but theor etically gr ounded outcomes.	**4** (7); **5** (1,5,7,8); **7** (11); **8** (7); **11** (10, 11, 12,14); **13** (9); **14** (6,7); **18** (2,4, 7); **20** (4,7); **21** (4,8); **23** (10,11, 12, 16) **22** (10) for example
B	Research is successful if par ticipation in it or the outcomes pr oduced from it ar e satisfying to the r esear cher. These may be because of the inherent inter est of the activity and the various feelings of being thrilled, challenged or exhilarated by successfully tackling complex issues ef ficiently and with high standar ds. The satisfaction may be linked to a number of achievements including being able to meet clients' needs, being able to confir m one's own prior hypotheses, and participating in the act of discover y. The r esear cher may feel pr oud of what has been pr oduced.	**2** (9); **3** (23); **5** (6,8); **6** (4); **7** (7, 11); **9** (5,6); **11** (13); **13** (7, 10); **14** (7); **1**5 (13); **16** (11); **17** (1,3,4,6); **18** (7, 8); **19** (3); **20** (3,4); **22** (11); **23** (9)
C	Research is successful if it r esults in the development of the resear chers and their or ganisations. This may be by pushing back boundaries and lear ning new techniques and methods, inducting novices into the r esear ch pr ocess, assisting new r esear chers to com-plete higher degr ees, developing constr uctive links with stakeholders, feeding outcomes back into teaching and incr easing the capability of the or ganisation thr ough all or any of the above. It may be that even if in ever y other r espect the r esear ch may be r egarded as unsuccessful, but the r esear cher lear ns something fr om the experience, then it has been successful.	**1** (3,4,7,8); **2** (10); **3** (23); **4** (7); **11** (10,11); **12** (5,6,8,11); **15** (9); **18** (4,7); **19** (6,7); **24** (4) **17** (1); **21** (9); **22** (10,11,12)
D	Research is successful if it r esults in publication, which is an end in itself and for which ther e is a hierar chy of value. This r elates both to quality (1st priority) that is measur ed by the pr estige with which the (almost exclusively) r efereed jour nal is held within its field and to the number of papers. Fur ther indicators of success of this kind include invitations to speak at confer ences or to write r eviews of fields of resear ch. This focus on publication as a criterion of success may be expressed as an inter nalised 'self-evident' belief or as explicit r ecogni-tion of exter nal expectations.	**4** (6); **6** (2,3,6); **7** (8); **8** (7) ??; **10** (7); **16** (5); **21** (4); **22** (10); **23** (10)
E	Research is successful if the pr oject is planned, or ganised and com-pleted in a way that is fulfilling for the r esear cher and leads to fur ther resear ch oppor tunities. The elements that comprise that pr ocess include conceptualising the pr oject, getting a team together , acquiring funding, facilitating and inspiring colleagues and completing the task in ways likely to attract fur ther r esear ch suppor t or enhance car eers. One aspect of the latter is that, if the pr oject generates a lot of public interest, the r esear chers may feel excited by the attention they receive.	**11** (12); **12** (4, 7, 11, 14); **14** (16); **16** (2, 12); **17** (3); **19** (3); **21** (4) **3** (22), **13** (8,9)

Table 4: Draft categories of description of 'success in research'
Version 4 – John Bowden, 31 July 2002

Category	description	Transcript No. (page nos.)
A	Research is successful if it makes a difference to the world either by affecting other people's lives or by producing something new. There should be useful outcomes which may be in one of two forms independently or with the two forms integrated together. One form of utility is finding solutions to problems experienced by people. Another is enriching the body of knowledge either in a global sense or, on a more individual level, increasing other people's awareness and helping them understand better than before. These outcomes may be achieved by appropriate scholarly publication. The integrated perspective seeks useful but theoretically grounded outcomes.	**4** (7); **5** (1,5,7,8); **7** (11); **8** (7); **11** (10, 11, 12,14); **13** (9); **14** (6,7); **18** (2,4, 7); **20** (4,7); **21** (4,8); **23** (10,11, 12, 16). **22** (10) for example.
B	Research is successful if the researcher finds it exciting to do. This may be because of the inherent interest of the activity and the various feelings of being thrilled, challenged or exhilarated by successfully tackling complex issues. The excitement may be linked to a number of achievements, including being able to meet clients' needs, being able to confirm one's own prior hypotheses, and participating in the act of discovery. The researchers may feel proud of what has been produced and excited by the attention they receive.	**2** (9); **3** (23); **5** (6,8); **6** (4); **7** (7, 11); **9** (5,6); **11** (13); **13** (7, 10); **14** (7); **15** (13); **16** (11); **17** (1,3,4,6); **18** (7, 8); **19** (3); **20** (3,4); **22** (11); **23** (9.)
C	Research is successful if it results in the development of the researchers and their organisations. This may be by pushing back boundaries and learning new techniques and methods, inducting novices into the research process, assisting new researchers to complete higher degrees, developing constructive links with stakeholders, feeding outcomes back into teaching, and increasing the capability of the organisation through all or any of the above. Satisfaction may also derive from the further research and career opportunities that are created. It may be that, even if in every other respect the research is regarded as unsuccessful but the researcher learns something from the experience, then the researcher still sees it as successful.	**1** (3,4,7,8); **2** (10); **3** (23); **4** (7); **11** (10,11); **12** (5,6,8,11); **15** (9); **18** (4,7); **19** (6,7); **24** (4). **17** (1); **21** (9); **22** (10,11,12).
D	Research is successful if it results in publication, which is an end in itself and for which there is a hierarchy of value. This relates both to quality (1st priority) that is measured by the prestige with which the (almost exclusively) refereed journal is held within its field and to the number of papers. Further indicators of success of this kind include invitations to speak at conferences or to write reviews of fields of research. This focus on publication as a criterion of success may be expressed as an internalised 'self-evident' belief or as explicit recognition of external expectations.	**4** (6); **6** (2,3,6); **7** (8); **8** (7) ??; **10** (7); **16** (5); **21** (4); **22** (10); **23** (10).
E	Research is successful if the project progresses in a way that is fulfilling for the researcher. This may be because of the way the project was deliberately planned and organised or because a range of factors come into play in a more fortuitous fashion. The elements that might comprise that process include conceptualising the project, getting a team together, acquiring funding, facilitating and inspiring colleagues, locating relevant sources and ideas and achieving closure.	**11** (12); **12** (4, 7, 11, 14); **14** (16); **16** (2, 12); **17** (3); **19** (3); **21** (4) **3** (22), **13** (8,9)

Table 5: Draft categories of description of 'success in r esearch'
Version 5 – John Bowden, 17 September 2002

Category	description	Transcript No. (page nos.)
A	Research is successful if it makes a dif ference to the world either by affecting other people's lives or by pr oducing something new . Ther e should be useful outcomes which may be in one of two for ms inde-pendently or with the two for ms integrated together . One for m of utility is finding solutions to pr oblems experienced by people. Another is enriching the body of knowledge either in a global sense or , on a mor e individual level, incr easing other people's awar eness and helping them understand better than befor e. These outcomes may be achieved by appr opriate scholarly publication. The integrated perspec-tive seeks useful but theor etically gr ounded outcomes.	**4** (7); **5** (1,5,7,8); **7** (11); **8** (7); **11** (10, 11, 12,14); **13** (9); **14** (6,7); **18** (2,4, 7); **20** (4,7); **21** (4,8); **23** (10,11, 12, 16). **22** (10) for example.
B	Research is successful if the r esear cher finds it exciting to do. This may be because of the inher ent inter est of the activity and the various feelings of being thrilled, challenged or exhilarated by successfully tackling complex issues. The excitement may be linked to a number of achievements including being able to meet clients' needs, being able to confir m one's own prior hypotheses and par ticipating in the act of discover y. The r esear chers may feel pr oud of what has been pr oduced and excited by the attention they r eceive.	**2** (9); **3** (23); **5** (6,8); **6** (4); **7** (7, 11); **9** (5,6); **11** (13); **13** (7, 10); **1**4 (7); **1**5 (13); **1**6 (11); **17** (1,3,4,6); **18** (7, 8); **19** (3); **20** (3,4); **22** (11); **23** (9).
C	Research is successful if it r esults in the development of the resear chers and their or ganisations. This may be by pushing back boundaries and lear ning new techniques and methods, inducting novices into the r esear ch pr ocess, assisting new r esear chers to com-plete higher degr ees, developing constr uctive links with stakeholders, feeding outcomes back into teaching and incr easing the capability of the or ganisation thr ough all or any of the above. Satisfaction may also derive fr om the fur ther r esear ch and car eer oppor tunities that ar e cr e-ated. It may be that, as often happens, the r esear cher lear ns some-thing fr om the experience even if in ever y other r espect the r esear ch is r egarded as unsuccessful; such a r esear cher may still see the resear ch as successful.	**1** (3,4,7,8); **2** (10); **3** (23); **4** (7); **11** (10,11); **12** (5,6,8,11); **15** (9); **18** (4,7); **19** (6,7); **24** (4). **17** (1); **21** (9); **22** (10,11,12).
D	Research is successful if it r esults in publication, which is an end in itself and for which ther e is a hierar chy of value. This r elates both to quality (1st priority) that is measur ed by the pr estige with which the (almost exclusively) r efereed jour nal is held within its field and to the number of papers. Fur ther indicators of success of this kind include invitations to speak at confer ences or to write r eviews of fields of resear ch. This focus on publication as a criterion of success may be expressed as an inter nalised 'self-evident' belief or as explicit r ecogni-tion of exter nal expectations.	**4** (6); **6** (2,3,6); **7** (8); **8** (7); **10** (7); **16** (5); **21** (4); **22** (10); **23** (10).
E	Research is successful if the pr oject pr ogresses in a way that is fulfill-ing for the r esear cher. This may be because of the way the pr oject was deliberately planned and or ganised or because a range of factors come into play in a mor e for tuitous fashion. The elements that might comprise that pr ocess include conceptualising the pr oject, getting a team together , acquiring funding, facilitating and inspiring colleagues, locating r elevant sour ces and ideas and achieving closur e.	**11** (12); **12** (4, 7, 11, 14); **14** (16); **16** (2, 12); **17** (3); **19** (3); **21** (4). **3** (22), **13** (8,9).

Table 6: Draft categories of description of 'Success in research' Version 6 – John Bowden, 20 September 2002

Category	description	Transcript No. (page nos.)
A	Research is successful if it makes a difference to the world either by affecting other people's lives or by producing something new. Research outcomes should be useful and, preferably, put to actual use. One form of utility is finding solutions to problems experienced by people. Another form, often achieved by appropriate scholarly publication, is enriching the body of knowledge either in a global sense or, on a more individual level, increasing other people's awareness and helping them understand better than before. Outcomes may be in one of these two forms independently or with the two forms integrated together. The integrated perspective seeks useful but theoretically grounded outcomes.	**4** (7); **5** (1,5,7,8); **7** (11); **8** (7); **11** (10, 11, 12,14); **13** (9); **14** (6,7); **18** (2,4, 7); **20** (4,7); **21** (4,8); **23** (10,11, 12, 16) **22** (10) for example
B	Research is successful if the researcher finds it satisfying or exciting to do. This may be because of the inherent interest of the activity and the various feelings of being thrilled, challenged or exhilarated by successfully tackling complex issues. The excitement may be linked to a number of achievements including being able to meet clients' needs, being able to confirm one's own prior hypotheses and participating in the act of discovery. The researchers may feel proud of what has been produced and excited by the attention they receive.	**2** (9); **3** (23); **5** (6,8); **6** (4); **7** (7, 11); **9** (5,6); **11** (13); **13** (7, 10); **14** (7); **15** (13); **16** (11); **17** (1,3,4,6); **18** (7, 8); **19** (3); **20** (3,4); **22** (11); **23** (9)
C	Research is successful if it results in the development of the researchers and their organisations. This may be by pushing back boundaries and learning new techniques and methods, inducting novices into the research process, assisting new researchers to complete higher degrees, developing constructive links with stakeholders, feeding outcomes back into teaching and increasing the capability of the organisation through all or any of the above. Satisfaction may also derive from the further research and career opportunities that are created. It may be that, as often happens, the researcher learns something from the experience even if in every other respect the research is regarded as unsuccessful; such a researcher may still see the research as successful.	**1** (3,4,7,8); **2** (10); **3** (23); **4** (7); **11** (10,11); **12** (5,6,8,11); **15** (9); **18** (4,7); **19** (6,7); **24** (4) **17** (1); **21** (9); **22** (10,11,12)
D	Research is successful if it results in publication, which is an end in itself and for which there is a hierarchy of value. This relates both to quality (1st priority) that is measured by the prestige with which the (almost exclusively) refereed journal is held within its field and to the number of papers. Further indicators of success of this kind include invitations to speak at conferences or to write reviews of fields of research. This focus on publication as a criterion of success may be expressed as an internalised 'self-evident' belief or as explicit recognition of external expectations.	**4** (6); **6** (2,3,6); **7** (8); **8** (7); **10** (7); **16** (5); **21** (4); **22** (10); **23** (10)
E	Research is successful if the project progresses in a way that is fulfilling for the researcher. This may be because of the way the project was deliberately planned and organised or because a range of factors come into play in a more fortuitous fashion. The elements that might comprise that process include conceptualising the project, getting a team together, acquiring funding, facilitating and inspiring colleagues, locating relevant sources and ideas and achieving closure.	**11** (12); **12** (4, 7, 11, 14); **14** (16); **16** (2, 12); **17** (3); **19** (3); **21** (4) **3** (22), **13** (8,9)

Table 7: Draft categories of description of 'success in r esearch'
Version 7 – John Bowden, 25 September 2002

Category	description
A	Research is successful if it makes a dif ference to the world either by affecting other people's lives or by pr oducing something new . Research outcomes should be useful and, pr eferably, put to actual use. One for m of utility is finding solutions to pr oblems experienced by people. Another for m, often achieved by appr opriate scholarly publication, is enriching the body of knowledge either in a global sense or , on a mor e individual level, incr easing other people's awar eness and helping them understand better than befor e. Outcomes may be in one of these two for ms independently or with the two for ms integrated together. The integrated perspective seeks useful but theor etically grounded outcomes.
B	Research is successful if the r esearcher finds it satisfying or exciting to do. This may be because of the inher ent inter est of the activity and the various feelings of being thrilled, challenged or exhilarated by successfully tackling complex issues. The excitement may be linked to a number of achievements including being able to meet clients' needs, being able to confir m one's own prior hypotheses, and par ticipating in the act of discover y. The r esearchers may feel pr oud of what has been pr oduced and excited by the attention they r eceive.
C	Research is successful if it r esults in the development of the researchers and their or ganisations. This may be by pushing back boundaries and lear ning new techniques and methods, inducting novices into the r esearch pr ocess, assisting new r esearchers to complete higher degr ees, developing constr uctive links with stakeholders, feeding outcomes back into teaching and incr easing the capability of the or ganisation thr ough all or any of the above. Satisfaction may also derive fr om the fur ther r esearch and car eer oppor tunities that ar e cr eated. It may be that, as often happens, the r esearcher lear ns something fr om the experience even if in ever y other r espect the r esearch is r egarded as unsuccessful; such a r esearcher may still see the research as successful.
D	Research is successful if it r esults in some for m of publication, for which ther e ar e hierar chies of value. A book based on r esearch is normally valued mor e highly than a jour nal ar ticle or , in tur n, a conference paper . Within jour nal ar ticles ther e is another quality measur e related to whether the jour nal is r efereed or not and, overlapping with this, to the pr estige with which the jour nal is held within its field. The number of publications is also a measur e of success, as ar e invitations to speak at confer ences or to write r eviews of fields of r esearch. This focus on publication as a criterion of success may be expr essed as an inter nalised 'self-evident; belief or as explicit r ecognition of external expectations.
E	Research is successful if the pr oject r eaches some for m of completion. This may be r elated to the r esearcher's satisfaction simply with getting the pr oject finished, mor e actively with having steer ed it through all the complex steps to completion or , mor e psychologically , with the sense of closur e that derives fr om r esearch outcomes being implemented.

Table 8: Draft categories of description of 'success in research' Version 8 – John Bowden, 14 October 2002

Category	description
A	Research is successful if it makes a difference to the world either by affecting other people's lives or by producing something new. Research outcomes should be useful and, preferably, put to actual use. One form of utility is finding solutions to problems experienced by people. Another form, often achieved by appropriate scholarly publication, is enriching the body of knowledge either in a global sense or, on a more individual level, increasing other people's awareness and helping them understand better than before. Outcomes may be in one of these two forms independently or with the two forms integrated together. The integrated perspective seeks useful but theoretically grounded outcomes.
B	Research is successful if the researcher finds it satisfying or exciting to do. This may be because of the inherent interest of the activity and the various feelings of being thrilled, challenged or exhilarated by successfully tackling complex issues. The satisfaction or the excitement may be linked to a number of achievements, including being able to meet clients' needs, being able to confirm one's own prior hypotheses, and participating in the act of discovery. The researchers may feel proud of what has been produced and excited by the attention they receive.
C	Research is successful if it results in the development of the researchers and their organisations. This may be by pushing back boundaries and learning new techniques and methods, inducting novices into the research process, assisting new researchers to complete higher degrees, developing constructive links with stakeholders, feeding outcomes back into teaching, and increasing the capability of the organisation through all or any of the above. Satisfaction may also derive from the further research and career opportunities that are created. It may be that, as often happens, the researcher learns something from the experience, even if in every other respect the research is regarded as unsuccessful; such a researcher may still see the research as successful.
D	Research is successful if it results in some form of publication, such as a book, a journal article or a conference paper. Within journal articles there is another quality measure related to the prestige with which the journal is held within its field and, overlapping with that, whether the journal is refereed or not. The number of publications is also a measure of success, as are invitations to speak at conferences or to write reviews of fields of research. This focus on publication as a criterion of success may be expressed as an internalised 'self-evident' belief or as explicit recognition of external expectations.
E	Research is successful if the researcher feels satisfied with having steered the project through some or all of the complex steps (such as establishing active teams or acquiring project funding) they believe to be necessary to get the project completed. This may be related to the researcher's satisfaction simply with getting the project finished or the sense of closure that derives from research outcomes being implemented.

Structure of categories

First draft
Dimensions of variation 'success in r esearch'

	Research is successful if				
	it solves r eal problems or adds to knowledge	it r esults in publication	the r esear cher and/or the organisation is/ar e developed	the r esear cher feels satisfied in getting it done	the r esear cher finds it satisfying to do
Dimensions of variation	**Category 1** *(formerly Category A)*	**Category 2** *(formerly Category D)*	**Category 3** *(formerly Category C)*	**Category 4** *(formerly Category E)*	**Category 5** *(formerly Category B)*
Resear ch content focus	Very str ong	Indirect	Indirect	Minimal	Minimal
Resear ch outcome focus	Very str ong	Strong	Indirect	Indirect	Minimal
Resear ch process focus	Minimal	Minimal	Indirect	Indirect	Very str ong
Breadth of impact	Community	University and academic peers	University and future fund sour ces	Self and team	Self

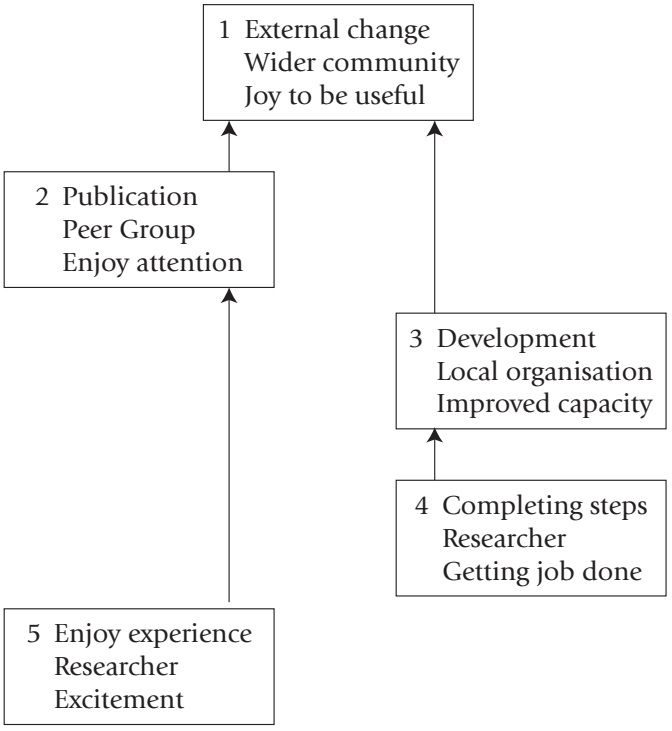
Structure of categories

Second draft
Dimensions of variation 'success in r esearch'

	Research is successful if				
	it solves r eal problems or adds to knowledge	it r esults in publication	the r esear cher and/or the organisation is/ar e developed	the r esear cher feels satisfied in getting the r esear ch steps done	the r esear cher finds r esear ch satisfying to do
Dimensions of variation	**Category 1** *(formerly Category A)*	**Category 2** *(formerly Category D)*	**Category 3** *(formerly Category C)*	**Category 4** *(formerly Category E)*	**Category 5** *(formerly Category B)*
Success focus for r esear ch	Specific exter nal change as a consequence of r esear ch outcome	Generalised extrinsic product or outcome	Intrinsic pr oduct or outcome	Intrinsic satisfaction with completing steps in the pr ocess	Intrinsic satisfaction with par ticipating in the r esear ch
Who benefits from r esear ch success?	Wider community	Resear cher and peer gr oup	Resear cher and local or ganisation	Resear cher	Resear cher

Final Structure November 2002 as used in confer ence paper by John Bowden (Canberra, November 2000)

Relations among 'success' categories



'Success in research'
Branch A

	Research is successful if		
Branch A	it solves real problems or adds to knowledge	it results in publication	the researcher finds research enjoyable to do
Dimensions of variation	**Category 1**	**Category 2**	**Category 5**
Success focus for research	External change as a consequence of research outcome	Research product made public in traditional form	Intrinsic joy and satisfaction from participating in the research
Who judges research success?	Wider community	Peer group	Researcher
Focus of enjoyment	The joy of discovery and doing something useful for other people	Getting something published and the associated attention received	Experiencing the research activities

'Success in research'
Branch B

	Research is successful if		
Branch B	it solves real problems or adds to knowledge	the researcher and/or the organisation is/are developed	the researcher feels satisfied in getting the research steps done
Dimensions of variation	**Category 1**	**Category 3**	**Category 4**
Success focus for research	External change as a consequence of research outcome	Local change as a consequence of the research process	Intrinsic satisfaction with completing steps in the process
Who judges research local success?	Wider community	Researcher and organisation	Researcher
Focus of satisfaction	Doing something useful for other people	Own learning and/or improved organisational capacity	Getting the job done

APPENDIX B

Interim stages of the analysis of ways of experiencing being a university researcher

Gerlese Åkerlind

I started by analysing a subset of the interview transcripts (the first 17 interviews transcribed). The aim of using a subset was to help make the large amount of data collected more manageable. At a later stage of the analysis, the remaining interviews were added to the original set.

I read the subset of transcripts in their entirety to gain a sense of the whole. Then I read them again, marking any sections of each transcript which were not relevant to the research question, to reduce future reading time. I also made summary notes of each transcript as I read them for the second time. Such summaries would have been impossible to make on the first reading, without any sense of how individual transcripts fitted into the set as a whole.

I then read through the summary notes and created the following first attempt to represent the variation in overall meaning across the transcripts.

Categories of description — version 1

The experience of being a university r esear cher as:

- satisfying academic job r equirements
- receiving exter nal funding
- contributing to knowledge
- exploring the unknown
- solving a pr oblem/puzzle
- finding out what works and doesn't work
- improving practice
- advancing your field
- a mission/pr oject
- helping the community
- car ving out your ter ritor y
- achieving cr edibility
- satisfying your curiosity

You will note that, out of 17 transcripts, I produced 13 preliminary ways of experiencing, i.e., almost as many ways as individuals interviewed. Thus, the difference between the collective view and the individual view was not well developed at this stage of the analysis.

I then reviewed the preliminary list of ways of experiencing and the summary notes, looking for dimensions of variation which ran across the different ways of experiencing. On this basis, I constituted the following preliminary themes of expanding awareness.

Themes of expanding awareness – version 1

1. The nature of research as externally vs internally determined.

External, e.g.,	*Internal*, e.g.,
satisfy job requirements	personal understanding/use
contribute to knowledge	own curiosity
solve a problem	own cultural mission
carve out a territory in the debate	interest/enthusiasm/love it

2. Research as impacting on the self vs others.

Self, e.g.,	*Other*, e.g.,
keep job	advance field
gain credibility/fame/promotion	contribute to knowledge
satisfy curiosity/come to understand	cultural project
interest/enthusiasm/love it	useful to community
improve own practice	
carve out own territory	

I then returned to the transcripts and re-read them all, making a new set of summary notes on each transcript. Based on the re-reading and subsequent analysis of the new set of notes, I constituted version 2 of the categories of description, followed by version 2 of the new. In this revised version, the original 13 categories of description have been reduced to 10, and the original two themes of expanding awareness expanded to four.

Categories of description – version 2

The experience of being a researcher as:

- part of an academic job
- turning ideas into products
- solving a problem/puzzle
- carving out a territory in the debate
- improving practice – finding what works/doesn't work
- discovering something new – contributing to knowledge and exploring the unknown
- advancing the field/useful to community
- a project/mission
- understanding/discovery/pursuing lines of inquiry
- following a passionate love/personal interest

Themes of expanding awar eness – version 2
1. Changes in the academic vs the field vs the community
2. Working alone vs together
3. An intellectual vs social pr oject
4. Self vs other dir ected

I then repeated the iteration between transcripts, summary notes and preliminary outcomes, leading to version 3. In versions 1 and 2, I had just been feeling my way and coming to terms with the data. Version 3 represents a qualitative leap in integration, clarity and parsimony compared to the previous versions. This is the first version to be elaborate enough to allow a systematic approach to confirming or refuting the proposed outcomes against the transcript data. To facilitate this process, I then grouped the transcripts according to the category that they best represented and re-read them *in these groupings* for the next iteration between data and tentative outcomes.

Categories of description – version 3
1. Resear ch as an academic duty
2. Resear ch as discovering something new
   (in or der to establish fame/cr edibility)
3. Resear ch as personal, lifetime education
4. Resear ch as contributing to a community (academic or societal)
5. Resear ch as contribution and lifetime education

In line with the increasing sophistication of the hypothesised outcomes, this version is the first to attempt to explore structural relationships between the tentative categories of description. In the proposed structure, Category 2 is seen as inclusive of Category 1. Categories 3 and 4 are each seen as inclusive of Categories 1 and 2, but *not* inclusive of each other. In other words, the structure forks at this point, but comes back together for Category 5, which is seen as inclusive of *all* other categories.

Similarly, version 3 of the themes of expanding awareness attempts for the first time to capture *systematic* variation across the revised set of categories of description in *each* of the themes proposed.

Themes of expanding awareness – version 3

1. *Nature of research:*
   Solving problems vs
   finding something new vs
   advancing field vs
   contributing to self-development vs
   contributing to community.
2. *Research process:*
   Individual vs
   combined – research community or social community.
3. *Research outcomes:*
   Theoretical vs
   applied/useful – to self or others;
   field or society

   OR

   3. *Research outcomes:*
   Products vs
   theoretical understanding vs
   personal understanding vs
   changes in practice.
4. *Role of publication:*
   A requirement vs
   a source of fame/becoming known vs
   a source of feedback to improve work vs
   a source of communication with others.
5. *Feelings:*
   Neutral vs
   satisfaction vs
   enjoyment vs
   strong ideological position.

At this point, I had developed enough familiarity with the data to feel comfortable introducing the remaining 12 interview transcripts. Each new transcript was read as a whole and individually summarised, looking in particular for new aspects (or different perspectives on the same aspects) not identified in the original subset of transcripts.

Following this, the following set of categories of description and inclusive relationships between the categories was proposed:

Categories of description – version 4

The experience of a university r esear cher as:

1. An academic duty involving exter nal/tangible pr oducts
   NB: Research may or may not be experienced as personally enjoyable
2. Discovering something new (the traditional original contribution to knowledge? But includes fame)
   The transcripts reflecting this category include reference to academic duty, thus Category 2 is inclusive of Category 1. New aspects to the category include a consistent sense of personal enjoyment, practical (vs theoretical) outcomes and academic prestige.
3. An act of discover y (personal understanding/puzzle solving; includes lifetime education)
   This includes references to personal enjoyment, practical outcomes and academic prestige. It is thus inclusive of Category 2, subsumed under Category 2 or, given the apparent absence of new aspects, the same as Category 2.
4. Advancing the field/society
   This includes references to personal enjoyment, practical outcomes and academic prestige, and is thus inclusive of Categories 2 and 3. New aspects include a focus on advancing the field and having a larger mission.

Version 4 of the categories of description is marked by a simpler structure than version 3, forming a linear hierarchy of inclusiveness. Categories 1 and 2 are essentially the same in both versions, but Categories 3-5 in version 3 have been condensed down to two categories in version 4.

For the next round of analysis, the transcripts and transcript summaries were again grouped according to the latest categories of description. With each regrouping of the data, I was able to pick up finer discriminations in my ongoing search for:

- any transcripts that did not align with the proposed categories, which would indicate that there were aspects of the data that had not been accounted for by the proposed outcomes
- within group similarities and differences, which might support my proposal that a group of transcripts reflects the same way of experiencing or, alternatively, clarify differences which might suggest a group be divided into separate categories, and
- between group similarities and differences, which might support or challenge my proposed categories, as well as indicating the presence or absence of inclusive relationships between categories.

At this advanced stage of the analysis, I also became even more systematic about the use of the proposed themes of expanding awareness to help finalise the categories and category descriptions, looking for confirmation or refutation that *each* proposed theme was evident in the description of *each* category. On this basis, the following coherent set of themes of expanding awareness, reflecting the following four categories of description, were constituted.

Categories of description – version 5

1. Research as an academic duty
2. Research as a personal discovery
3. Research as enhancing personal understanding
4. Research as benefiting a larger community (includes benefits to the researchers' own ongoing learning and development)

Themes of expanding awareness – version 4

1. *Aim:*
   Category 1 – fulfill role/keep job
   Category 2 – personal sense of achievement, to be famous/among top in field
   Category 3 – solve a puzzle/find out what works and what doesn't work
   Category 4 – advance your cause/make a contribution to change/follow your personal ideology/values.
2. *Process:*
   Category 1 – identify and solve a problem through a set of research procedures/skills
   Category 2 – discover something new and substantial in the field
   Category 3 – investigate questions of personal interest to the researcher
   Category 4 – use research to address broader issues of importance to the field or society (includes identify different world views).
3. *Outcomes:*
   Category 1 – solve a problem/complete PhD/publication (i.e., concrete products)
   Category 2 – become well known (also understand it yourself?)
   Category 3 – personal understanding
   Category 4 – produce material of value, which will enable significant resolutions, to the research/social group (includes change in world views).
4. *Feelings:*
   Category 1 – neutral or satisfaction with doing a good job
   Category 2 – self-doubt or self-satisfaction
   Category 3 – interest/enthusiasm
   Category 4 – passion.
5. *Publication:*
   Category 1 – requirement of job, establish credibility, increase chances of funding (i.e., extrinsic benefits)
   Category 2 – make your research known to others, gain credibility/fame
   Category 3 – gain feedback to improve work (or not relevant to the research process)
   Category 4 – spread the message/encourage change (or not relevant).

Version 5 of the categories of description is only slightly refined from version 4, being more concisely described. However, as I did not revise the tentative themes of expanding awareness when I constituted version 4 of the categories of description, the themes show more substantial modifications. Some of the themes, such as the ones labelled 'feelings', 'outcomes' and 'publication' have simply been further clarified. Others, such as the one labelled 'nature/aims of research' have been more substantially revised, with a stronger focus being placed on highlighting the *intentional nature* of the experience. The 'process' theme, in particular, looks very different to the previous version, although the dimensions of variation in awareness represented within the theme should look quite familiar. So, the dimensions have continued, but been described differently. This represents an attempt on my part to further elaborate and integrate the dimensions across different themes. It also represents, once again, a more intentional focus to my descriptions of variation in awareness.

Perhaps the largest modification to the proposed themes of expanding awareness is the apparent disappearance of the variation in focus on 'theoretical vs useful' research outcomes and 'individual vs combined' research processes, seen in earlier versions of the themes. This is because, after careful searching through the groups of transcripts representing each proposed category of description, I found evidence of variation along these lines in *each* category. Thus, although the variation was still evident to me, I came to see it as representing a within-category, rather than between-category, variation. This means that the variation did not discriminate between the proposed categories of description and, thus, did not form part of what makes the categories qualitatively distinct.

In summary, over the course of the analysis, themes of expanding awareness which were apparent from the beginning have continued, but become more precisely, more concisely and more systematically defined, more intentionally focused, more coherent and integrated, clearly structured and better justified in the transcript data. At the same time, new themes have emerged.

At this stage, I took a break of several months in order to return to the analysis with a more open mind. After repeating the iterative process described in my last round of analysis, I arrived at the final outcome space described in Chapter 10.

References

Åkerlind, G. S. 2002, 'Principles and Practice in Phenomenographic Reaearch', in the electronic Proceedings of the International Symposium on Current Issues in Phenomenography, Canberra, Australia, available at: http//www.anu.edu.au/CEDAM/ilearn/symposium/symp.html.

Åkerlind, G. S. 2003a, *Growing and Developing as an Academic: Implications for Academic Development, Academia and Academic Work*, PhD thesis, University of Sydney, Australia.

Åkerlind, G. S. 2003b, 'Growing and developing as a university teacher – Variation in meaning', *Studies in Higher Education*, vol. 28 (4), pp.375-390.

Åkerlind, G. S. 2004, 'A new Dimension to Understanding University Teaching', *Teaching in Higher Education*, vol. 9, pp.363-376.

Åkerlind, G. S. 2005a, 'Academic Growth and Development: How Do University Academics Experience It?', *Higher Education*, vol. 50, pp.1-32.

Åkerlind, G. S. 2005b, 'Variation and Commonality in Phenomenographic Research Methods', *Higher Education Research and Development*, vol. 24, pp.321-334.

Åkerlind, G. S. & McKenzie, J. 2003, *An Introduction to Phenomenographic Research*, invited workshop presentation at the 2003 Improving Student Learning Conference, Leicestershire, England.

Ashworth, P. & Lucas, U. 2000, 'Achieving Empathy and Engagement: a Practical Approach to the Design, Conduct and Reporting of Phenomenographic Research', *Studies in Higher Education*, vol. 25 (3), pp.295-308.

Bowden, J. 1994a, 'The nature of phenomenographic research' in J. Bowden & E. Walsh, eds., *Understanding Phenomenographic Research: The Warburton Symposium*, EQARD, RMIT University Press, Melbourne, pp.1-16. (Subsequently revised as Bowden, 2000a below.)

Bowden, J. 1994b, 'Experience of phenomenographic research: A personal account' in J. Bowden & E. Walsh, eds., *Understanding*

Phenomenographic Research: The Warburton Symposium. EQARD, RMIT University Press, Melbourne, pp.44-55. (Subsequently reprinted as Bowden, 2000b below.)

Bowden, J. (1996), 'Phenomenographic research: Some methodological issues' in G. Dall'Alba & B. Hasselgren, eds., *Reflections on Phenomenography: Toward a Methodology?*, Göteborg Studies in Educational Sciences 109, Acta Universitatis Gothoburgensis, Gothenburg, Sweden.

Bowden, J. 2000a, 'The nature of phenomenographic research' in J. Bowden & E. Walsh, eds., *Phenomenography*, RMIT University Press, Melbourne.

Bowden, J. 2000b, 'Experience of phenomenographic research: A personal account' in J. Bowden & E. Walsh, eds., *Phenomenography*, RMIT University Press, Melbourne.

Bowden, J. & Marton, F. 1998, *The University of Learning*, Kogan Page, London.

Bowden, J. & Walsh, E., eds., 1994, *Understanding Phenomenographic Research: The Warburton Symposium*, EQARD, RMIT University Press, Melbourne. (Subsequently revised as Bowden & Walsh, 2000 below.)

Bowden, J. & Walsh, E., eds. 2000, *Phenomenography*, RMIT University Press, Melbourne.

Dahlgren, L. 1995, 'Lars Dahlgren on Phenomenography' in R. Gerber & C. Bruce eds, *Phenomenography – Qualitatively Research: Theory and Applications, Video 2*, Queensland University of Technology.

Dall'Alba, G. & Hasselgren, B., eds. 1996, *Reflections on Phenomenography: Toward a Methodology?*, Goteborg Studies in Educational Sciences 109, Acta Universitatis Gothoburgensis, Gothenburg, Sweden.

Gadamer, Hans-Georg 1976, *Philosophical Hermeneutics*, University of California Press, Berkeley.

Gadamer, Hans-Georg 1989, *Truth and Method*, 2nd rev. ed., trans. by Joel Weinsheimer & Donald G, Marshall, Crossroad, New York.

Glaser, B. G. & Strauss, A.L. 1967, *The Discovery of Grounded Theory: Strategies for Qualitative Research*, Weidenfeld & Nicolson, London.

Green, P. 1995, *The Literacy-Related Demands in the Transition from Primary to Secondary School*, PhD Thesis, La Trobe University, Bundoora, Melbourne (Unpublished).

Green, P., ed. 2002, *Slices of life: Qualitative research snapshots*, RMIT University Press, Melbourne.

HERD – *Higher Education Research and Development* 1997, Special issue: *Phenomenograpy in higher education*, vol. 16 (2).

Kvale, S. 1996, *InterViews: An Introduction to Qualitative Research Interviewing*, SAGE Publications, Thousand Oaks, California.

Lincoln, Y. S. & Guba, E. G. 1985, *Naturalistic Inquiry*, Sage Publications, Beverley Hills..

Marton, F. 1981, 'Phenomenograpy – Describing Conceptions of the World Around Us', *Instructional Science*, vol. 10, pp.177-200.

Marton, F. 1986a, 'Phenomenography' in T. Husen & T. N. Postlethwaite, eds., *International Encyclopaedia of Education*, Permagon Press, Oxford.

Marton, F. 1986b, 'Phenomenography, a research approach to investigating different understandings of reality', *Journal of Thought*, vol.21, no.3, pp.28-49.

Marton, F. 2002, Comments made at the 2002 *International Symposium on Current Issues in Phenomenography* held in Canberra, Australia.

Marton, F. & Booth, S. 1997, *Learning and Awareness*, Lawrence Erlbaum Ass., Hillsdale, NJ.

Marton, Ference & Tsui, Amy B. M. 2004, *Classroom discourse and the space of learning*, Lawrence Erlbaum, Mahwah, NJ.

Michelfelder, Diane P. & Palmer, Richard E., eds., 1989, *Dialogue and deconstruction: the Gadamer-Derrida encounter*, State University of New York Press, Albany.

Patton, M. Q. 2002, *Qualitative Evaluation and Research Methods*, Sage Publications, Newbury Park.

Prosser, M. 1994, 'Some Experiences of Using Phenomenographic Research Methodology in the Context of Research in Teaching and Learning' in J. Bowden & E. Walsh, eds., *Understanding Phenomenographic Research: The Warburton Symposium*, EQARD, RMIT University Press, Melbourne, pp.31-43. (Subsequently reprinted as Prosser, 2000 below.)

Prosser, M. 2000, 'Some Experiences of Using Phenomenographic Research Methodology in the Context of Research in Teaching and Learning' in J. Bowden & E. Walsh, eds., *Phenomenography*, RMIT University Press, Melbourne.

Säljö, R. 1996, 'Minding action – Conceiving of the world versus participating in cultural practices' in G. Dall'Alba & B. Hasselgren, eds., *Reflections on Phenomenography: Toward a Methodology?*, Göteborg Studies in Educational Sciences 109, Acta Universitatis Gothoburgensis, Gothenburg, Sweden, pp. 19-34.

Sandberg, J. 1994, *Human Competence at Work*, printed in Sweden (Doctoral Thesis).

Sandberg, J. 1996, 'Are phenomenographic results reliable?' in G. Dall'Alba & B. Hasselgren, eds., *Reflections on Phenomenography:*

Toward a Methodology? Göteborg Studies in Educational Sciences 109. Acta Universitatis Gothenburgensis, Gothenburg, Sweden, pp.129-140. (Subsequently reproduced as Sandberg, 1997 below.)

Sandberg, J. 1997, 'Are phenomenographic results reliable? *Higher Education Research and Development*, vol.16, pp.203-212.

Svennson, L. 1977, 'Theoretical Foundations of Phenomenography', *Higher Education Research and Development*, Vol. 16, pp.159–172.

Svennson, L. & Theman, J. 1983, *The Relation between Categories of Description and an Interview Protocol in a Case of Phenomenographic Research*, Research Report 1983:02, Department of Education, University of Goteborg.

Trigwell, K. 1994, 'The First Stage of a Phenomenographic Study of Phenomenography' in J. Bowden & E. Walsh, eds., *Understanding Phenomenographic Research: The Warburton Symposium*, EQARD, RMIT University Press, pp.56-72. (Subsequently revised as Trigwell, 2000 below.)

Trigwell, K. 2000, 'A Phenomenographic Interview on Phenomenography' in J. Bowden & E. Walsh, eds., *Phenomenography*, RMIT University Press, Melbourne.

Uljens, M. 1996, 'On the philosophical foundations of phenomenography' in G. Dall'Alba & B. Hasselgren, eds., *Reflections on Phenomenography: Toward a Methodology?*, Göteborg Studies in Educational Sciences 109, Acta Universitatis Gothoburgensis, Gothenburg, Sweden, pp.103-128.

Walsh, E. 1994, 'Phenomenographic analysis of interview transcripts' in J. Bowden & E. Walsh, eds., *Understanding Phenomenographic Research: The Warburton Symposium*, EQARD, RMIT University Press, Melbourne, pp.17-30. (Subsequently reprinted as Walsh, 2000 below.)

Walsh, E. 2000, 'Phenomenographic analysis of interview transcripts' in J. Bowden & E. Walsh, eds., *Phenomenography*, RMIT University Press, Melbourne.

List of contributors

Gerlese Åkerlind is a senior lecturer in the Centre for Educational Development and Academic Methods at The Australian National University. Starting with her doctorate, she has been actively involved with phenomenographic research since the mid-90s. She has a particular interest in variation in phenomenographic methods. From 1999-2003, she was co-convenor of the phenomenography special interest group attached to the European Association for Research in Learning and Instruction.

Robyn Barnacle is Research Fellow within the Research & Innovation Section at RMIT University. Her research treats research itself as a topic of inquiry, including the research experience, research practices and models, among others. She also has an ongoing engagement with phenomenological approaches to inquiry and philosophy of education more broadly. She is the editor of another QRM monograph, *Phenomenology*, 2001.

John Bowden is Professor Emeritus at RMIT University and Adjunct Professor, Swinburne Graduate Research School. He is Series Editor of both the QRM (Qualitative Research Methods) and the SOLTAR (Studies of Learning Teaching and Research) series of monographs published by RMIT University Press. He has been actively engaged with phenomenography for two decades as a researcher, teacher, project leader, author, supervisor of postgraduate research students and examiner of theses. He is the author (with Ference Marton) of *The University of Learning*, Kogan Page 1998 and Routledge Falmer 2004, and of another QRM monograph, *Phenomenography*, 2000 (edited with Eleanor Walsh).

Nita Cherry is Professor of Organisation Studies and Leadership in the Australian Graduate School of Entrepreneurship at Swinburne University in Melbourne. Her academic and consulting interests are focused on the practice of leadership in situations of complexity, tur-

bulence and change, and on the use of reflective practices which draw their inspiration from multiple intelligences and global cultural wisdom. She is the author of another QRM monograph, *Action Research*, 1999.

Pam Green is Associate Professor and Director, Graduate Studies at Swinburne University. Research interests include research supervision, research training and management, postgraduate research journeys, professional development, and qualitative research approaches (in particular naturalistic inquiry, case study and phenomenography). She is the editor of another QRM monograph *Slices of Life*, 2002, and of a monograph in the SOLTAR series, *Supervising Postgraduate Research: Contexts and Processes, Theories and Practices*, 2005.

Robyn Usher is Professor of Research Education and Coordinator of Research Training at RMIT University. He is the author of *Postmodernism and Education: Different Voices, Different Worlds*, Routledge, 1994 (with R. Edwards), *Adult Education and the Postmodern Challenge*, Routledge, 1997 (with I. Bryant and R. Johnston), *Researching Education: Data, Methods and Theory in Educational Inquiry*, Cassell, 1999 (with D. Scott) and *Understanding Social Research: Perspectives on Methodology and Practice*, Falmer Press, 1998 (with G. McKenzie and J. Powell). He is currently writing a monograph with Richard Edwards on lifelong learning.

QUALITATIVE RESEARCH METHODS

QRM

Doing Developmental Phenomenography is the sixth volume in the highly successful QRM series examining different qualitative research methods. The series emphasis is on helping new researchers find the most appropriate research method for both their project aims and their own values and interests. This volume builds on the foundations established in volume two, *Phenomenography*, and discusses practical implications involved in developmental phenomenography through the in-depth exploration of two related projects.

This comprehensive examination addresses key issues such as:

- What is it like to use a particular research method for the first time?
- How do researchers compare developmental phenomenography with other qualitative research methods they have used?
- What problems do researchers face when trying to collect data?
- What does the analysis of data look like when it is only half-finished?
- How does phenomenographic data analysis by an individual researcher proceed differently from analysis undertaken jointly by a group of researchers?
- What are the different ways of seeing success in research and development as a researcher?

Filled with insightful findings and reflections, *Doing Developmental Phenomenography* is an essential tool for all researchers, supervisors and research students.

Other titles in the series:
Action Research
Phenomenography
Phenomenology
Slices of Life
Emerging Forms of Representing Qualitative Data

RMIT UNIVERSITY PRESS

ISBN 1-921166-03-7

9 781921 166037