

A PHENOMENOGRAPHY OF PHENOMENOGRAPHY

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A Contribution to a Study of the History of Ideas in Higher Education/Research

I've already looked at: academic drift (Tight 2015a), academic tribes and territories (Tight 2015b), collegiality and managerialism (Tight 2014d), communities of practice (Tight 2015c), the scholarship of teaching and learning, the teaching/research nexus, threshold concepts (Tight 2014a)

I'm currently looking at: approaches to learning, cultural historical activity theory, human and social capital, institutional diversity and mission, student retention and engagement

The Place of Phenomenography in Higher Education Research

While only a small proportion of higher education researchers have ever used phenomenography (Tight 2012), it is an important niche research design within this field, particularly for research into teaching and learning. It is also one of the few research designs, methodologies or theories to have been substantially created and developed within higher education research (Tight 2014b), which makes it of added significance to the field (cf. threshold concepts). The qualifying term 'substantially' is used here because the originators of phenomenography have also researched other levels or areas of education using this design, and others have applied it outside education altogether. In this article, however, we will focus primarily on its development within higher education research.

A Caveat – I am not a Phenomenographer

At this point, it is probably sensible to state that I am not myself a phenomenographer (until now that is), as one of the reviewers of a previous article of mine (Tight 2016) raised the issue of whether non-phenomenographers can fully appreciate and usefully comment upon phenomenography. While acknowledging this point, I think it dismisses the potential usefulness of an 'external' view. While I am not a phenomenographer, I have supervised research students undertaking phenomenography, examined theses that have employed it, and reviewed many articles that have applied it. I am coming at the subject, therefore, from the perspective of an informed outsider, interested in the

development of higher education research and phenomenography's place within this.

Phenomenography as an Innovative Research Design

I am using the term 'research design' to refer to the overarching approach taken towards a particular research project. As such, a research design typically encompasses distinctive methodological *and* theoretical positions or viewpoints (even if these are not recognized and articulated). The relationships between research design, methodology and theory – as these terms are being employed here - may readily be illustrated in the context of phenomenography.

Phenomenographers adopt a particular (albeit with some variations) methodological strategy for data collection and analysis. This typically involves the use of interviews as a method for collecting data on the phenomenon of current interest; though other forms of data, such as written responses, may also be used. All of the data collected is then treated collectively for the purposes of analysis, such that the focus is on the variations in understanding across the whole sample, rather than on the characteristics of individuals' responses.

In terms of theoretical framework, phenomenographers operate with the underlying assumption that, for any given phenomenon of interest, there are only a limited number of ways of perceiving, understanding or experiencing it. Typically, the number identified is relatively small – e.g. only four or five variants are commonly found – and, as with most forms of qualitative research, these are identified on the basis of a relatively small number of interviews (20 or fewer are typical). Most commonly – and, it would seem, most satisfactorily – the various ways of experiencing the phenomenon identified can be organized in a hierarchy, with each higher level encompassing those below it, and the highest level representing the most advanced or developed way of experiencing the phenomena.

Phenomenographers, therefore, have firm ideas about how phenomenography should be practiced (i.e. a methodology); though, as with any research design which has been established for a few decades or more, there are, of course, both variations in practice and controversies. Phenomenographers also have firm ideas about the pattern – if, perhaps, not the specific content – of what they are likely to find through their research (i.e. a theoretical framework). Taking these characteristics together, therefore, we may refer to phenomenography as a research design.

Phenomenography variously understood by its practitioners

That said, however, we must recognize that phenomenographers themselves characterize phenomenography in a wide variety of ways (Collier-Reed and Ingerman 2013). Thus, in reading for this article I have found it referred to as an approach, a depiction, a method, a methodology, a movement, an orientation, a paradigm, a perspective, a position and a programme. Furthermore, two or more of these terms may be employed in the same piece of writing, and the same authors often use different characterisations in successive pieces.

We will return to the issue of how phenomenography is variously understood by phenomenographers later, when a phenomenography of phenomenography is carried out.

The Origins of Phenomenography

Phenomenography was developed and practiced for some years before it was named and designated as a distinct research design. Its origins lie in research on 'approaches to learning' (i.e. the different ways in which students conceive of and go about their learning) carried out at Goteborg University in Sweden in the 1970s by Marton, Svensson, Dahlgren, Saljo and others (Dahlgren and Marton 1978, Fransson 1977, Marton and Saljo 1976a, 1976b, Svensson 1977; see also Dall'Alba 1996, Entwistle 1997).

The first use of the term 'phenomenography' in print by the originators of this new research perspective did not come until 1981 (Marton 1981). Marton notes elsewhere (1986, p. 28), however, that the term was in use from 1979.

It is a characteristic of specialist terms, such as phenomenography, that they often turn out to have been used before, either in related or different contexts (Tight 2014a, 2015a, 2015b), with the supposed 'originators' being unaware of this. Not surprisingly, given the longer history of the related term 'phenomenology', this was the case for phenomenography, as was later made clear to its practitioners:

It seems that Sonnemann (1954) first used the term "phenomenography" in an attempt to distinguish between the phenomenologies of Karl Jaspers and Martin Heidegger, as applied within psychopathology (the former being better called phenomenography, according to Sonnemann). (Dahlin 2007, p. 327)

Sonnemann (1954/1999) noted that 'phenomenology, in Jaspers' conception of it... might better be called phenomenography, a descriptive

recording of immediate subjective experience as reported' (1999, pp. 343-344). Tellingly, Needleman (1963, p. 37) also uses the term 'phenomenography' in his analysis of Binswanger's existential psychoanalysis, disparaging it as phenomenology's 'good-for-nothing brother' (see also Protti 1974).

Phenomenographers have spent quite a lot of effort in trying to explain what it isn't (Giorgi 1999, Larsson and Holmstrom 2007, Uljens 1993, 1996), and, in particular, discussing its relationship with phenomenology. Marton has consistently rejected the idea of any link between the two, similarly named, research designs, and has sought to emphasise their differences:

Phenomenography is not an offspring of phenomenology... While phenomenographers try to characterize the variations of experience, for phenomenologists the essence of experience usually is interpreted as that which is common to different forms of experience... phenomenology [emphasizes]... the distinction between immediate experience and conceptual thought... Phenomenographers... try instead to describe relations between the individual and various aspects of the world around them, regardless of whether those relationships are manifested in the forms of immediate experience, conceptual thought or physical behaviour. (1981, pp. 40-42)

By contrast, Svensson has taken a more measured stance, recognising the linkages while denying that phenomenography was consciously developed from phenomenology:

from a historical point of view, phenomenography was not developed on the basis of phenomenological philosophy and, although there are fundamental similarities between phenomenography and phenomenology, it is also problematic to totally include phenomenography as a part of the phenomenological tradition. (1997, p. 164)

The Practice of Phenomenography

The key method used for collecting data within phenomenography is the interview:

The phenomenographic interview has a focus – the way in which interviewees understand the chosen concept – and this focus is maintained throughout the interview. Interviewees are encouraged to express their qualitative understanding of the phenomena under investigation. The researcher may ask interviewees to clarify what

they have said, and ask them to explain their meaning further. (Bowden 2000, pp. 9-10)

In later writing, he also offers guidance on how many interviews should be carried out in a given project, stressing the importance of seeking variation in conceptions:

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... In practice, most phenomenographers find that between 20 and 30 subjects meet the two criteria. (Bowden 2005 p. 17)

Apart from the prefixing of 'interview' with 'phenomenographic', this does not sound greatly different from standard qualitative research practice.

Greater issues arise when it comes to the analysis of the collected data, particularly as some phenomenographers insist on the importance of 'bracketing out' all prior knowledge of the concept under consideration throughout the process (cf. classical versions of grounded theory), so as to reduce bias and help the researcher to focus on the data (Ashworth and Lucas 1998, 2000)

Concerns remain, however, about whether, in undertaking phenomenographic analysis, the researcher is 'consciously interpreting the data, choosing and discarding data, and thereby constructing the relationship', rather than 'looking into the transcripts to discover the particular ways in which people understand the phenomenon' (Walsh 2000, p. 20). Such concerns have led to an increasing focus on clarifying and tightening up the processes involved in doing phenomenography. As Akerlind notes, 'it is only recently that epistemological and ontological assumptions, a theoretical basis and specification of methodological requirements underlying the approach have been more clearly developed' (2005b, p. 321).

At the same time, it has become more and more obvious that there are considerable variations in practice amongst phenomenographers, concerning, for example:

1. how much of each transcript is considered at one time during the analysis;
2. the emphasis placed on analytic collaboration with other researchers;
3. variation in ways of practically managing the large amount of data involved;
4. the degree to which the logical structure of the outcome space [i.e. the results] is seen as needing to emerge as directly as

possible from the data versus more explicitly reflecting the professional judgement of the researcher;

5. use of communicative and pragmatic validity checks; and

6. use of coder and dialogic reliability checks. (Akerlind 2005b, p. 332)

These differences are also apparent in the prefixes now used by many phenomenographers, including developmental, discursive, empirical, experimental, hermeneutic, naturalistic, new, phenomenological and pure phenomenography (Bowden 1996, Hasselgren and Beach 1997, Uljens 1996).

The Application of Phenomenography

Phenomenography, while remaining a minority interest, has been fairly widely applied within higher education research. A search through Google Scholar (carried out on 31/5/16) found a total of around 16,600 academic publications that mentioned either or both of the terms 'phenomenography' or 'phenomenographic', of which 638 used one of the terms in their titles; most, but not all, of the latter were focused on higher education. The great majority, 92%, of the articles mentioning phenomenography or phenomenographic, and 87% of the articles using one of these terms in their titles, have been published since 2000.

The interest in phenomenography has been global - at least within the western developed world - but has also been particularly intense in certain countries. Thus, as well as Sweden, the country where phenomenography was first developed, the authors of articles focusing on phenomenography as applied to higher education research have been based in Australia, Canada, Fiji, Finland, Hong Kong, Hungary, Israel, the Netherlands, South Africa, Taiwan, Turkey, the UK and the USA.

Overall, however, over half of all the refereed journal articles identified that applied phenomenography in higher education research were authored by researchers based in either Sweden or Australia, with the latter now having overtaken the former in terms of numbers of outputs. Australian-based authors such as Akerlind, Bowden, Prosser and Trigwell have added substantially to the literature on phenomenography initiated by Marton and his colleagues in Sweden. By comparison, researchers in the United Kingdom, the United States and elsewhere have engaged to a much lesser degree with phenomenography.

The concepts examined in these studies have gone far beyond the initial interest in teaching and learning. Thus, phenomenographic studies have addressed the varied understandings within higher education of academic development, environmental conceptions, grade descriptors, information

literacy, internationalization, the literature review, research, the research-teaching nexus, study support, sustainable development, understanding and using the internet.

Phenomenography has also been applied across the academy, within, and/or to, disciplines as varied as accounting, business studies, chemistry, computing, design, economics, environment, geography, health care/nursing, information systems/technology, languages, mathematics, music, physics, science, sociology and statistics. Phenomenography has also been applied to the study of other types or levels of education, including adult education, further education and school education; as well as outside education.

Issues and Critiques of Phenomenography

The earliest published critiques that I have found date from the 1990s, came mainly from non-phenomenographers, and tended to question whether phenomenography was achieving anything new. For Taylor (1993) this was partly because phenomenography deliberately rejected existing approaches and findings:

Even the phenomenographic movement in learning theory, which pays very particular attention to varying conceptions of a given phenomenon... seems to miss much of the historical sedimentation in individual understanding. It is curious that phenomenographic analyses of differing conceptions tend to tell us much the same as we can discover by studying the history of attitudes towards the subject in question. (p. 63)

Webb (1997a) went further in making a joint critique of both the notions of deep and surface learning and of phenomenography, 'the associated methodology and theory of knowledge' as he termed it (p. 195). He was particularly critical of the tendency of phenomenographers to identify hierarchical arrangements of conceptions, with the most highly developed of these identified as the 'correct' one towards which teachers should be working to develop their students:

In practice, phenomenographic studies usually concern students being asked to describe their understanding of a concept, a text or a situation, with the researcher then sorting the description into a 'handful' (very often five!) categories... Invariably, one of the categories displays 'correct meaning, correct knowledge or correct understanding' while the others are recapitulations of earlier, now supposedly discredited accounts. (pp. 200-201)

Ekeblad (1997) retorted that Webb's 'description of phenomenography is unrecognisable and based on an inadequate review of the literature, while the whole attempt to invalidate this approach to research is seen as far from disinterested' (p. 219). Webb (1997b), in responding, concluded that 'it is still an unequal contest for those wishing to mount a critique against an orthodox position' (p. 229).

Kember (1997) echoed some of Webb's concerns in raising the question of the accuracy of the categorisations identified by phenomenographers:

When multiple categories are proposed, are they discrete entities or shades of adjoining categories or sub-categories of hierarchically superior categories? There appears to be no firmly established procedures to provide answers to these questions. (p. 261)

More recently, Alsop and Tompsett have doubted the long-term validity of the categorisations arrived at, arguing that 'the principles that underlie phenomenography can only produce a narrow, snapshot model of what understanding might be, and provide little insight into learning' (2006, p. 242).

The tone of most critical discussions has, however, been accepting of phenomenography as a research design, while seeking to improve its practice and impact. Thus, Francis (1993, p. 72) noted that 'It would be a considerable advance in method if some sort of 'dialogue rules' could be developed for interviewing'. And Richardson (1999) bemoaned the variability and lack of precision in the methods used: 'a proper evaluation of the phenomenographic approach has in the past been bedeviled by a lack of specificity and explicitness concerning both the methods for the collection and analysis of data and the conceptual underpinning of these methods' (p. 53).

Phenomenographers themselves, naturally enough, have become centrally involved in these debates, with Saljo, one of the pioneers of the approach, expressing some doubts in later years. He noted a general concern with the way in which phenomenography analysed data in a collective fashion, ignoring the individual: 'in making this the key feature of an approach (or a method?, or a theory?), it becomes very difficult sometimes to find one's way back to living people involved in communicative encounters in which there are options with respect to categorisations and often conflicts regarding interpretations' (Saljo 1996, p. 20). He also argued that:

phenomenography has a weak spot in its lack of a theory of language and communication, and in its almost dogmatic disregard for paying attention to why people talk the way they do. The assumption seems to be that what is meant by what is said can be

construed as representing a conception of the phenomenon which one – according to the interviewer – is talking about. (ibid, p. 24)

In the following year he noted that phenomenographers did not ‘have access to anything except utterances from individuals made in specific situations and with varying motives (and about which the researchers seldom seem to worry)’ (Saljo 1997, p. 177).

Meyer and Shanahan (2002) – like Kember (1997) – focused on the categories of description identified by phenomenography, exploring whether they could also be measured quantitatively. Picking up on earlier work by Dahlgren and Marton (1976) on students’ conceptions of price, they tried to replicate these findings through surveys, with limited success.

Alsop and Tompset (2006) raise the related issue, common to much qualitative research because of its typically small-scale nature, of the generalizability of phenomenographic results. Sandberg (1997) tackles this issue from the perspective of interjudge reliability, which he argues is based on objectivistic epistemology, and thus methodologically and theoretically inconsistent with phenomenography. Cope (2004) disagrees, arguing that phenomenographic research can satisfy the demands of validity and reliability if certain standards are explicitly adopted and demonstrated.

Explaining the Popularity of Phenomenography

Any evaluation of the development and application of phenomenography within higher education research has to recognize that, while only a minority of researchers may have applied this design, those that have done so have demonstrated a strong and continuing commitment to it. It is important, therefore, to consider why this might be so. There seem to me to be three related reasons.

First, phenomenography is closely associated with an interest in higher education practice, particularly the student learning experience, and in seeking to improve this: for example, through the encouragement of deep rather than surface learning, and the employment of variations in teaching approaches. Most of those involved in higher education, and especially in higher education research, would acknowledge the importance of this. Any research design, methodology or theory which yields, or promises to yield, practically useful findings in this area will be welcomed (though perhaps with some caveats).

Second, phenomenography has developed to a large degree within higher education research. It is arguably the only research design which, as

higher education researchers, we may claim as our own. Consequently, it is something we can feel proud of, particularly when it is picked up and used outside higher education research (and educational research more generally).

Third, phenomenography has stimulated both methodological and theoretical development. It offers what may be thought of as a 'stronger' or more rigorous form of qualitative research, with guidance available on how each stage of the research process should be carried out. This is welcomed by many qualitative researchers concerned by the critiques frequently advanced by quantitative researchers. All in all, then, it is not surprising that phenomenography has attracted and retained adherents, particularly those concerned with researching teaching and learning in higher education.

A Phenomenography of Phenomenography

And now for my first venture into actually doing phenomenography, rather than just criticizing it.

Instead of using the classic method of semi-structured interviews, and interviewing a number of phenomenographers, I have adopted the less common, but still acceptable, method of using their written utterances: i.e. the books and articles published by phenomenographers, in which they articulate what phenomenography means to them.

This means that there is one key difference between my approach and that typically used by phenomenographers. The interview-based approach involves the collection of data over a relatively short time period; usually a matter of weeks at most. In my analysis, however, the data has been produced over a period of more than 30 years, a period in which one might expect there to have been some development of phenomenography. This does make the identification of qualitatively different categories of description somewhat easier, with their hierarchical relationship developing over time.

In analysing the published work of phenomenographers on phenomenography, I have, of course, been guided by the practices they identify for doing phenomenography. Thus, I repeatedly read through the publications 'in an iterative manner... searching for the underlying foci and intentions expressed in them, comparing and contrasting them for similarities and differences, and looking for key structural relationships which related as well as distinguished them to and from each other' (Akerlind 2005a, p. 10). As my understanding developed, I moved on 'to iterate between alternately focusing on the analytic outcomes and the original transcript data, looking to confirm, contradict and modify my

emerging hypotheses about meanings and relationships. This continued until a consistent set of categories of description, representing different meanings or ways of understanding... eventuated' (ibid).

Eventually, this analysis led to the identification of an 'outcome space' with four categories of description. A hierarchy is clear, though it is somewhat of a dual hierarchy, with the last of the categories being the most developed.

A: phenomenography as identifying the different ways in which people (e.g. students) experience and conceptualize a particular phenomenon (e.g. learning)

phenomenography is a research method for mapping the qualitatively different ways in which people experience, conceptualize, perceive and understand various aspects of, and phenomena in, the world around them. (Marton 1986, p. 31: pure phenomenography)

The most significant characteristics of the approach are the aiming at categories of description, the open explorative form of data collection and the interpretative character of the analysis of data. (Svensson 1997, p. 162)

The ultimate goal of phenomenography is to describe the qualitatively different ways in which we understand our experience of phenomena in the world around us. Phenomenography is about the description of things (phenomenon) as they appear to us. (Tan and Prosser 2004, p. 264)

B: phenomenography as identifying how to enable people (e.g. students) to experience and conceptualize a particular phenomenon (e.g. learning) in different ways

From a phenomenographic perspective, learning is shifting from not being able to do something to being able to do it, as a result of some experience. (Booth 1997, p. 136)

my phenomenographic research is developmental and it has a particular kind of context. It seeks to find out how people experience some aspect of their world, and then to enable them or others to change the way their world operates. (Bowden 2000, p. 3: developmental phenomenography)

C: phenomenography as identifying the different ways in which people (e.g. teachers) experience and conceptualize a particular phenomenon (e.g. teaching and learning)

When discussing their conception of teaching, those teachers, at one end of the spectrum, who focussed on the syllabus or the textbook, structured their discussion of teaching in terms of them transmitting information to the students. Those teachers at the other end, who focussed on their students' conceptions of the subject matter rather than on the text or the syllabus, talked about teaching in terms of them helping their students develop and/or change their conceptions. (Prosser, Trigwell and Taylor 1994, pp. 227-228)

teachers who did not experience change in their understanding [of teaching] were more likely to experience teaching as being about the transmission of knowledge. The teachers who did experience change in their understanding, where the change was more about re-interpretation or the questioning of problematic knowledge (rather than as the re-organising or adding to unproblematic knowledge), were more likely to experience teaching as student-focused (rather than teacher-focused). (Trigwell et al 2005, p. 262)

D: phenomenography as identifying how to enable people (e.g. teachers) to experience and conceptualize a particular phenomenon (e.g. teaching and learning) in different ways

We suggest that the way teachers approach their teaching and the strategies they deploy is directly related to what it is teachers want their students to know, 'the object of study'... we argue that if we are concerned to improve teaching we should not focus our attention only on the quality of teaching skills and strategies; nor should we be satisfied to consider the approach to teaching adopted by teachers. Certainly both strategy and intention have their place in helping students to learn but a more fundamental question appears to be: 'what is it that teachers want their students to learn and how do they believe their students will come to know this – 'the object of study'? As a result of the present study we suggest that 'the object of study', more than anything else, will determine the quality of teaching and probably the quality of learning outcome as well. (Martin et al 2000, p. 211)

phenomenography recently moved on from attempts to describe different ways of experiencing various phenomena to attempts to answer such questions as 'what is a way of experiencing something' and 'what is the actual difference between two ways of experiencing

the same thing?'... The question that we are interested in is 'how can we bring about different ways of experiencing something?'... certain patterns of variation characterise certain ways of experiencing a phenomenon. To bring about a particular way of experiencing a particular phenomenon it is necessary to follow that very pattern of variation. The object of study is to explore the extent to which teachers or the instructional methods contribute to constitute the pattern of variation. (Pang 2003, pp. 147, 153: variation theory)

concerned with particular ways of facilitating... 'conceptual change learning' or learning that is meaningful and results in new ways of seeing the 'world'. It assumes that, from the teachers' perspective, some types of learning are better than others; learning for understanding that involves conceptual change is superior to learning of information or skills where the focus of the learner is on meeting 'external' requirements. (Trigwell, Prosser and Ginns 2005, p. 350: 'phenomenographic pedagogy')

Starting from the idea that using the findings from phenomenographic studies in teaching by introducing the students to the variation of conceptions found, it seems natural that the notion of variation as the "mother of all learning" arose as the central idea of this theoretical development... In order for learning to take place, the learner has to discern a critical aspect or dimension of variation in the phenomenon; she has to see how this aspect can vary; and she has to become simultaneously aware of the possible "values" along this dimension of variation in order to compare them. (Dahlin 2007, p. 328: variation theory)

According to the tenets of the phenomenographic tradition, the object of learning in a learning study is to help learners to develop a target way of experiencing a phenomenon upon which a certain human capability is developed. To achieve that object, the critical aspects of the phenomenon must not be regarded as derivable from disciplinary knowledge alone or as taken-for-granted truths. (Pang and Ki 2016, p. 333: learning study)

There are further signs here, of course, of phenomenography splitting or evolving into something else.

Some Conclusions

I will close with a few concluding comments.

To start with, even a quick examination of my phenomenography of phenomenography suggests that perhaps Taylor (1993, p. 63) had a point when he argued that 'phenomenographic analyses of differing conceptions tend to tell us much the same as we can discover by studying the history of attitudes towards the subject in question'. The four categories of description in the outcome space are, in essence, successive developments of phenomenography, as it moved from being simply a way of uncovering the collective variation in the ways of thinking about a particular phenomenon (e.g. learning) to becoming the underlying structure for thinking about how best to organize one phenomenon (e.g. teaching) in order to create desired features in a linked phenomenon (e.g. learning).

While this quasi-historical hierarchy seems unsurprising when considering a research design – i.e. phenomenography itself – might it, as Taylor suggested, be more general to phenomenographic studies? After all, in the most satisfactory phenomenographic analyses, when each category of description subsumes the descriptions beneath it in the hierarchy, are we not recognizing the collective development of understanding and increased sophistication of thinking over time?

Secondly, and relatedly, we might query whether it was necessary for me to conduct the research phenomenographically in order to arrive at the results that I did (and, again, this conclusion might well apply to other, perhaps all, phenomenographic studies). With the focus of the study the same (the development of phenomenography over the last four decades), and the means of data collection the same (published phenomenographic writings), I'm inclined to think that I'd have arrived at much the same conclusions if I had undertaken a conventional, qualitative, thematic analysis.

Third, what are we to make of phenomenographers' apparent obsession with focusing on the collective rather than the individual, average or dominant view? My view is that this is simply misleading. After all, some phenomenographers relate their collective findings back to the individuals who produced them, sometimes in a simplistic quantitative fashion. And the more advanced phenomenographers are keen to use their findings to improve people's experience, which involves engaging with the individual as well as the collective. Meanwhile, other qualitative researchers are also interested in examining variations in people's experience and perceptions of it.

So why, then, persist with phenomenography? There is a sense, in some of the latest writings, of the more advanced phenomenographers 'moving on' from phenomenography, into variation theory, learning study, phenomenographic pedagogy or whatever. Meanwhile, more recent converts to the research design continue to produce simpler

phenomenographic studies of an increasing range of phenomena. Of course, phenomenography will persist as long as some show interest in it, as I, of course, am doing here, even if in an expressly critical fashion.

References

Akerlind, G (2005a) Academic Growth and Development: how do university academics experience it? *Higher Education*, 50, 1, pp. 1-32.

Akerlind, G (2005b) Variation and Commonality in Phenomenographic Research Methods. *Higher Education Research and Development*, 24, 4, pp. 321-334.

Alsop, G, and Tompsett, C (2006) Making Sense of 'Pure' Phenomenography in Information and Communication Technology in Education. *ALT-J: Research in Learning Technology*, 14, 3, pp. 241-259.

Ashworth, P, and Lucas, U (1998) What is the 'World' of Phenomenography? *Scandinavian Journal of Educational Research*, 42, 4, pp. 415-431.

Ashworth, P, and Lucas, U (2000) Achieving Empathy and Engagement: a practical approach to the design, conduct and reporting of phenomenographic research. *Studies in Higher Education*, 25, 3, pp. 295-308.

Booth, S (1997) On Phenomenography, Learning and Teaching. *Higher Education Research and Development*, 16, 2, pp. 135-158.

Bowden, J (1996) Phenomenographic Research: some methodological issues. pp. 49-66 in in Dall'Alba, G, and Hasselgren, B (eds) *Reflections on Phenomenography: toward a methodology?* Goteborg, Goteborg Studies in Educational Sciences 109.

Bowden, J (2000) The Nature of Phenomenographic Research. pp. 1-18 in Bowden, J, and Walsh, E (eds) *Phenomenography*. Melbourne, RMIT University Press.

Bowden, J (2005) Reflections on the Phenomenographic Team Research Process. pp. 11-31 in Bowden, J, and Green, P (eds) *Doing Developmental Phenomenography*. Melbourne, RMIT University Press.

Collier-Reed, B, and Ingerman, A (2013) Phenomenography: from critical aspects to knowledge claim. *International Perspectives on Higher Education Research*, 9, pp. 243-260.

Cope, C (2004) Ensuring Validity and Reliability in Phenomenographic Research Using the Analytical Framework of a Structure of Awareness. *Qualitative Research Journal*, 4, 2, pp. 5-18.

Dahlgren, L, and Marton, F (1976) Investigations into the learning and teaching of basic concepts in economics. Report No. 54, Institute of Education, University of Göteborg.

Dahlgren, L, and Marton, F (1978) Students' Conceptions of Subject Matter: an aspect of learning and teaching in higher education. *Studies in Higher Education*, 3, 1, pp. 25-35.

Dahlin, B (2007) Enriching the Theoretical Horizons of Phenomenography, Variation Theory and Learning Studies. *Scandinavian Journal of Educational Research*, 51, 4, pp. 327-346.

Dall'Alba, G (1996) Reflections on Phenomenography. pp. 7-17 in Dall'Alba, G, and Hasselgren, B (eds) *Reflections on Phenomenography: toward a methodology?* Goteborg, Goteborg Studies in Educational Sciences 109.

Ekeblad, E (1997) On the Surface of Phenomenography: a response to Graham Webb. *Higher Education*, 33, 2, pp. 219-224.

Entwistle, N (1997) Introduction: phenomenography in higher education. *Higher Education Research and Development*, 16, 2, pp. 127-134.

Francis, H (1993) Advancing Phenomenography: questions of method. *Nordisk Pedagogik*, 13, 2, pp. 68-75.

Fransson, A (1977) On Qualitative Differences in Learning IV: effects of intrinsic motivation and extrinsic test anxiety on process and outcome. *British Journal of Educational Psychology*, 47, 3, pp. 244-257.

Giorgi, A (1999) A Phenomenological Perspective on some Phenomenographic Results on Learning. *Journal of Phenomenological Psychology*, 30, 2, pp. 68-93.

Hasselgren, B, and Beach, D (1997) Phenomenography: a 'good-for-nothing brother' of phenomenology? Outline of an Analysis. *Higher Education Research and Development*, 16, 2, pp. 191-202.

Kember, D (1997) A Reconceptualisation of the Research into University Academics' Conceptions of Teaching. *Learning and Instruction*, 7, 3, pp. 255-275.

Larsson, J, and Holmstrom, I (2007) Phenomenographic or Phenomenological Analysis: does it matter? Examples from a study on anaesthesiologists' work. *International Journal of Qualitative Studies on Health and Well-being*, 2, pp. 55-64.

Martin, E, Prosser, M, Trigwell, K, Ramsden, P, and Benjamin, J (2000) What University Teachers Teach and How they Teach It. *Instructional Science*, 28, pp. 387-412.

Marton, F (1981) Phenomenography: describing conceptions of the world around us. *Instructional Science*, 10, pp. 177-200.

Marton, F (1986) Phenomenography: a research approach to investigating different understandings of reality. *Journal of Thought*, 21, 3, pp. 28-49.

Marton, F, and Booth, S (1997) *Learning and Awareness*. Mahwah, NJ: Lawrence Erlbaum.

Marton, F, and Saljo, R (1976a) On Qualitative Differences in Learning I: outcome and process. *British Journal of Educational Psychology*, 46, 1, pp. 4-11.

Marton, F, and Saljo, R (1976b) On Qualitative Differences in Learning II: outcome as a function of the learner's conception of the task. *British Journal of Educational Psychology*, 46, 2, pp. 115-127.

Meyer, J, and Shanahan, P (2002) On Variations in Conceptions of 'Price' in Economics. *Higher Education*, 43, pp. 203-225.

Needleman, J (1963) A Critical Introduction to Ludwig Binswanger's Existential Psychoanalysis. In L Binswanger, *Being-in-the-World: selected papers*. Translated by J Needleman. New York, Basic Books.

Pang, M (2003) Two Faces of Variation: on continuity in the phenomenographic movement. *Scandinavian Journal of Educational Research*, 47, 2, pp. 145-156.

Pang, M, and Ki, W (2016) Revisiting the Idea of 'Critical Aspects'. *Scandinavian Journal of Educational Research*, 60, 3, pp. 323-336.

Prosser, M, Trigwell, K, and Taylor, P (1994) A Phenomenographic Study of Academics' Conceptions of Science Learning and Teaching. *Learning and Instruction*, 4, pp. 217-231.

Protti, M (1974) Dalla Fenomenografia di Jaspers alla Fenomenologia di Binswanger. *Neuropsichiatria*, 30, 3-4, pp. 295-309.

Richardson, J (1999) The Concepts and Methods of Phenomenographic Research. *Review of Educational Research*, 69, 1, pp. 53-82.

Saljo, R (1996) Minding Action: conceiving of the world versus participating in cultural practices. pp. 19-33 in in Dall'Alba, G, and

Hasselgren, B (eds) *Reflections on Phenomenography: toward a methodology?* Goteborg, Goteborg Studies in Educational Sciences 109.

Saljo, R (1997) *Talk as Data and Practice: a critical look at phenomenographic inquiry and the appeal to experience.* *Higher Education Research and Development*, 16, 2, pp. 173-190.

Sandberg, J (1997) *Are Phenomenographic Results Reliable?* *Higher Education Research and Development*, 16, 2, pp. 203-212.

Sonnemann, U (1954) *Existence and Therapy: an introduction to phenomenological psychology and existential analysis.* New York, Grune and Stratton. Reprinted in 1999 by the Gestalt Legacy Press, New York.

Svensson, L (1977) *On Qualitative Differences in Learning III: study skill and learning.* *British Journal of Educational Psychology*, 47, 3, pp. 233-243.

Svensson, L (1997) *Theoretical Foundations of Phenomenography.* *Higher Education Research and Development*, 16, 2, pp. 159-171.

Tan, K, and Prosser, M (2004) *Qualitatively Different Ways of Differentiating Student Achievement: a phenomenographic study of academics' conceptions of grade descriptors.* *Assessment and Evaluation in Higher Education*, 29, 3, pp. 267-282.

Taylor, G (1993) *A Theory of Practice: hermeneutical understanding.* *Higher Education Research and Development*, 12, 1, pp. 59-72.

Tight, M (2012) *Researching Higher Education.* Maidenhead, Open University Press, second edition.

Tight, M (2013) *Discipline and Methodology in Higher Education Research.* *Higher Education Research and Development*, 32, 1, pp. 136-151.

Tight, M (2014a) *Theory Development and Application in Higher Education Research: the case of threshold concepts.* *International Perspectives on Higher Education Research*, 10, pp. 249-267.

Tight, M (2014b) *Discipline and Theory in Higher Education Research.* *Research Papers in Education*, 29, 1, pp. 93-110.

Tight, M (2014c) *Working in Separate Silos? What citation patterns reveal about higher education research internationally.* *Higher Education*, 68, 3, pp. 379-395.

Tight (2014d) Collegiality and Managerialism: a false dichotomy? Evidence from the higher education research literature. *Tertiary Education and Management*, 20, 4, pp. 294-306.

Tight, M (2015a) Theory Development and Application in Higher Education Research: the case of academic drift. *Journal of Educational Administration and History*, 47, 1, pp. 84-99.

Tight, M (2015b) Theory Development and Application in Higher Education Research: tribes and territories. *Higher Education Policy*, 28, 4, pp. 277-293.

Tight, M (2015c) Theory Development and Application in Higher Education: the case of communities of practice. *European Journal of Higher Education*, 5, 2, pp. 111-126.

Tight, M (2016) Phenomenography: the development and application of an innovative research design in higher education research. *International Journal of Social Research Methodology*, 19, 3, pp. 319-338.

Trigwell, K, Prosser, M, and Ginns, P (2005) Phenomenographic Pedagogy and a Revised Approaches to Teaching Inventory. *Higher Education Research and Development*, 24, 4, pp. 349-360.

Trigwell, K, Prosser, M, Martin, E, and Ramsden, P (2005) University Teachers' Experiences of Change in their Understanding of the Subject Matter they have Taught. *Teaching in Higher Education*, 10, 2, pp. 251-264.

Uljens, M (1993) The Essence and Existence of Phenomenography. *Nordisk Pedagogik*, 13, pp. 134-147.

Uljens, M (1996) On the Philosophical Foundations of Phenomenography. pp. 103-128 in in Dall'Alba, G, and Hasselgren, B (eds) *Reflections on Phenomenography: toward a methodology?* Goteborg, Goteborg Studies in Educational Sciences 109.

Webb, G (1997a) Deconstructing Deep and Surface: towards a critique of phenomenography. *Higher Education*, 33, pp. 195-212.

Webb, G (1997b) Contesting Learning Theory: a response to Entwistle and Ekeblad. *Higher Education*, 33, 2, pp. 225-230.