Phenomenographic or phenomenological analysis: does it matter? Examples from a study on anaesthesiologists’ work

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Abstract

Phenomenography is a research approach developed from an educational framework. However, practised in other areas this research approach can be misunderstood as seems to be the case in some reports on allegedly phenomenographic studies. In this article, the authors show how the phenomenographic approach differs from a phenomenological one, using as an example an interview study on anaesthesiologists’ understanding of work. Having performed both a phenomenographic and a phenomenological analysis of the same transcripts, the researchers compared the results from the two approaches. The result of the phenomenographic study was four ways of understanding work: (a) monitoring and controlling the patient’s vital functions; (b) guiding the patient safely through the operation; (c) serving patients, other doctors and nurses; (d) leading the operating theatre and team. The phenomenological analysis showed the essence of being an anaesthesiologist: Carrying the responsibility for the patient’s vital functions; always being alert, watching carefully over the patient’s body, ready to act whenever the patient’s life is in danger, however difficult the circumstances. The authors discuss the differences between the two research approaches, stressing the value of phenomenographic studies in educational settings as well as its limited value in research on patients’ experiences of illness.

Key words: Phenomenography, phenomenology, anaesthesiologist, competence development, variation theory, qualitative method

Introduction

Phenomenography as a research approach is not very well known, in contrast to phenomenology, familiar to most qualitative researchers of today. We have observed some published articles on allegedly phenomenographic studies, where the results presented seem to emanate from a thematic phenomenological analysis or other types of qualitative analysis, for example, Winterling, Wasteson, Glimelius, Sjoden and Nordin (2004). This problem is noted also by Marton (1996). For this reason, the aim of this article is to describe the phenomenographic approach and to show how this method differs from the phenomenological approach. Furthermore, we want to illuminate how phenomenography can be a useful tool for learning and competence development within the health care sector. To accomplish these goals, we will use examples from a phenomenographic study on professional work, using interviews with experienced anaesthesiologists (Larsson, Holmström & Rosenqvist, 2003).

Phenomenography and phenomenology share the term “phenomenon” which means “to make manifest” or “to bring to light”. Phenomenography, with the suffix -graphy, denotes a research approach aiming at describing the different ways a group of people understand a phenomenon (Marton, 1981), whereas phenomenology, with the suffix -logos, aims to clarify the structure and meaning of a phenomenon (Giorgi, 1999). We will now introduce phenomenography, followed by a report on the result of a phenomenographic analysis of interview transcripts. Thereafter follows a brief description of the phenomenological research approach and the result of a phenomenological analysis of the same interview texts.
Phenomenography—how it started

Phenomenography was developed from an empirical educational framework by Ference Marton and co-workers in Göteborg, Sweden, starting in the 1970s. In phenomenography, the aim is to study the variation of peoples’ conceptions of a given phenomenon in the surrounding world (Marton, 1981). The approach has subsequently been used frequently in health services research, for example in studies on medical students’ understanding of medical practice (Dall’Alba, 1998), general practitioners’ conceptions of asthma treatment (Stålsby-Lundborg, Wahlström & Dall’Alba, 1999) and diabetes care professionals’ understanding of the patient encounter in diabetes care (Holmström, Halford & Rosenqvist, 2003). A phenomenographic theory of learning and awareness has subsequently been developed (Marton & Booth, 1997a). Thus, phenomenography is the study of how people experience, understand or conceive of a phenomenon in the world around us. The investigation is not directed at the phenomenon as such, but at the variation in people’s ways of understanding the phenomenon. This is referred to as a second-order perspective (Marton, 1981).

Data collection in phenomenographic studies

The study object in phenomenographic studies, conception or way of understanding, differs from attitudes, values, thoughts and opinions. We can get information about peoples’ conceptions of a given phenomenon through their speech and actions. The phenomenographic method of data collection, par preference, is open-ended interviews. In these interviews, the informants are encouraged to speak freely about their experiences, giving concrete examples to avoid superficial descriptions about how things should be or ought to be. The in-depth interviews are tape recorded and transcribed verbatim. Experiences from a large number of phenomenographic studies have shown that data from 20 informants is usually enough to discover all the different ways of understanding the phenomenon in question. This is referred to as a second-order perspective (Marton, 1981).

Basic concepts in phenomenography

Phenomenography is about different ways of understanding. A general way of understanding constitutes a relation between the subject and the phenomenon. It is the result of a person thinking intentionally (in the Husserlian sense of the word), interacting with the phenomenon and striving to create meaning. A phenomenon can theoretically be perceived in an infinite number of ways, but in the process of creating meaning, only a limited number (usually 2–6) of ways of understanding will remain (Uljens, 1996; Ekeblad, 1996). This has been confirmed in numerous empirical studies (Marton, 1996). The different ways of understanding have both “what” and “how” aspects. The “what” aspect tells us what is in the subject’s focus, the “how” aspect describes how meaning is created.

Categories of description and the outcome space

The categories of description are the researcher’s abstractions of the different ways of understanding, which have been identified. They refer to a collective level and describe the different ways the phenomenon can be understood. The categories are often based on ways of understanding expressed in more than one interview. These categories are mutually exclusive. All the categories of description, the outcome space, constitute the result of a phenomenographic study. In many phenomenographic studies, especially of earlier date, a set of categories and nothing more is presented as the result of the study (Sjöström & Dahlgren, 2002). However, the different categories in the outcome space are usually related to one another in a hierarchical way (Marton & Booth, 1997b; Sandberg, 1994) and defining this structural relation between the categories could be a further step in a phenomenographic analysis. This hierarchical structure of the outcome space can be inferred from the data or it can be a result of a theoretical analysis of the categories.

Below we will show examples from a phenomenographic study on how anaesthesiologists understand their work (Larsson et al., 2003). Later in this article, this phenomenographic study will be compared to the results generated from the same interview data by using phenomenological analysis.

A phenomenographic study on Swedish anaesthesiologists

The background of this study is a phenomenographic analysis of anaesthesiology in Sweden, where anaesthesiologists have two main fields of work. The first is the operating rooms, where the anaesthesiologists’ main task is to ensure that patients can be operated on, safely and without pain. The second field is the intensive care unit, where anaesthesiologists are responsible for diagnosis and treatment of vital functions derangement in very sick patients, e.g. ventilator treatment for patients with serious lung disease.
Traditionally in Sweden, anaesthesia nurses have an important and independent role in the operating room; in fact, they do much of the anaesthesia work. Swedish anaesthesiologists rely heavily on their competence and good collaboration between anaesthesiologists and anaesthesia nurses is of vital importance for proper care and treatment.

Anaesthesiology—the anaesthesiologists’ perspective
When describing a profession, such as anaesthesiology, we by tradition seek the answer to the question “What is anaesthesiology?” The question can be put differently, namely “What do experienced anaesthesiologists think about what anaesthesiology is?” In this way, one can learn about anaesthesiology from the anaesthesiologist’s perspective, getting a deeper and more comprehensive picture of the profession. One can also find out about variations in the ways anaesthesiologists understand their work. This is what a phenomenographer would call the second order perspective.

For the present study, 19 experienced anaesthesiologists were interviewed by the first author (JL), who is an experienced consultant anaesthesiologist and qualitative researcher. He asked them three questions which are derived from Dall’Alba (1998) and have been used previously in phenomenographic studies (Dall’Alba, 1998, 2002; Holmström et al., 2003):

1. When do you feel you have been successful in your work?
2. What is difficult or what hinders you in your work?
3. What is the core of your professional anaesthesia work?

By concentrating on concrete experiences, the focus was maintained, avoiding expressions of how things should be, or ought to be.

Phenomenographic data analysis
The analysis of phenomenographic studies could be carried out in different ways (Sandberg, 1994; Dahlgren & Fallsberg, 1991). However, the structural and referential aspects of the studied phenomenon are essential. That is, we study both the “what aspect” of the phenomenon, and the “how aspect” of it. When the informants talk about this phenomenon: what do they talk about and how do they talk about it?

The phenomenographic analysis was carried out by the first author (JL) while the second author (IH) acted as a co-reader:

1. Read the whole text.
2. Read again and mark where the interviewee gave answers to the three main interview questions.
3. In these passages look for what the focus of the anaesthesiologist’s attention is and how she/he describes her/his way of working. Make a preliminary description of each anaesthesiologist’s predominant way of understanding the work.
4. Group the descriptions into categories, based on similarities and differences. Formulate categories of description.
5. Look for non-dominant ways of understanding
6. Find a structure in the outcome space.
7. Assign a metaphor to each category of description

The informants participated voluntarily and they were informed that they could withdraw from the study at any time and that the result would be presented in a way that assured confidentiality. The ethics committee at the Faculty of Medicine at Uppsala University, Sweden, approved of the study.

Results of the phenomenographic analysis
In the analysis of the interviews with Swedish specialist in anaesthesiology, four ways of understanding the anaesthesiologist’s work were discovered. To each of them a metaphor was assigned. The four categories were: (a) seeing the patient as a physiological object, monitoring and controlling her vital functions: the professional artist; (b) seeing the patient as a person, guiding her safely through the operation: the good Samaritan; (c) focus on the hospital system, serving patients, other doctors and nurses: the servant; and (d) organizing and leading the operating theatre and team: the coordinator. These results have been reported more in-depth elsewhere (Larsson et al., 2003), and will only be briefly outlined here.

(a) The professional artist
Focus is on the medical process of anaesthesia and the patient as a physiological object. The core of the work is to control the patient’s vital functions by applying knowledge of physiology and pharmacology:

Well, it is, I think, it is very much about basic medicine, physiology and applied physiology, and how you can ... how you can control, take over and support these basic events.
(b) The good Samaritan

Focus is on the patient as an individual with a life story, threatened by a disease, having to experience pain, fear and suffering. The core of the work is to guide the patient through the operation and protect him/her from dangers:

I think it is important to try... especially this psychological way of taking care of the patient just at the moment of being put to sleep, because for most people this is not an easy thing.

(c) The servant

The clinic of anaesthesia is a service organisation for the whole hospital. The anaesthesiologist is thus a helper not only for the patients but also for the helpers:

We are sort of ‘the spider in the web’ that is – we coordinate and help where others have failed in some way—we facilitate surgical operations, help with seriously ill patients... We are a sort of helpers, I think.

(d) The coordinator

Focus is on leadership, organisation and communication. The anaesthesiologists’ task is to lead the teams in the operating rooms, seeing to that the operations list is carried through with good pace and quality:

You are the one who runs the business and then I mean from the point of view of production, as a matter of fact I have to take responsibility for things to get started.

These four categories represent different aspects of the anaesthesiologist’s work. According to Uljens (Uljens, 1996), the categories of description are the researchers’ way of expressing the variation in conceptions.

The assigned metaphors illustrate four ways of relating to work and they should not be understood as a typology of anaesthesiologists.

Thus, anaesthesiologists understand their work in different ways. Since people’s ways of understanding are expressed in their speech and actions (Giorgi, 1989), it can be assumed that anaesthesiologists also differ in the way they act at work. Some, with only one aspect in focus will have a restricted work field, whereas others, with a more comprehensive understanding of work, can choose between three or four aspects to put into focus and, if theory holds, might have a greater action repertoire. There did not seem to be a development towards a more comprehensive understanding over time.

The structure of the outcome space

As stated above, the result of a phenomenographic study is not always only the categories discovered by the researcher. The last step in the analysis can be to investigate the internal relations between the categories. The four categories of understanding and their internal relations then constitute the outcome space. In this study, there is a logical relation between understandings (a), (b) and (c). Anaesthesiologists with understanding (b) want to help the patient to go through operation and anaesthesia safely. To do so, they must control, among other things, the patients’ vital functions, that is—they must also bring aspect (a) into focus. The opposite is not the case; it is perfectly possible to focus on controlling the patient’s vital functions without focussing on the patient as an individual.

This hierarchy was supported by the distribution of ways of understanding; all anaesthesiologists with understanding (b) also expressed understanding (a), whereas none of the anaesthesiologists with understanding (a) as the predominant one had understanding (b) as a non-dominant understanding. Thus, understanding (b) is more comprehensive than (a). Furthermore, it could be shown that anaesthesiologists with understanding (c) also included the two understandings (a) and (b). These anaesthesiologists also have the patient in focus, but for them it is the whole hospital that has to function well so that the patients can be taken care of well. To that end, they support other doctors and nurses and guide the anxious patient through the perioperative period and safely take care of the patient’s vital functions.

The analysis of the logical relations between the categories of description makes it possible to create a map of the anaesthesiologist’s work, see Figure 1.

To take another path of discovery, we could stay in the lifeworld research field and conduct a phenomenological analysis of the interviews mentioned above. Now follows, after a brief introduction to the phenomenological research approach, a report on the result of a phenomenological analysis of the same dataset as above.

The phenomenological research approach

Modern phenomenology was founded by Edmund Husserl as a theoretical philosophical movement (Zahavi, 2003). Several philosophers have developed Husserl’s thoughts in different ways (Heidegger, 1962; Merleau-Ponty, 1962). Subsequently it has
Phenomenographic or phenomenological analysis

As used in the context of caring research, phenomenology is concerned with understanding the meaning that people give to their every day experiences, to gain a deeper understanding of patients' and health care professionals' experiences of illness and caring. Focus is on the phenomenon under study; descriptions of peoples' lived experience of the phenomenon are used to avoid the risk of the researcher's subjective bias. The research should thus focus on understanding the lifeworld of the research participants in the study in question (van Manen, 1997). In the present study, the first author (JL) has, as a consultant anaesthesiologist, of cause his own pre-understanding about anaesthesiology and of what it is like to be an anaesthesiologist. However, the advantages with this were easy access to the operating rooms and the prerequisites for understanding the informants’ narratives. On the other hand, there were great risks for bias and preconceptions. The pre-understanding should be held back or "bridled" (Dahlberg, 2006) when carrying out a phenomenological analysis and the process was enhanced by the fact the second author (IH) had no experience whatsoever of anaesthesiology.

**The result of the phenomenological analysis**

The phenomenological analysis can be carried out in several ways, as stated above. Here we have followed the phenomenological analysis outlined by van Manen (1997). Both authors took part in the analysing process. As pointed out by Röing, Hirsch and Holmström (forthcoming), according to existential phenomenological theory, four fundamental existentials, lived space (spatiality), lived body (corporeality), lived time (temporality) and lived human relation (relationality) belong to the existential ground, the fundamental structure by which all human beings experience the world. The experience of lived space is felt and pre-verbal, not reflected upon, yet it affects the way human beings feel. Lived body refers to the subjective and experienced body, not to the body as a physical object (Merleau-Ponty, 1962). Lived time is subjective, a human beings’ temporal way of being in the world. Lived relationality is the lived relation human beings maintain with others and the world. These form an intricate unity, our lived world (van Manen, 1997).

![Figure 1. The anaesthesiologists’ work-map, representing the collective understanding of the work in a group of Swedish anaesthesiologists.](image-url)
patient’s body, ready to act whenever the patient’s life is in danger, however difficult the circumstances. The themes constituting this essence are described below and exemplified by quotes. According to van Manen (1997) phenomenological themes may be understood as the structures of experiences.

Anaesthetising the patient in a safe way

In the anaesthesiologist’s world, saving lives and patient safety always have the highest priority. Indeed this is the case for the medical profession per se. However, in the hectic and intense atmosphere of operating rooms and intensive care units, instant decisions about life and death have to be taken by the anaesthesiologist almost every day. He or she has to be calm and relaxed in the work but always prepared for immediate action. Each patient is unique and choosing the right form of anaesthesia should be considered with care. The anaesthesiologist must also be prepared for sudden and unexpected problems. He or she has to perform dangerous procedures, which might be potentially fatal for the patient or leave him or her with disabling sequelae:

I had a patient… they called for me from the endoscopy department, where they were performing a gastroscopy on a patient with bleeding oesophageal varicose veins. It just kept on bleeding and bleeding and his saturation was decreasing all the time. I came there and I was supposed to… well he had a saturation just above 80%. I could not visualize the laryngeal inlet and I tried to keep him as still as possible by careful sedation and gave him oxygen and then I tried to intubate him, but I failed. Therefore, we had to call for the ENT-specialist. The ENT-doctor arrived and performed an acute tracheotomy but couldn’t introduce the cannula … I was a bit in a cold sweat. Finally, it worked out when we used a guide wire to get the cannula down ….

Dependency on anaesthesia nurse and surgeon

Every health care professional must cooperate with other professionals on different levels in the organisation. Two professional categories are especially important and have a great impact on the anaesthesiologists’ work. The first one is the anaesthesia nurse. Swedish anaesthesiologists’ rely heavily on their competence and on good collaboration with them, with both positive and negative consequences. There might be intricate power-relations and ways of sharing the responsibility between the anaesthesia nurses and the anaesthesiologist, especially when the doctor is a trainee and the nurse is very experienced.

In fact, the anaesthesia nurse may have years of practical experience to rely on, while the young doctor has the theoretical knowledge but not yet the clinical experience.

It was a premature extubation of a six months old baby with a hernia repair; it was about ten years ago. I remember it so well because it illustrated what might happen if you have an unclear way of sharing the responsibility between anaesthesiologists and anaesthesia nurses. The nurse clearly told me that he was competent and could handle it and he wanted to extubate. I was in doubt, however, but I let him proceed, because he had the experience. Then it all happened … well it was a premature extubation and the baby lost the airway immediately, and the saturation went down and he turned blue. It was scared, and I was not prepared for a situation like that.

Another significant person in the life of the anaesthesiologist is the surgeon. Surgeons and anaesthesiologists are mutually dependent on each other’s work. However, this collaboration is far from conflict free, as expressed in the interviews.

Relating to patients and relatives in risky and fearful situations

All health care professionals relate to patients and relatives to some extent. Often patients are in pain and despair and their relatives are worried. However, this is often driven to an extreme in the anaesthesiologist’s work. The anaesthesiologist will often put the patient in a state between life and death, manipulating the patient’s vital functions to make work as smooth as possible for the surgeon. When the anaesthesiologist knows beforehand that he or she is to anaesthetize a patient with a rare or difficult medical condition, he or she tries to be prepared:

I had a woman with cystic fibrosis who was about to deliver her baby. Everything was rather okay and it was a full-term baby but she was very worried indeed and she was to have a spinal. We had to make sorts of preparations. Do take care of the spinal and make her feel safe … I felt so satisfied when everything went well … a referral in good time before … I knew in beforehand that she was going to turn up on my list

The anaesthesiologist should make the patient feel safe and secure, even if some doctors, surgeons or anaesthesiologists may be inexperienced and scared themselves. This demands a great deal of trust from
both patient and relatives. With regard to the relatives, the work at the ICU has its own difficulties. At the ICU, the patients are often unconscious or heavily sedated. There might be situations where the anaesthesiologist and the relatives have to make a joint decision about stopping life-prolonging treatment. A special case is when there is a question of a potential organ donation.

Always be alert and ready to act

This theme is about the anaesthesiologist him- or herself, about the shape of the day, about personal stress levels and about getting old in a demanding profession. There has to be a first time for everything, even the performance of a specific and complex anaesthesia or inserting a needle into the back of a patient to give a spinal anaesthesia. Ideally, the young doctor has an inspiring and reliable senior colleague at his or her side at such moments. However, there are also problems for the experienced anaesthesiologists: an elderly consultant on-call runs the risk of having to deal with very complicated or unusual cases, having to perform procedures that he or she may not have done for many years. This can make an on-call duty scary even for the experienced anaesthesiologist. In addition, the shape of the day of the elderly consultant will have great impact on the work situation for the younger doctors or trainees:

... she had the courage to give me feedback about how my behaviour affected her. And I thought, among other things, that it is easy to forget that I'm no longer an intern, I am a consultant. I have a hard time really believing that I'm a consultant. I went to learn more on this larger hospital and I was placed in a situation I couldn't handle and I really had the feeling of being a rookie again... I had one special case when I felt that I definitely hadn't the situation under control. Well, potentially I could have mastered it, but not there and then. It was pointed out to me by a surgeon... he asked me to get another anaesthesiologist in place immediately, and of course I did, but it was sort of humiliating. He told me, loud and clear, that in this particular game I was an unknown player.

Struggle in an insufficient health care organisation

During the past decade, the Swedish health care system has undergone major structural changes and financial cutbacks resulting in staff reduction and increased distress and workload among personnel. Some anaesthesiologists seem to feel used by the system and express exhaustion:

About a year ago I was sort of burnt out and I was on sick leave for a long time... a large part of it was that I hadn't handled my situation at work in a good way. I had difficulties with my own limitations...

Considerable time and energy is used to survive in the system:

I get a feeling of not meeting the standards, which makes it hard to be an anaesthesiologist. There are too many things to be done at the same time, and you feel stressed by the heavy burden you have to carry.

Working for a “rent-a-doctor” service can be a solution for the individual anaesthesiologist. As a rented doctor you have no administrative or tutoring duties, you only have to anaesthetize patients as well as possible. To be able to work in this way is probably why most anaesthesiologists chose to become doctors many years ago.

Discussion

As stated in the introduction, the aim of this paper was to describe the phenomenographic approach and to show how this method differs from the phenomenological one. One question that could be raised is if it is appropriate to analyse interviews, initially collected for a phenomenographic study, in a phenomenological way. There is no clear-cut answer to this question. In this particular case, the interview material had rich descriptions of lived experiences, which allowed a phenomenological analysis.

Having analysed interviews with a group of anaesthesiologists, using a phenomenographic approach, we can give a structured description of the different aspects of this profession, the different ways a situation at work can be understood. The results demonstrate how differently anaesthesiologists may see similar work situations, thereby possibly explaining why they act in different ways. Furthermore, we maintain that certain ways of understanding are more powerful than others are and probably linked to more efficient ways of acting in clinical work.

Phenomenography could thus be used in professional training (Sandberg, 2001) by mapping the work and using the map for competence development. The aim of such professional training should be that trainees acquire new, more comprehensive ways of seeing their work.

In contrast, results from the phenomenological analysis describe the pre-reflective experience of being an anaesthesiologist and the essence of the profession. Maybe it needs to be said that expressing
the essence as being responsible for the well-being of the patient’s body, is not the same as to say that anaesthesiologists do not care for patients as individuals. Instead it means that an anaesthesiologist must have a holistic understanding of the complex bodily functions: a physician who does not have this understanding and who does not accept the full responsibility for managing the patients vital functions (respiration, circulation, etc.), however difficult the circumstances, such a physician is not an anaesthesiologist.

These descriptions will make it easier for people to grasp what it really means for a person to live with this work. The data could be used to improve working conditions and start a discussion about how to live well and remain healthy in this demanding profession. Understanding the essence of anaesthesiology is also important for young physicians, planning to choose it as their future specialty.

**Phenomenography versus phenomenology—an ongoing debate**

In both phenomenological and phenomenographic inquiries, what is under study are phenomena, objects as they appear to people, i.e. people’s lifeworlds. However, whereas in a phenomenological study the phenomenon per se is investigated, in a phenomenographic study the researcher investigates how (a group of) people view or understand the phenomenon. Furthermore, in phenomenology the essence of the phenomenon is sought. An essence could be described as a meaning structure of the phenomenon under study (Dahlberg, 2006). This is in contrast to phenomenography, where the researcher looks for the variation of people’s ways of understanding or conceptualising the phenomenon, that is, the different ways the phenomenon with its different aspects appear to people.

In phenomenography, text passages containing the interviewees’ reflections on their experiences are also considered valuable, in contrast to phenomenological studies where the difference between pre-reflective and reflective experience is essential. Marton thus states that “the structure and meaning of an experienced phenomenon can be found both in pre-reflective experiences and conceptual thought” (Marton, 1996).

Uljens (1996) commented on the phenomenographic movement and stated that new interpretations are continuously made by us humans. Referring to Gestalt psychology, he argues that we change our focus of awareness and thus have different phenomena as figure and background. This could be understood as if we continually change our conceptions of phenomena in the surrounding world. Uljens continues to argue that phenomenographic results are neutral both with respect to individuals and to their contexts. Hence, one individual could express two different conceptions during the same interview. He takes this as an argument that context does play a part in the expressing of conceptions during interviews. These two issues are, according to Uljens, problematic and he continues that both man and world have been forgotten in the development of phenomenographic research. In our view though, these problems could be overcome by a development towards a more hermeneutic phenomenography. Experiences always occur within a context and they are experienced by a particular individual. This is pointed out also by Friberg, Dahlberg, Petersson and Ohlen (2000). In accordance with their critique, it is important to delimit and define the phenomenon under study. Researching broader aspects of the health care sector might be done better within other qualitative approaches, such as phenomenology.

**Phenomenography and professional training**

There is an interesting difference between the results from the phenomenographic and the phenomenological analysis. The results could be used for different purposes. What we would like to point out is that phenomenographic results could be used for competence development.

By using the variation of how professionals understand the studied phenomenon, new ways of understanding open up the possibility of working in new ways (Sandberg, 2000). By adopting a more comprehensive way of understanding work, the anaesthesiologist will get a broader repertoire of action in clinical situations. Changing one’s way of understanding in this way means a great step in learning. To create learning situations which could facilitate this, the outcome space of the study (the work map) could be used (Larsson, Holmström, Lindberg & Rosenqvist, 2004). This is why we argue that phenomenography is a way forward for qualitative researchers. We think that the time has come for phenomenographic researchers to move on from merely describing conceptions to use the generated results for educational interventions.

**Phenomenography, the future**

In addition, we can see three ways for future development of the phenomenographic movement. The first one is variation theory, outlined by Marton and Pang (1999), stressing the importance of variation if new aspects of a phenomenon are to be
discerned by the learner. The second one is the more
cognitive approach, a phenomenography with strong
connections to the cognitive sciences, described in
Learning and awareness (Marton & Booth, 1997a),
with a theory of awareness based on phenomenolo-
gical gestalt theory. The third one, we suggest, is a
more hermeneutical phenomenography which is in
line with Ulijns (1996) ideas. The interpretative part
of analysing phenomenographic interviews is ob-
vious, although more purist phenomenographers
might disagree. None the less, phenomenography is
currently undergoing a rapid development and
adjustment to other research fields than merely
educational science.

Conclusion

In the studies reported here, the contrast would
be between, on the one hand studying the essence
of being an anaesthetist (phenomenology) and
on the other hand studying the different ways
of understanding or making sense of the work
(phenomenography). Thus, in phenomenology we
describe the pre-reflective meaning of work experi-
ences, thereby giving us a better understanding of
what it is to be an anaesthetist. In phenomeno-
graphy we instead study how anaesthetists,
on a more cognitive level, make sense of their work.
As stated by Marton (1996) "You cannot act but in
the relation to the world as you experience it".

The question about the relationship between
them is far from resolved. They are both based
on a lifeworld perspective, linked together by
ontological and epistemological assumptions. De-
spite this, it is obvious that the phenomenogra-
phic outcome space and the phenomenological
essence of a phenomenon in the world have much
in common. Marton has stated (Marton, 1996):
"The simultaneous awareness of all the critical
aspects comes close to the phenomenological
essence...". (p. 2).

A conclusion of this analysis is that phenomeno-
graphy and phenomenology, even if they have much
in common and they are related, have differing aims,
goals and methods, and thus different results. A
phenomenographic analysis cannot replace aphe-
nomenological one, and vice versa.

Notes

1. These three expressions will be used synonymously in the
article.
2. Physician specialized in ear, nose, and throat diseases.

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