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An approach to the phenomenological analysis of data

In this paper, Helena Priest describes and justifies a phenomenological research method that may be used to explore complex and nebulous concepts relevant to nursing and health care, for example, the concept of 'caring'. The history and development of Husserlian phenomenology are outlined, followed by an account of the use of phenomenology within nursing research. Tensions inherent in the use of Husserlian phenomenology in nursing research are noted. A phenomenological approach to data analysis, designed to address some of these tensions, is described and compared with several well-established phenomenological analysis strategies. Issues of reliability, validity and generalisability are discussed, as are limitations in the use of the approach, before conclusions relevant to healthcare researchers are drawn.

Keywords: data analysis, Husserl, phenomenology

Introduction and aims

In recent years, a plethora of nursing and allied healthcare research has been published that claims to use phenomenology as the basis for data generation and analysis. Upon closer inspection, however, it is clear that a wide variety of approaches have been employed under the auspices of phenomenology. This paper, therefore, seeks to review the history and development of phenomenology and its application to nursing research, in order to provide a context for the particular methodological approach developed and described here. The paper describes and justifies a phenomenological research method that may be used in the exploration of complex and nebulous concepts relevant to nursing and health care, such as the concept of 'caring'.

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Phenomenology

The term phenomenology, first expressed by Immanuel Kant in 1764, is derived from the Greek *phainein*, meaning 'to appear'. Rooted within the continental philosophical tradition, its significant origins are generally attributed to Husserl (1859-1938), a German mathematician and logician. Husserl's mission was to discover the nature, goals and methods of philosophical enquiry. With the publication of his influential text, *Ideas* (Husserl 1913/1982), he formalised his attempts to devise a single system of doctrine, or '*philosophia prima*' (Bell 1990). Husserl insisted upon the need for philosophy to be a rigorous science that would rid itself of all assumptions, and make no claims that could not be guaranteed (Paley 1997).

Husserl believed that access to the material world was through consciousness, and that all knowledge was derived from experience. In effect, he expanded the meaning of the term 'experience' to refer to anything of which a person may be conscious, such as a physical object, an abstract concept, or a mood state (Stewart and Mickunas 1974). Husserl aimed to develop a scientific method for finding and guaranteeing the essential structures of consciousness. This method was phenomenology, through which he believed that it would be possible to 'set aside mere appearances and to deal directly with the reality as it is in itself' (Bell 1990). Husserl's phenomenology is eidetic or descriptive, whereby individuals are seen as the vehicle through which the essential structure or 'essence' of the phenomenon of interest may be accessed and subsequently described. If the appearance of essential structures can be described, then it is possible to arrive at certainty, or ultimate truth (Solomon and Higgins 1996).

Phenomenological method

The aim of phenomenology, then, is to produce a description of a phenomenon of everyday experience, in order to understand its essential structure. Specifically, eidetic phenomenology aims to determine the form and nature of reality as mediated through an individual's experience of it. In order to arrive at this essential structure, Husserl's method suggests four fundamental processes: intentionality; phenomenological reduction; description; and essence (Baker *et al* 1992).

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Intentionality

Intentionality is the process whereby the mind consciously directs its thoughts to an object (Holloway and Wheeler 1996). The task of phenomenology is to distinguish between the 'natural attitude', that is, the set of common sense beliefs and assumptions about the nature and existence of things in the everyday world, and the phenomenological standpoint. The phenomenological standpoint focuses not on natural objects but on conscious ideas of objects. In other words, if a phenomenological standpoint is adopted, the natural attitude has been transcended.

Phenomenological reduction

Phenomenological reduction is the process that facilitates this transcendence. Although sometimes described as distinct stages in the reduction process, Husserl used the terms bracketing, eidetic reduction, and *epoché* interchangeably to describe the change of attitude necessary for philosophical inquiry (Stewart and Mickunas 1974). Bracketing, a mathematical metaphor, involves putting one's natural attitude to the world 'in brackets' in order to place it temporarily out of question. In this way, presuppositions and theorising about the phenomenon are suspended (Ray 1994). Similarly, *epoché* means the deliberate suspension of judgement, commonly held beliefs, and presuppositions in order to investigate the phenomenon from a fresh viewpoint and to see the experience for itself (Patton 1990). A further strategy required to achieve the transcendence from natural to phenomenological attitude is 'imaginative variation' (Giorgi 1985). Imaginative variation involves asking questions of the phenomenon in order to remove inessential features and to test its limits, and exploring all possible meanings of the data (Beech 1999). In this way, it should be possible to see what would need to change to make the phenomenon under study a different one. For imaginative variation to occur, intuition and reflection are required in order to open up the meaning of the experience (Holloway and Wheeler 1996). Imaginative variation, or intuiting, continues until a common understanding of the phenomenon of interest has been generated (Streubert and Carpenter 1995).

Description and essence

Once reduction has been achieved, the phenomenon of interest may be described and its essential structure uncovered (Baker *et al* 1992). The reductive process, however, should continue throughout the entire research effort in order to achieve the purest form of description (Streubert and Carpenter 1995).

Tensions in Husserlian phenomenology in healthcare research

Husserl's position contrasts with much modern qualitative research, in which reality and experience are deemed to be socially constructed and represent but one of many possible truths rather than the absolute truth. Furthermore, Husserl restricted his focus to individual personal experience and did not explore how other people might experience a phenomenon. There are, therefore, some difficulties in using a phenomenological approach based upon Husserlian principles in nursing and healthcare research, as this typically draws upon a range of participants and data sources. A further difficulty becomes apparent when searching for the 'essence' of the many nebulous and diversely experienced concepts of relevance to nursing and health care. Paley (1997) has argued that while it may be perfectly legitimate to collect and described a range of participants' experiences of a phenomenon, it is doubtful whether this can produce anything that could be described as 'essence'.

There are counter-arguments however, to both these positions. Arguing against a focus solely on pure, individual personal experience, Griffin (1983) suggested that in order to reveal aspects of a phenomenon that are important but hidden because of familiarity it is necessary to explore how ideas are used by particular groups of people, or at particular times. Swanwick and Barlow (1994), too, claimed that the analysis of several people's meanings could lead to a greater understanding of the phenomenon being explored. In relation to the concept of 'essence', Watson (1985) claimed that this need not mean absolute or definite but 'more pragmatically represents the deepest understanding available, established on the basis of inter-subjective agreement of a given context' (Watson 1985). Despite the aforementioned difficulties, researchers should not be discouraged from

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using a phenomenological approach, but be prepared to tolerate a degree of tension within their work (Hallett 1995).

Since Husserl, the influence of phenomenology in research generally, and in nursing research particularly, cannot be overestimated. As Embree (1997) has noted, 'in view of its continual development and its spread into other disciplines as well as across the planet, phenomenology is arguably the most significant philosophical movement in the 20th century'. In broad terms, researchers are likely to have a particular ontological orientation based on their philosophical understanding, which influences the way in which their study will be conducted (Ray 1994). Typically, they attribute their stance either to the Duquesne school, based upon Husserl's descriptive phenomenology, and elucidated by Colaizzi (1978), Giorgi (1985) and van Kaam (1969), or to interpretive phenomenology, or hermeneutics, based upon Heidegger's (1962) work, and applied in practice by researchers such as Benner (1984).

Some nursing research, however, has been criticised for not making clear the philosophical assumptions underpinning the particular approach selected. Koch (1995) criticised nurses who appeared to assume that Husserlian and Heideggerian phenomenology were the same. Crotty (1996) argued that many nurse researchers had misused phenomenology, being overly concerned with people's experience of a phenomenon rather than with the nature of the phenomenon itself. Equally, Yegdich (1999) criticised nurse phenomenologists who acted as though Husserlian phenomenology concerned itself with subjective experience, rather than, as it actually does, with the essence of phenomena 'unclouded by subjective opinion'. Crotty (1996) concluded that there were essentially two phenomenologies drawn upon by nurse researchers: 'authentic', linked to traditional Husserlian phenomenology, and 'new', a variant that had undergone transformation through its acceptance and use in north America and the influence of humanistic psychology. Crotty's contention was that both were valid, but that researchers must be clear about which approach they were adopting, and not conduct and write about research as though they were one and the same.

Phenomenological analysis

A research design utilising a phenomenological approach needs to be able to collect descriptions while preserving the spontaneity of subjects' experiences (Jasper 1994). Furthermore, people who have lived the reality of the subject being investigated provide the only legitimate source of data through which the researcher can access this reality (Baker *et al* 1992). The most usual data source, therefore, is verbatim transcripts of audio-taped interviews, but other sources are sometimes used, such as group discussions, written accounts or diaries.

While it is true that phenomenologists are sometimes reluctant to focus on specific steps in the data generation and analysis process because of the risk that they will become reified as in the natural sciences (Hycner 1985), in practice, many have devised methods that may be followed in a systematic fashion. Common features of these approaches, notably those of the Husserlian-influenced Duquesne scholars are: the division of text into units; the transformation of units into meanings expressed as phenomenological concepts; and the tying together of transformed meanings into a general description of the experience (Polkinghorne 1989). An additional feature common to many approaches is horizontalisation, whereby all elements of the text are deemed initially to be of equal value (Hycner 1985, Moustakas 1994). Taking these common features into account, the following sections outline a strategy developed specifically to explore the concept of psychological care in nursing, but which could equally be utilised to explore other complex and nebulous concepts of relevance to nursing and health care.

Reflection, intuition and production of first textual description

In order to produce an initial descriptive account of the concept a period of reflection and intuition is undertaken (de Rivera 1981, Moustakas 1994). Foci for this reflection can be personal experience, knowledge of the relevant literature, and data generated in previous studies. It has been noted that such reflection 'provides a logical, systematic and coherent resource for carrying out the analysis and synthesis needed to arrive at essential descriptions of experience' (Moustakas 1994). This process of preliminary reflection upon personal experience and literature sensitises

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the researcher to the phenomenon and to his/her own preliminary ideas around it, and enables an initial written description of the phenomenon to be produced. This initial description can serve to heighten awareness of presuppositions, assumptions, and bias, and act as a template against which all data subsequently generated may be compared. In this way, the researcher is a legitimate participant in the research process.

Consideration and management of the data

This involves intensive engagement with the data (e.g. listening to audio-taped interviews; reading and re-reading verbatim transcripts, written accounts or diaries), followed by examination of transcribed data generated from the first participant in the study. All statements that appear relevant to the concept under study are identified, adhering as far as possible to the principle of horizontalisation. This process may be facilitated using the 'highlight' function available within popular word-processing packages. Each highlighted statement from the first participant is then compared with the initial textual description, remaining alert to prejudices and presuppositions in order not to reject statements that do not readily fit into the initial account. Selected statements are integrated into relevant sections of the initial description. In practical terms, this may be facilitated by the 'copy-and-paste' facility available within word processing packages, following which the description is re-written to incorporate the highlighted statements. Separate consideration must be given to statements that cannot readily be integrated into the initial description, and the description must be extended to accommodate these as appropriate. In this way, a second textual description is created out of the initial description plus integrated statements and additional elements.

These steps are repeated with data from all other participants, and a new written account of the phenomenon is produced each time. Once data from all participants have been considered, and a final written account produced, this is sent to participants to judge whether it resonates with their experience of the phenomenon. Any amendments can be incorporated into the written description. Ultimately, a final written account is produced which, having considered a wide range of data

sources and personal experiences, aims to have arrived at a description of the essential structure of the phenomenon of interest.

This strategy shares many features with other phenomenological approaches, and Table 1 (see over) provides an overview of a selection of phenomenological data generation and analysis strategies alongside, for comparison, the strategy described in this paper (column six).

It may be seen that the strategy described in column six has elements in common with others. The process of initial reflection on the phenomenon, for example, shares similarities with Moustakas's (1990) method of heuristic inquiry, in that it seeks to answer the question: 'What is my experience of this phenomenon and the essential experience of others who also experience this phenomenon intensely?' (Patton 1990). In that it adopts, as far as possible, the principle of horizontalisation, it bears similarities to Hycner's (1985) method and to Moustakas's (1994) modification of van Kaam's method. Furthermore, in that it relies upon constant movement between the developing textual descriptions and the data, it bears similarities to the methods of Colaizzi (1978) and Moustakas's (1994) modification of van Kaam's method. However, in taking as its starting point the first textual description produced following reflection, before comparison with the data, this method is different from the other methods with which it has been compared.

Methods of ensuring rigour

In considering rigour in any qualitative research, including phenomenological approaches, there is a need to determine whether the study is believable, accurate, and right, and whether it is useful to people beyond those who participated in it. This necessitates a consideration of the concepts of validity, reliability and generalisability.

Validity

Methods of increasing validity, or trustworthiness of the interpretations of the data, can include:

- making explicit presuppositions and acknowledging subjective judgements (Ashworth 1997)

Table 1: Comparison of steps in the phenomenological generation and analysis of data

1. Van Kaam (1969)	2. Moustakas (modification of Van Kaam) (1994)	3. Colaizzi (1978)
	Horizontalisation: listing every relevant expression and perform preliminary grouping	
Classification of data into categories		Extraction of phrases or sentences pertaining to the experience
Reduction and linguistic transformation of the selections into more precisely descriptive terms	Reduction: testing each expression – does it contain a necessary and sufficient moment of the experience? Can it be abstracted and labelled?	Transforming phrases into own words, resulting in a list of 'meaning' or 'significant' statements
Elimination of reduced statements not inherent in the experience	Elimination: remove expressions not meeting the above requirements	
	Clustering remaining invariant constituents	
	Applying thematic labels to the invariant constituents	Clustering of individual themes to produce a further reduction
First hypothetical identification and description of the experience		Production of hypothetical 'exhaustive' lists
Application of description to randomly selected protocols to test necessary and sufficient constituents	Checking invariant constituents and their theme against the complete record of the research participant for explicit expression and compatibility	Moving back and forth between meaning statements and successive hypothetical lists until themes are accurately reflected in the clusters
Valid identification and description of the experience	Construction of Individual textual description; individual structural description based on ITD and imaginative, variation and textual-structural description incorporating invariant constituents and themes Repeat above step for each co-researcher	Essential structural description
		Return of description to subjects. Revision of description, if necessary
	Develop composite description of meanings and essences of experience for group as a whole	

4. Hycner (1985)	5. Moustakas (1990) Heuristic enquiry	6. Strategy described in this paper (Priest 2001)
Bracketing and phenomenological reduction – openness to meanings and suspension of own meanings and interpretations	Immersion: centring whole life on the experience. Incubation: withdrawing and waiting for insights	Reflection and intuition, sensitising researcher to the phenomenon and to preliminary ideas, presuppositions, assumptions and bias
Delineating units of general meaning		
Delineating units of meaning relevant to the research question	Illumination: themes and patterns emerge, forming clusters	
Training independent judges to verify units of relevant meaning		
Eliminating redundancies		
Clustering units of relevant meaning		
Determining meaning from clustering of themes	Explication: adding other dimensions of meaning, refining emergent patterns	
	Arrival at a description of the experience and a portrayal of the individuals in the study	Production of initial description of the phenomenon against which data may be compared
		Examination of data from first participant; highlighting all statements relevant to the phenomenon, adhering to horizontalisation
		Comparison of each selected statement from the first participant with the initial textual description and integration of these into initial description
	Creative synthesis: bringing together pieces; showing relationships	Creation of second textual description out of the initial description plus integrated statements and additional elements
		Repetition of steps with data for each participant
Return summary and themes to participants/second interview		Return of accounts to participants for checking, amending and feedback
Modification of themes and summary		
Identifying general and unique themes		
Contextualisation of themes		
Composite summary of all interviews capturing essence of phenomenon. Note significant individual differences		Production of final textual account of the phenomenon

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- prolonged engagement with the data (Erlandson *et al* 1993, Lincoln and Guba 1985)
- verification with the source/participant feedback (Johnson 1997)
- using low inference descriptors, such as extracts from participants' verbatim accounts (Johnson 1997)
- peer debriefing, whereby ongoing analysis and findings are regularly presented to others for peer evaluation (Robson 1993).

Reliability

Strategies to increase the reliability of the procedures and data generated can include:

- providing evidence of an audit trail (Koch 1994)
- disclosing personal orientation and context (Ashworth 1997, Stiles 1993)
- having intensive engagement with the material and iteration between data and interpretation (Erlandson *et al* 1993, Stiles 1993)
- grounding interpretations within the data through the use of verbatim illustration (Johnson 1997)
- ensuring technical accuracy in recording and transcribing (Peräkylä 1997).

Generalisability

Generalisability is the extent to which findings are transferable to, or fitting for, other situations (Conway 1998). Qualitative research is generally considered weak in its generalisability across populations, to different settings, and across times (Johnson 1997), particularly as participants are often selected purposively in order to fulfil the needs of a particular study. However, it has been suggested that the concept of generalisation should be reclaimed for qualitative inquiry (Sandelowski 1996), and that it need not be a problem if comparisons are made with similar people, settings and times (Johnson 1997). Therefore, it is necessary in the written account of the study to provide detailed information regarding participants, selection methods, context, and data generation and analysis methods in order for readers to decide how far and to whom the findings may be generalised.

Limitations and conclusions

Although the aforementioned strategies can enhance the rigour of a phenomenological research study, it nevertheless remains the case that, because of the 'difficulty and painstaking nature of getting back to, and re-encountering, the phenomena of immediate experience' (Crotty 1996), phenomenological research is challenging. Thus, the extent to which a novice phenomenological researcher can claim to have convincingly devised and implemented a novel and untested approach to data generation and analysis must be questioned.

While the intention within phenomenological research is not to generate theory but to describe and understand the essence of a concept, there remains always the option to compare the findings with those achieved through alternative methods. Any similarities might lend weight to the validity of the method developed and described here.

Utilisation of the approach developed and described in this paper resulted in the production of a written account of the phenomenology of psychological caregiving in nursing. It is suggested that the approach has remained faithful to the ideas of Husserl while at the same time adopting a rational and pragmatic strategy for dealing with multiple participants and multiple data sources. Furthermore, in utilising Moustakas's (1994) and de Rivera's (1981) recommendations that phenomenological inquiry should commence with a period of reflection and intuiting, in order to produce an initial phenomenological account, this study made transparent its starting point for the comparison of the data subsequently generated. In this way, difficulties inherent within the strict Husserlian use of bracketing were to some extent overcome. It is suggested that, while other approaches may be equally useful, the approach devised may facilitate an understanding of nebulous and diversely experienced concepts that are of relevance to nursing and health care.

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