An introduction to Moustakas’s heuristic method


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Abstract

Aim This paper is intended to introduce Moustakas’s heuristic method to a wider nursing research audience. It is aimed at identifying the main principles that underpin this approach, and outlining the processes and structure that this form of inquiry might take.

Background Heurism is a generic term that encapsulates a way of thinking and exploring that is shared by such diverse disciplines as computer programming, mathematics and philosophy. All these disciplines at some point require an understanding of the process that comprises the experience of discovery that pre-empt the formulation of a hypothesis.

Review methods The heuristic method is critically reviewed and its strengths are identified. The discourse offered by post-modernism, which challenges some of the method’s main principles, is explored and potential solutions offered.

Discussion This paper highlights how research questions that are heuristic in origin can create conditions that offer the possibility for change in the researcher. It explores how the internal change that occurs in the researcher can be a catalyst for deeper appreciation of the question under investigation and how this personal transformation can be relevant for practice and research.

Conclusion Nursing practice and research are ideally placed to engage with questions that emerge heuristically from our experience.

Implications for research/practice Moustakas’s method gives practitioners and researchers the opportunity to explore internal and personal questions. It suggests that the personal nature of these questions can contribute to the contexts and environments in which care and research take place.

Keywords Heuristic inquiry, transformative potential, process, transdisciplinarity

Introduction

HEURISTIC INQUIRY is a method that has attracted the interest of researchers working in counselling, art therapy and psychotherapy (Braud and Anderson 1998, West 2001, Etherington 2004a) but has received little attention to date in wider nursing research. Moustakas’s (1990) heuristic method has its roots in an autobiographical account of loneliness when having to make a decision regarding his daughter’s need for an operation for a heart defect (Moustakas 1961). He used his experience to explore and understand that in others. The methodology was refined over 30 years as Moustakas sought to identify the processes and qualities that helped in the internal search of researchers in their attempts to explore, collect and interpret data holistically (Hiles 2002).

Introductions to Moustakas’s heuristic method often begin with explorations of its derivation from the ancient Greek word ‘heuriskein’, which means ‘to discover’ or ‘to find’. Heurism is a generic term that encapsulates a way of thinking and exploring that is shared by such diverse disciplines as computer programming, mathematics and philosophy.

All these disciplines at some point require an understanding of the process of discovery that pre-empt the formulation of a hypothesis. Heuristic inquiry highlights that inquiry
should reflect and be modeled on a process of deepening understanding.

Finding the right question
For Moustakas (1990), the research process begins with the identification of a question that is deeply felt, a question that has an emotional effect on the researcher and cannot be ignored. Finding the right question is potentially more important than finding the right answer (Macy and Rothberg 1994). It is this feeling that becomes the first point of contact between the internal world of the researcher and the external and social world in which the research takes place. Initially because of the deeply personal nature of the question, the early stage of the research requires care and sensitivity as it is expressed in the social context.

Moustakas concurs with Gadamer (1975) that the question must be lived and that the researcher must embody the question. For Voegelin (2000), by virtue of being human we are constantly seeking to understand ourselves and our environment. This questioning involves effort and, if pursued conscientiously, can take us to fundamental questions that concern the nature of our existence.

Once a question is articulated, the initial impulse to strive for an answer needs to be set to one side. Heurism shares with Heidegger (1962) that an embodied question allows the inquiry to work on us and influence the quality of our thinking and exploration, which in turn guides the experience and the understanding we achieve.

For example, Dorcy (2010) identified how a heuristic approach can help provide a deeper understanding of hope in the context of the human experience of suffering and despair. Casterline (2009) saw heuristic inquiry as being consistent and compatible with Watson’s (2008) philosophy of nursing in that the philosophies seek to improve life and well-being by appreciating our lives as they are subjectively experienced. Kim (2010) showed the increased potential for nursing theory to be developed to guide practice from this deep understanding.

Transformative potential Moustakas (1990) argued that a deeply felt question will hold the greatest potential for a transformative effect on the researcher. Milner (1986) characterized the process of deepening understanding as being not ‘the slow shaping of achievement to fit my preconceived purposes, but the gradual discovery and growth of a purpose which I did not know… it’s the only way which is not a presumption, forcing the self into a theory’ (Milner 1986).

Woodhouse (1996) defined this type of knowing as being ‘new paradigm’ thinking, which is a ‘process, not a unified structure waiting to drop into place’. The importance of knowing as a process rather than a product is crucial in heuristic inquiry. Jaspers (2003) described an individual who seeks to inquire in this manner as being someone who is ‘on the way’. Capra (1996) found this type of understanding to be a way to make sense of human experience and a method that comes closer to reflecting how living systems evolve and develop.

Sensitisation of the researcher Moustakas (1990) identified that understanding and change occur in heuristic inquiry because the researcher becomes an instrument, a data-collection tool for the research process. Guba and Lincoln (1989) also said that this means of engaging with data collection involves being receptive to information that is collected through the senses, and responding to non-verbal clues and experience. The main processes by which the researcher comes to a deeper understanding of the question were identified by Moustakas (1990) as: ‘identifying with the focus of inquiry’, ‘tacit knowing’, ‘focusing’, ‘indwelling’, ‘intuition’, ‘self-dialogue’ and ‘internal frame of reference’.

Processes of heuristic inquiry
The value of the heuristic method to nursing is that it begins with the experience of the practitioners or researchers. It requires that there is a personal experience that has left the inquirer with a desire to understand the experience more fully.

The heuristic process involves getting inside the research question, becoming one with it and living it. In this respect, it is the question that chooses the researcher. Sela-Smith (2002) acknowledged that this makes it a valuable tool in the exploration of the study of subjective human experience. Nursing practice and literature are replete with examples of how personal experience of healing, suffering, death, care, communication or stress, to mention but a few, has resulted in inquiry. Moustakas (1990) highlights that, if personal experience is going to be a catalyst for inquiry and change, it also requires that the qualities of tacit knowing and intuition are acknowledged.

Moustakas (1990) acknowledges that Polanyi’s (1983) contribution to our understanding of tacit knowing is a crucial component of heuristic inquiry, and that ‘at the base of all heuristic discoveries is the power of revelation in tacit knowing’. Nonaka and Takeuchi (1995), drawing on Polanyi’s work on tacit understanding, identify two types of knowing. The first is ‘codified’, which can be transmitted in formal
Table 1 Phases of heuristic inquiry

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
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<tr>
<td>Initial engagement</td>
<td>The researcher's contact with the subject and question. Moustakas (1990) recognised that it is the autobiographical source of the question that generates the movement of the research as the researcher and the question seek clarity, understanding and integration.</td>
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<tr>
<td>Immersion</td>
<td>The invitation, the experience or question to the researcher to stay fully with the experience of the phenomenon in whatever form it takes.</td>
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<tr>
<td>Incubation</td>
<td>Recognition of the value for the researcher in retreating from intense and focused attention on the question or data to engage in activities that are unrelated to research.</td>
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<tr>
<td>Illumination</td>
<td>Discoveries in science and philosophy come about when the investigator forgets the object of inquiry and engages in other activities. These moments of illumination show the experience brings with it a change in perception of the subject of inquiry. The internal frame of reference had previously been in place is often dramatically altered.</td>
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<tr>
<td>Explication</td>
<td>Explication involves examining what has arisen in the process and coming to an understanding of what meaning it might hold.</td>
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<tr>
<td>Creative synthesis</td>
<td>The many strands of experience and understanding that have emerged in the research are brought together to form a coherent whole.</td>
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Systematic language and as such can be explicit. In contrast, tacit knowing, the second type, is personal, subjective and context-specific, and so can be difficult to communicate and is therefore implicit.

There is an intimate link between tacit knowing and the use of intuition. It is intuition that has access to the underlying pattern of the inquiry when the researcher is trying to understand relationships between diverse aspects of the research process.

While tacit knowing and intuition are contentious in nursing practice and research (Moule and Goodman 2009), there remains an acknowledgement that they play fundamental roles in uncovering new understanding. Rigorous application of these qualities to the phenomenon of interest can help to develop insights that initially may appear to be unique to a particular situation or inquirer but will also have some wider significance (Carlsson et al 2002). For Moustakas (1990), the rigour in an inquiry an be improved by identifying two other qualities: ‘focussing’ and ‘indwelling’. Focussing is the process of ‘clearing an inward space’ to remove the clutter that obscures our understanding, to allow contact with the core themes that emerge out of the experience. Hiles (2001) identifies indwelling as the deliberate process of turning inward to seek a deeper comprehension of a quality of human experience.

In the heuristic process, researchers must move between their internal worlds and the external worlds that they inhabit. For this, Moustakas (1990) advocated a process of ‘self-dialogue’. Self-dialogue contains two qualities. The first is that, if researchers are going to understand an experience deeply, they must begin with themselves so they can be receptive to all facets of the experiences being explored as they happen. Second, this personal appreciation assists with the process of being open to others, thereby potentially helping the researcher and participant to come together more ‘authentically’.

It is this reflexive quality that Carroll (2009) saw as being crucial for nurse researchers if they are to be sensitive to issues of power, gender and context in clinical environments.

It is through self-dialogue and talking with others that the final process of heuristic inquiry can be identified: the ‘internal frame of reference’. Moustakas (1990) argued that the experiences and stories of participants will illuminate and bring into focus the internal frameworks of researchers and how these influence their choices and actions. Consequently, it is by bringing this internal frame of reference into fuller view that the portrayal of an experience can be said to be heuristically valid because it comes from within.

**Framework for clarification and guidance**

The nature of internal processes as they are explored by researchers and expressed in external contexts means that some kind of framework is needed to help make the process of inquiry explicit and guide researchers as they navigate their experiences. Moustakas (1990) identified that the internal process of the researcher in developing a frame of reference, and the external process of the participants and their data, together move through six phases. These are ‘initial engagement’, ‘immersion’, ‘incubation’, ‘illumination’, ‘explication’ and ‘creative synthesis’ (Table 1).

There is an intimate and natural link between the processes of heuristic inquiry and the phases. Initial engagement requires identification with the focus of the inquiry so that immersion in the question can be enhanced through indwelling, intuition and tacit knowing. Exploration of core findings may require deeper self-dialogue and discussion with others, and the making of the internal frame of reference of the researcher may need to be more explicit.
**Data collection and synthesis**

As with many qualitative designs, data can be collected through interviews, which can be supplemented with field notes and subsequent reflections. These sources of information are synthesised to form depictions of the participants that seek to capture the essence of their experiences. Consequently, there is the potential for the participants to be ‘kept alive’ as individual presences and not reduced to anonymous themes. Moustakas (1990) encouraged researchers to return depictions to participants to see if they are accurate reflections of what had been shared.

**Depictions and the research process**

Moustakas (1990) said that contact with each research participant results in the creation of a depiction and identifies the process that the depictions can move through in the synthesis of the data. The first stage is the creation of individual representations. The second looks for those themes or places of resonance that occur in the images and, from this, the researcher can create a composite depiction that can be written as a first-person narrative that pulls the main themes into one place. With the formation of the composite depiction, the researcher returns to the individual portrayals and selects those that most exemplify the composite depiction. These individual representations are developed to contain detail that may not have been present in the individual depictions. Moustakas (1990) referred to these as ‘exemplary portraits’ and stated that they have the capacity to maintain their individual uniqueness and reflect the group as a whole.

The final phase is the integration of the researcher’s intuitive and personal knowledge and experience with the themes that have emerged from moving through the process of working with the depictions. Moustakas refers to this as ‘creative synthesis’. It is the sum of the outcomes of the whole experience and can be presented as a poem, story or artwork.

**Heuristic inquiry and literature**

The absence of a formal method and process has important implications for the use of literature in research. Heuristic inquiry recognises that the sources that inform and guide the process may not be confined to the disciplinary field in which the inquiry takes place. Moustakas (1990) encouraged the researcher to use an eclectic range of sources, reasoning that this can help to achieve a richer and fuller understanding of the experience being explored. Consequently, heuristic inquiry sits easily with transdisciplinarity. Nowotny (2003) said that a transdisciplinary approach acknowledges that inquiry of this kind is transgressive because of its ability to ‘seep through institutions and structures like water through the pores of a membrane’. Hadot (1995) described this as a process of allowing different perspectives to ‘rub names, definitions, visions and sensations against one another’. Consequently, the focus and attention is less on interpretation of the literature and more towards the researcher becoming sensitive to how it can be used to create movement and illuminate pattern.

**Identifying patterns**

Pinchbeck (2006) described his experience of self-inquiry as being one where he became a ‘perceiver of pattern’. Henagulph (2000) identified that one of the characteristics of working in this way is to be drawn to places of correspondence, or ‘knots of communication’, where the question, literature and experience meet, ‘speak’ to each other and come together in a meaningful synthesis. This self-inquiry requires a certain flexibility and willingness to look at something from different perspectives. However, this is not something that is unusual. Minsky (1988) argued that our consciousness is designed to perceive and learn by looking from different perspectives and what is unusual is that we have become accustomed to looking from a single perspective that depends on our circumstances and socialisation. Minsky and Moustakas agree that the natural qualities of the human mind are movement, exploration and connection.

**Resonance with other approaches**

Heurism shares some principles with other qualitative approaches. Like Van Manen’s (1990) human sciences, it seeks to engage with a phenomenon as it is, with those who have lived the experience, rather than through conceptualisation. By making connections between participants’ experiences and those of the researcher, heurism has aspects of auto-ethnographic inquiry in that it appreciates the reflexivity and experience of the researcher as a primary source of data (Patton 2002). Like narrative inquiry, it values the process of gathering stories that can give voice to human experiences (Riessman 1993). In keeping with Van Manen and grounded theory, it favours a movement of data that is emergent. In the flexibility that comes with unfolding understanding, heurism shares with transpersonal approaches the belief that the spiritual and mystical dimension of our lives can be included in our emerging understanding of the experience being explored (Rothberg 1994). Spiritual sensitivity does not mean that the research is removed from life but rather, like action research, shares the
understanding that there is an intimate connection between research processes and life processes (Reason and Bradbury 2000). While Moustakas (1990) did not make explicit reference to dialectical processes, heurism is flexible enough to absorb its use and in doing so brings it into some sympathy with Gadamer's (1975) view that the movement towards understanding of deep and enduring questions is dialectical.

Challenges

Moustakas (1990) acknowledged that one of the goals of heurism is to explore the meaning of an experience so that its essential structure can be revealed. It is through the process of coming to know the essence of an experience that the inquirer also discovers aspects that are universal. Therefore, heuristic research has the capacity to hold master stories or meta-narratives. Since these stories seek to explain aspects of human experience, they have the potential to organise our experience and understanding of our reality. For this reason, they are powerful, because in doing so they can also exclude other stories or narratives that might suggest alternative ways of explaining and understanding human experience (Ferrer 2002).

Therefore, a common strand that runs through heuristic inquiry is an ease with viewpoints that in a post-modern perspective would be understood to be universal and essential. ‘Essentialism’, in its broadest definition, means to understand things as if they had an essential ‘nature’ - a set of qualities that serve to define those things (Foucault 2005). Rowan (2004) suggested that, when a researcher engages with a question that is felt deeply and is process-driven, normal boundaries fall away and an essence of the researcher’s is being revealed.

Post-modern response

Advocates of post-modernism are distrustful of grand narratives that allude to universality, contending that the self is constituted through multiple discourses and contexts and that no definitive statement can be made about the nature of human experience (Lyotard 1984). For Foucault (2005), that which is described as ‘essence’ is no more than something that has been fabricated, and from other things, and the idea of a whole or unity, or essence, can only come about through the suppression and denial of difference. Etherington (2004b) has been an important advocate for heuristic research and her work has brought Moustakas to the attention of a wider research audience. Yet she feels that heurism is a ‘methodology of its time’ that had been superseded by other reflexive methodologies, such as narrative inquiry, that have a heightened awareness of culture, gender and history that heuristic research can appear to lack.

In one sense, Etherington (2004b) is correct: in the 1990s, heurism would have made an important contribution to discourse. Yet it has not lost its relevance. The phenomena in nursing that present themselves for heuristic inquiry often reflect those aspects that lie in the deep recesses of our being and concern the fundamental experiences of our lives. In this respect, the nature of the inquiry is timeless. This is not the ‘timeless’ of modernism or analytical philosophy, which sees understanding as unchanging and devoid of social and historical context. ‘Timeless’ in this context refers to the Platonic sense of engaging with ‘timeless’ human issues that confront us all in our nursing practice.

Moustakas’s (1961) original work on loneliness came about through his experience on a hospital ward and dealt with his feelings of loneliness after he found out that his daughter had a congenital heart defect. The decision about whether or not his daughter should have an operation revealed in him an intense sense of loneliness.

Moustakas identified two types of loneliness. The first is ‘existential’, which is concerned with our relationship to the unknowable and mysterious aspects of life, such as nature. The second is the loneliness that comes about through our relationships with others and experiences of loss. These two are related but taking the existential aspect first, it can be seen that, although Moustakas was writing in the early 1960s, he was engaging with a fundamental aspect of human experience that had concerned thinkers and writers from ancient Greek times through to the present day and that had been addressed in philosophy, literature and psychology (Mijuskovic 1979).

Consequently, there is a perception that Moustakas’s concern with essential and timeless experiences makes it unresponsive to current post-modernist forms of inquiry. This perception omits two points. The first is that these timeless issues are explored through the individual subjectivity of the inquirer; the timeless is given expression in and through the experience of the individual. Second, Moustakas speaks of someone who explores the issues, - as someone who ‘discovers life, who he is, what he really wants, the meaning of his existence... the true nature of his relation with others’ (Moustakas 1990). It is through relationships with others that the inquirer can become sensitive to issues of gender, class and history but this has its starting place in the inner subjective engagement with the timeless.
Modern and post-modern

Mehl-Madrona (2003) suggested that those who are engaged with issues of health, disease and healing need to be able to move between the modern and post-modern. He acknowledged that an inquirer into these states must live in and respond to the post-modern condition. However, he also argued that sources of wisdom found in the modern archetype master stories have the potential to bring a sense of unity to the post-modern experience of fragmentation.

It is for this reason that Albanese (2002) argued that, despite the surface pluralism of our post-modern context, there exists the need for the modern in those approaches and practices concerned with illness and healing.

Moustakas acknowledged that by exploring each other’s biographies, we might reveal something that moves beyond the life of the individual and say something about our wider lives and experience. Simons (1996) agreed that, through studying the particular, we may come to know something of the universal. In this case, the universal becomes known through the deep and intensive study of the particular, whereby even small but carefully chosen research samples reveal knowledge and principles that can be generalised to a wider population. Cather (1992) spoke of something similar: ‘There are only two or three human stories and they go on repeating themselves as fiercely as if they had never happened before.’

In our nursing practice and inquiry, we can acknowledge that, while every person is new, every experience is fresh, and that every context has its sociopolitical dimension, there is something in our human experience that is shared.

Conclusion

Heuristic approaches to nursing research offer nurses the potential to explore questions that emerge from within themselves. They provide frameworks in which the researcher can integrate experience and knowledge so they can continue to evolve and expand. Consequently, heuristic methods of inquiry offer the potential for the emergence of insight that could create meaningful order from the complexity that accompanies questions that arise from nursing activity and inquiry.

References


Conflict of interest

None declared