Detangling the web of methodology: A doctoral student's perspective on chaos and contradiction

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Detangling the web of methodology

As a postgraduate student conducting qualitative research, it appears important to develop a thorough understanding of methodologies, paradigms, and assumptions that guide the research process. However, this can be challenging due to the different, and at times conflicting, definitions and perspectives of the key terms used within published literature (Crotty, 1998). Furthermore, academics have often been criticised for their use of inaccessible jargon when disseminating research as this hinders comprehension for many (Oxenham & Sutton, 2015). Complex terminology and phrasing used within literature surrounding ontologies, epistemologies, methodologies, and paradigms can make it particularly difficult for students, and sometimes supervisors, to understand and interpret key messages that may influence their programme of research. As a doctoral student, it has taken me quite some time to understand this complex and challenging element of my work. It has been an emotional journey during which I have occasionally doubted my ability to navigate the literature successfully and apply what I find to my research. Therefore, within this article, I aim to detail my understanding of methodology in a way that will be accessible to other doctoral students. In addition, the article will consider some of the challenges that I have faced and will provide some of my top tips for writing about methodologies, paradigms, and assumptions within the PhD thesis.

Understanding paradigmatic assumptions

Before starting any research project, it is useful to be aware of our assumptions and beliefs about the world because these influence the way in which we conduct research (Cresswell, 2009). By understanding and acknowledging our assumptions, we make ourselves and others aware of how our beliefs may influence the methods that we use. In addition, such information is likely to enhance a reader's understanding of why we have drawn particular inferences from

published evidence and our own data. Different people will hold different perspectives of the world, meaning that similar problems might be approached in various ways.

An individual's worldview, which is underpinned by their beliefs and assumptions, is referred to as a paradigm (Guba & Lincoln, 1994; Sparkes & Smith, 2014). A number of different paradigms are commonly described within the literature. Our worldview can influence the specific research paradigm that we align to, which in turn is likely to influence the methods that we use to collect and interpret data (Maxwell & Mittapalli, 2010). As a result, it is important that researchers understand their own worldview and the assumptions upon which it is founded. In essence, our worldviews are based on *ontological*, *epistemological,* and *methodological* assumptions (Denzin & Lincoln, 2005; Sparkes & Smith, 2014). Researchers of different paradigmatic positions may express different perspectives regarding these three main assumptions (Krane & Baird, 2005). Figure 1 demonstrates my understanding of the relationship between a researcher's assumptions of the world, the paradigm within which he or she sits, and the methods which he or she may use to conduct research.

INSERT FIGURE 1 HERE

Ontology, is concerned with the nature of reality and focuses on understanding what is real (Cresswell, 2007; Denzin & Lincoln, 2003). It considers what kinds of things exist, why they exist, and the relationships between these things (Blaikie, 2007). The literature suggests that we place ourselves on a continuum between two ontologies to determine our views of reality (see Figure 2). The two predominant ontologies referred to within the literature are relativism and realism (Gray, 2009; Sparkes & Smith, 2014). Realists assert that there is a single, knowable, and objective reality that exists and that this reality is independent of an individual's knowledge (Gray, 2009; Ponterotto, 2005). On the other hand, relativists believe that an individual's

perceptions of reality differs according to their experiences of the world (Denzin & Lincoln, 2005; Madill, Jordan, & Shirley, 2000). In accordance with this ontological assumption, it is assumed that each individual is likely to experience the world differently from one another based on their own subjective experiences (Stajduhar, Balneaves, & Thorne, 2001). Therefore multiple realities are believed to exist (each person creates a different interpretation of experience and therefore this means many different perceptions of reality exist within the world; Levers, 2013).

INSERT FIGURE 2 HERE

Epistemology refers to the study, theory, and justification of knowledge (Denzin & Lincoln, 2003). It is "a way of understanding and explaining how I know what I know" (Crotty, 1998, p. 3). Therefore it is concerned with explaining how individuals formulate knowledge about the world around them (Denzin & Lincoln, 2005), as well as determining which types of knowledge are legitimate (Cohen, Manion, & Morrison, 2007). Within research, epistemology also considers the relationship between the researcher and the subject being researched (Cresswell, 2007). Constructivism, objectivism, and subjectivism are three epistemological positions that have been detailed in the literature (Gray, 2009). Objectivism is related to realist ontological assumptions because it suggests that reality is objective and exists independent of an individual's conscious thoughts (Gray, 2009). Objectivist research assumes that both the researcher and researched are independent of one another and do not influence each other in any way (Sparkes & Smith, 2014). On the other hand, constructivist epistemology is associated with relativist ontological views, claiming that meaning is "constructed" by the individual based on their interactions with the world, and that different meaning can be assigned by different individuals to the same scenario (Gray, 2009). The final epistemological position, subjectivism, is also aligned to relativist perspectives and assumes that meaning does not arise from the interaction between the object

and individual but, rather, that it is imposed on the object by the individual (Crotty, 1998; Gray, 2009). Through subjectivist eyes, the object being researched does not contribute to the meaning that is formulated by the individual (Crotty, 1998). Instead, meaning is thought to be imported from an individual's collective unconscious (e.g., dreams, beliefs; Crotty, 1998; Gray, 2009).

Methodology refers to the process of gaining knowledge about the world through systematic research (Harding, 1987) and considers the description, assumptions, and justification of the methods that will be used within a research project (Kaplan, 1964; Schwandt, 2001). In other words, it focuses on how we gain knowledge of the world, which informs the specific methods that are used to collect data (Crotty, 1998). As stated earlier, the ontological, epistemological, and methodological assumptions that we have will influence the paradigm we adopt and the methods we develop (Sparkes & Smith, 2014). Indeed, there appear to be some trends in the methods that researchers with different ontological and epistemological assumptions use. For instance, individuals who adhere to realist ontology and objectivist epistemology tend to conduct research using experimental and manipulative methods (e.g., adapting independent variables to assess their impact on dependent variables). On the other hand, individuals who adopt a relativist ontology and constructivist or subjectivist epistemology often engage in qualitative research (Sparkes & Smith, 2014).

Key challenges faced and top tips

Writing the methodology chapter of my thesis was a challenging and emotional task. Despite extensive reading, I found it difficult to understand the complex terminology that is used within this area of academic literature. In addition, it was evident that there are contradictory perspectives within methodology literature, which made selecting the most appropriate approach for my research project more taxing. After being challenged about my intended methodological approach during my first annual progression meeting I became more aware of the importance of

understanding research paradigms and assumptions. It became apparent at this point that by raising my awareness and understanding in these areas, I would be better placed to justify my chosen research methods. It was interesting to have discussions with my supervisory team as they offered candid reflections on their lack of exposure to the complexities of ontologies, epistemologies, and methodologies during their own doctoral training. Their experiences might be accounted for by their early focus on realist research designs, and discussions with peers in the School who adopt realist viewpoints underscore that this position is alive and kicking. However, research training developments in the School, led by internationally renowned scholars, are beginning to shift the research culture by galvanising greater debate and discussion in relation to our understanding of 'what is knowledge'.

Tip #1: Start developing an understanding of methodologies early

In my attempts to understand paradigms, assumptions, and methodologies, I found it useful to talk to other doctoral students or individuals who were in the process of completing, or had recently completed a PhD. Interestingly, I found that the students had contradictory perspectives with regards to the perceived importance of this chapter within the thesis and the stage in the PhD process at which this chapter should be complete. In several instances, the individuals that I spoke to conceded that they left the writing of this chapter until the end of their PhD, despite the arguments provided above for considering research paradigms and methodologies in the initial stages of a programme of research. From my experience, starting this process early on is essential as it is likely that the knowledge you gain from this will positively influence the methods that you incorporate within each study of your PhD, subsequently enhancing the overall quality of your research. Therefore, I would encourage other PhD students to focus on the methodology chapter of the thesis during the early stages of the PhD, as this will optimise the coherence and rigour of the programme of research.

Tip #2: Attend methodology related workshops, seminars, and conference presentations

I am fortunate to be at an institution where workshops are provided by qualitative research experts to assist doctoral students and academic staff in understanding more about ontologies, epistemologies, methodologies, methods, and different theoretical perspectives. Leeds Beckett University offers postgraduate students annual opportunities to attend week-long training courses in qualitative and quantitative research. In addition, the university offers a weekly research student training programme and one of the timetabled sessions considers ontologies, epistemologies, and methodologies. Such support has been beneficial in reinforcing and confirming my understanding of this complex area. If such workshops are offered at your institution I advise that you consider attending these to enhance your knowledge in this area.

Tip #3: Expect and accept uncertainty

I found it difficult to understand much of the published literature, as it was conveyed in such a complex way (have a dictionary by your side!). I found that the time intensive nature of the learning task made me question whether I was progressing at a quick enough rate to complete the PhD on time. During these challenging periods, I found it useful to discuss these fears with my supervisory team who helped to normalise how I felt. I came to recognise that I was not the only person to find the web of methodology and methods difficult and I am now in a position to discuss other students' ideas when they are attempting to navigate the choppy waters of research paradigms. Given the sometimes timely nature of developing understanding of paradigms and methodologies, I suggest that other candidates factor in a significant portion of time within their PhD timeline to account for the reading and writing related to the methodological underpinnings of their research.

Tip #4: Think carefully about theoretical frameworks

Since the research conducted by PhD candidates is scrutinised closely, it is vital that theoretical perspectives can be clearly and consistently demonstrated through the research conducted. An example within my research is that I originally aimed to adopt an Interpretative Phenomenological Analysis (IPA) approach. However, after further reading, I realised that whilst my studies aligned well with two of the aspects of IPA (i.e., hermeneutics and idiography), they only partially adhered to the phenomenological part of IPA. Thus, it was not appropriate to say that I had fully adopted an IPA perspective. It was, however, important to incorporate hermeneutics and idiography as theoretical perspectives within my study design and this was duly acknowledged. Therefore, I advise other students to think carefully about the theoretical frameworks that you use to underpin your research and ensure that you provide clear explanations about how you incorporated these frameworks in your research. To achieve this, you need to make sure you know the perspectives well – and if you do not adhere to that particular perspective fully within your research, be cautious in taking the decision to say that you do.

Tip #5: Do not spend too much time critiquing each perspective and do not get confused with the variation of perspectives

Whilst ontology and epistemology are important, sometimes students get preoccupied by critiquing all the different philosophical perspectives with the idea that this will help them to defend the empirical work which they are going to later produce (Greenhalgh, 2016). However, a PhD student's main aim is to produce an original contribution to knowledge. It is likely that this will not be achieved by criticising the different philosophical perspectives. Instead the best way to achieve this is to develop a strong piece of empirical research on your topic area (Greenhalgh, 2016). What you will also find within philosophical literature is that different

authors will debate over the best way to represent each philosophical position and theoretical framework resulting in many variants of each approach (Greenhalgh, 2016). For example, when considering hermeneutics, a theoretical perspective I have incorporated within my research, in reading the literature it was evident that numerous different perspectives of hermeneutics have been proposed by different authors. This can be quite confusing for a novice researcher, however, it is important to understand that these perspectives do not provide you with a rule book for exactly how research should be conducted. Due to the number of different perspectives offered, it is likely that you will not include all of the ideas proposed by all of the authors who have provided varying contributions to that one approach. Therefore, it is advised that when writing this up in your thesis you take the form of saying that your work calls upon these elements from author 1's notion, and these elements from author 2's notion etcetera, and justify why these elements have been focused on in your research. The main aim is to demonstrate the way in which you have applied the ideas proposed by these researchers as opposed to using their notions as a rule book.

Conclusion

When I initially approached my methodology chapter, I had limited understanding of what was required. The first thing I did was look at other PhD students' theses to see what approach they had taken and to view the ways in which they structured the chapter. This was helpful. I also tried to understand the different research paradigms by reading widely and discussing (and some debating!) my ideas with colleagues and my supervisors. Given the complex nature of research paradigms I would urge students who are unfamiliar with the paradigm lexicon to look at theses closely aligned with their topic area (your supervisor should be in a position to assist with this). Spend time in the early stages of your programme of study getting to grips with key terms,

including ontology, epistemology, paradigm, methodology, and methods. A strategy that I developed to facilitate my understanding with one of my supervisors was a "word of the month" activity. At each monthly progress meeting, my supervisor and I would agree a methodological term to examine in greater depth, and would seek to develop a clear definition and illustrative example for that term ahead of the next monthly meeting. This allowed both my supervisor and I to enhance our understanding of different paradigms and assumptions.

Completing the methodology chapter of the PhD thesis can be a difficult but rewarding process if done well. Not only have I found this process beneficial for my development as an independent researcher, but I have also found it useful for my personal growth. My supervisors have been supportive on the emotional rollercoaster of methodology and methods and their support was essential to ensure that my confidence remained intact during this critical period of understanding and writing. For those currently in the eye of the methodological storm, I hope that the above reflections and recommendations prove useful and reassuring.

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Figures

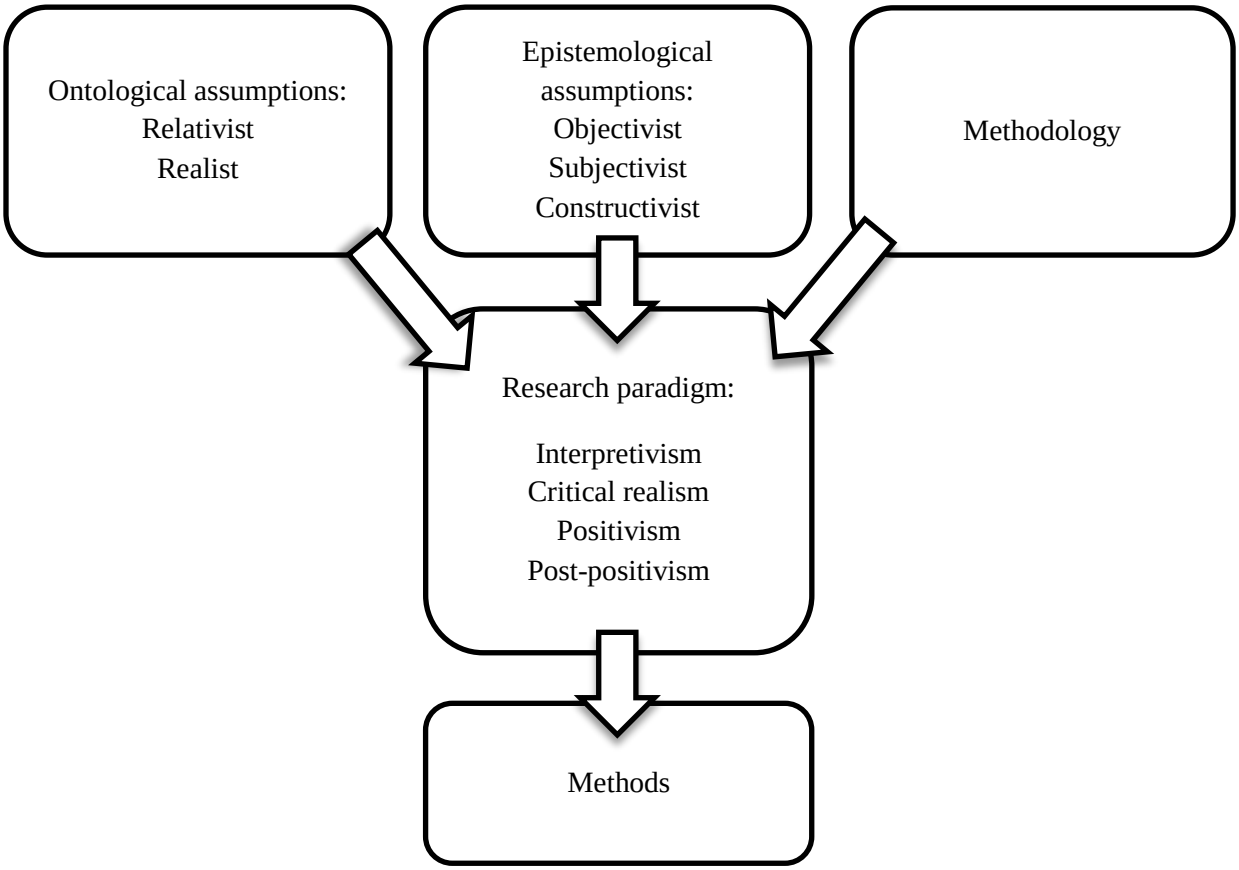

Figure 1: Associations between ontology, epistemology, research paradigm, methodology, and methods.

Figure 2: Ontological continuum (adapted from Andrews, 2012)