

Making connections: The relationship between epistemology and research methods

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The ability to identify the relationship between the epistemological foundation of research and the methods employed in conducting it is critical in order for research to be truly meaningful. Unfortunately this connection is often not taught in the research methods classes that most psychology students experience. Indeed the very names of these units emphasises the focus on methods and consequently the epistemology, theoretical frameworks and methodologies that influence the choice of methods remain 'hidden' from view. This paper brings into focus these hidden (or often overlooked and ignored) elements of research and illustrates the importance and relevance by drawing on example from the author's research into the student experience of higher education.

The relationship between epistemology and method is rarely articulated through our formal coursework education either at undergraduate or postgraduate level; certainly this is true in many psychology programmes. Nowhere during my formal education was the connection between epistemology and method clearly explained, indeed the entire notion of a philosophical foundation to research was missing. The Australian Psychological Accreditation Council (APAC) guidelines do not require the epistemological foundations of science to be explicated at either the undergraduate or postgraduate level. In fact the only reference to 'philosophy' in the 2005 documentation is a requirement for the "history and philosophy of psychology" (APAC, 2005, p.23) to be included somewhere during the undergraduate degree. The various research units I studied throughout my undergraduate and postgraduate education were all titled *Research Methods* (with or without various suffixes attached) which served to emphasise the focus onto the *methods* employed instead of the entire construction of the research process. It was only when I was struggling to write my PhD thesis that I realised that this gap in my knowledge and understanding existed and that I needed to rectify it before I continued with the writing. But in embarking on this journey I discovered as much about me as I did about how the methods I employed sat within a social constructionist worldview.

In this paper I will describe why it is important to be explicit about the epistemological foundations of our work and how identifying our

orientation can help frame our research design. I begin by outlining the constructionist view and differentiating this from the positivist stance. I do this for two reasons; first, to demonstrate the dominance of the positivist perspective in psychology students education and second, because I personally subscribe to a constructionist worldview and this influenced my choice of research topic, and the methodology I employed. Having done this I then demonstrate how this epistemological view shaped my study and was able to cast new light on the experience of undergraduate students that challenges the accepted knowledge on this topic.

Epistemological Roots

The basic contention of the constructionist argument is that reality is socially constructed by and between the persons who experience it (Gergen, 1999). It is a consequence of the context in which the action occurs and is shaped by the cultural, historical, political, and social norms that operate within that context and time: And that reality can be different for each of us based on our unique understandings of the world and our experience of it (Berger & Luckman, 1966). Reality in this case is completely subjective and need not be something that can be shared by anyone else but at the same time it is independent of the person living it.

In contrast, empiricism, which is the foundation of positivism, views reality as universal, objective, and quantifiable. Therefore from this perspective, it is argued that reality is the same for you as it is for me and through the application of science we can identify and 'see'

that shared reality. By adopting the positivist orientation, psychology has reduced the individual to the status of a passive receptacle. There is little notion of the person as the *perceiver* of his or her world and even less thought seems to be afforded to the possibility of the person as a *conceiver* or *constructor* of his or her world (Ashworth, 2003). Social constructionism (Berger & Luckman, 1966; Gergen, 1999, 2001a, 2001b) on the other hand views the individual as a *sense maker* in that each of us seeks to understand or make sense of our world as we see and experience it.

The fact that science is situated within empiricism is in fact to locate it within an epistemology. Because this is the dominant discourse of science it becomes the taken-for-granted norm that is above question and by extension is not subjected to critique. So while science, and psychology in particular, believes that scientific endeavour is objective and value free it fails to realise that these assumptions are in fact a statement about the nature of knowledge and therefore is in fact an epistemology. In adopting the belief that a single universal reality exists for all of us and that this reality can be discovered via systematically controlled investigation science/psychology fails to recognise the ability of the human person to *interpret* and *make sense* of his or her world.

Social constructionism provides a different perspective with which to view the world that allows the unique differences of individuals to come into focus while at the same time permitting the essential *sameness* that unites human beings to be identified (Ashworth, 2003). This means that it is not necessary for any of us to share the views of others but at the same time none of us can change or alter *our* reality simply because we might wish to. In this manner each individual reality is true for the person because he or she experiences it but it is independent of that person due to his or her inability to alter it (Gergen, 1999).

Relevance to Research on Retention in Higher Education

To illustrate how these two worldviews differ I refer to my PhD thesis which explored the issue of retention in higher education; why do some students complete their undergraduate degree and others do not? Most of the literature

in this area speaks of the role of the student in terms of motivation, commitment and ability as if these are isolated constructs that occur independently of the person or the context in which the person exists. The reality is that each of us has very complex reasons for studying and these decisions are influenced by the type of person we are, our experiences, culture, background, social, and economic status. So imagine if you will a student who comes to university from a privileged background; both her parents are university graduates, she attended a well resourced high school that facilitated her social and academic ability. She was encouraged by her teachers and family to explore her potential in every area and university was regarded as the natural progression in her postsecondary development. Contrast this experience to the student who is the first in her family to attend university; her family and teachers are equally supportive and encouraging of her achieving her potential but the nature of her experience is fundamentally different from the advantaged student. In the first instance the student regards her university experience as “more of the same” in that she is continuing a family tradition almost. The second student though is experiencing university as a life changing challenge. She sees university not simply as a natural progression but as an opportunity for her to help her family and to become a role model for others in her neighbourhood (Ostrove, 2003; Ostrove & Cole, 2003; Paulsen & St John, 2002; Walker, Matthew, & Black, 2004).

These two students share the same experience at a surface level in that they both attended university from high school, they are the same age and gender, and both are committed to completing their degree. Therefore as far as the attrition literature is concerned both have the same opportunity to succeed. This position is supported by a plethora of eminent researchers in the area all of whom employed quantitative methodologies to examine completion and non-completion among undergraduate students (see for example: Abbott-Chapman, Hughes, & Wyld, 1992; Clark & Ramsay, 1990; Owen, 2003; Shah & Burke, 1996). The approach adopted by these studies was to assume that students enter university on an equal level and to track them

over the course of their degree (or more commonly for the first semester or first year). A range of demographic data (age, ethnicity, gender, financial resources etc) is gathered on these students and then depending on their status at the end of the study (still enrolled, graduated, or withdrawn) various conclusions are drawn to 'explain' non-completion.

However, the realities of students are in fact vastly different as a result of their prior experiences, the socialisation process they were subject to, and the cultural differences resulting from their different economic positions. In the examples I presented earlier, neither student can change her view of what university represents to her or her family nor is she in a position to immediately see the world of the other. So from the constructionist perspective each of them has a separate and unique reality and each is independent of her interpretation of that reality. Simply sitting in the same classroom for the same lessons does not make their experience of university identical. Consequently, trying to explain their experience of university and the fact that one of them might withdraw by looking solely at demographic data cannot hope to succeed in capturing the unique reality of the individual, and as a researcher one is poorly placed to claim any degree of 'understanding' of her experience. One has to look at the question differently and employ a different approach to the research process for any real understanding to emerge.

Therefore, accepting the constructionist definition of reality calls for a change in how we view science and scientific enquiry. If my reality is created out of my subjective view of the world then it does not lend itself to objective analysis or scrutiny because no-one can see the world in exactly the same way I do. All that an observer can do is *interpret* my actions through his or her understanding of what he or she *thinks* my world is like. Therefore, as researchers we must instead utilise methods of enquiry that accept and value the role of the subjective rather than the objective in our attempts to understand phenomena from the idiographic perspective. This requires a major epistemological shift away from empiricism towards constructionism and the development of different parameters of investigation. Arriving at this understanding

whilst trying to make sense of my research caused me several weeks of anxiety which was reinforced when I was asked (by a significant person) why I was discussing philosophical positions instead of focussing on *psychology* (after all I was a psychology student!). This left me in a quandary of self doubt that called into question not only my interpretation of the data but my whole understanding of what I was trying to achieve with the research and the legitimacy (and therefore validity) of the approach I had taken. After lengthy conversations with some of my peers and reading (again) Gergen's (1999) *Invitation to Social Construction* I was able to understand that it was the dominance of positivism that prevented this person (and many others with whom I have discussed research) from seeing the strength of the constructionist perspective. This realisation emphasised to me the power of the empiricist perspective and the manner in which it controlled what was viewed as scientific and showed me that a shift in perspective does not negate the rigour involved in the scientific pursuit of knowledge; rather it requires a broader definition of what constitutes science and scientific endeavour (Gergen, 2001b).

Scientific Rigour

The rules of scientific research state that it must be conducted systematically, sceptically, and ethically (Robson, 2002) and that it must be based on empirical data. Within the positivist paradigm this has come to mean, controlled, objective, value free (or value neutral) and able to be generalised to a broader population. However, deeper scrutiny of these rules allows for a much broader scope to scientific investigations.

Let me illustrate each of these three points from a constructionism perspective with examples drawn from my own study. The first point *systematic investigation* requires giving serious thought to *why* we are interested in investigating a particular issue or domain as well as deciding how we might proceed (Robson, 2002). This scrutiny includes the role of the researcher in the investigation, his or her values base and how this might interact with the research process, and what drives or motivates that interest as well as which methods of enquiry best meet the objectives of the study.

My interest in retention was triggered by my own experience of being an undergraduate student. I found the whole experience challenging, not simply from the academic perspective but more so in relation to the processes adopted by the university and the content of the degree I studied. The thought of not continuing occurred to me many times over the years as it did to some of my peers, and I began to wonder what it was that contributed to our dissatisfaction with the experience and what factors motivated us to continue. I wondered why some of my cohort seemed so able to accept the tenets of psychology while I constantly wanted to question and challenge them. As a postgraduate student I began to formulate a research design that would allow the different voices to emerge from the study and demonstrate that students could share the same surface experience but the meaning attributed to that experience and the effect it had on the individual could be very different. The fact that I arrived at this approach to the research *before* I had read any literature that explained the constructionist perspective indicates that it was my personal worldview that was dictating the orientation that the study should follow. Once I discovered the literature, (with grateful thanks to two of my lecturers) I discovered a language that allowed me to put my research design into a legitimate framework and identified the specific research methods employed.

Using recursive interview techniques allowed me to explore the experiences of the respondents in my study and uncover the meaning that the experiences had for them (the subjective interpretation). But as part of that process I was able to scrutinise my role in the interview process, and challenge how my own experience as a student and my views and biases might be interacting with the student narratives to create my understanding and interpretation of those narratives. This reflexivity is not a normal part of research conducted within the positivist paradigm because of the assumption that the researcher is separate from, or objective to, the research process. Therefore within the positivist view the researcher has no means of scrutinising his or her perspective to see how or to what extent his or her personal views might be affecting the interpretation of the data. In

contrast, recursive interviewing offers a deeper scrutiny of the research process and the role of the researcher and as such increases the rigour of the study.

The second point, *being sceptical* means allowing scrutiny of our ideas, observations and conclusions by peers and includes the role of the researcher not just the data in that scrutiny (Robson, 2002). It could be argued that all researchers subject their work to scrutiny because the process of peer review conducted by journal editors and conference committees requires at least two reviewers to examine the work before it is accepted for publication or inclusion in the programme. However, I would suggest that this scrutiny needs to occur long before the publication or presentation phase; it should occur throughout the entire research process. Talking with others about our research provides the opportunity to explore areas and ideas that we might not have considered in isolation.

Throughout my research process I shared my ideas and concerns not only with my supervisors but also with my fellow postgraduate students, other lecturers and people I met through attending academic conferences. This can be quite a challenging process because it exposes one to the critique of peers, and to work successfully the process needs to be founded on trust, honesty, and reciprocity. But the benefits associated with adopting this approach are incalculable in my view. There is a note of caution to add here though in relation to discussing our interpretation of the interview data. While scrutiny of these interpretations by peers is beneficial, there will be times when we as the researcher differ from them in our understanding of what was said and intended by the participant. In these situations it is necessary to revisit the raw data and any notes we made at the time of the interview, listen to the nuances of what was said and explore why we interpreted the information the way we did (Strauss & Corbin, 1998, 1997). You might also speak with the participant to discuss your interpretation with him or her. If the difference of opinion still remains after this process it is critical to trust our own instincts because it is the interviewer who was present with the participant during the interview and therefore the researcher is the only person who experienced the entirety of the

interview, the body language, intonation, hesitation etc that occurred and that can contribute to meaning and understanding of the whole experience. It is as a result of the conversation between that *particular* respondent and the *particular* researcher that resulted in the co-construction of meaning that emerged. Consequently it is the judgement of the researcher that must take precedence over the perspective of our peers and colleagues with whom we might discuss our interpretations of the data (Crotty, 1998). While some researchers would take exception to this perspective I think their objections reflect the pull of positivism and therefore indicate the dominance of the traditions within psychology rather than a genuine understanding of the argument.

The final issue of *working ethically* requires more than following a code of conduct; it requires that we examine our motives and scrutinise our actions and our research processes for foreseeable and perhaps unforeseeable consequences that might affect our participants or have even broader repercussions to society (O'Neill, 1989; O'Neill & Trickett, 1982; Robson, 2002). During the data collection phase I was a member of staff in the school of psychology and I was interviewing psychology students about their experience of the school. The potential for harm to the participants was particularly relevant in this context and required additional vigilance to ensure that the participants felt safe enough to discuss their experiences openly and were protected from identification both during the research process and afterwards. To this end I insisted that no-one other than me knew who the participants were and I presented interview data as a series of composite narratives (Gutierrez De Soladatenko, 2002; Hanninen & Koski-Jannes, 1999; Rourke, et al. 2000) that represented the issues raised by the students but which could not identify any individual.

Adopting a broader definition of scientific enquiry allows for much greater flexibility in methodology and deeper understanding of the unique characteristics of a domain and the individuals who comprise it. It allows for the examination of human agency and thought and the relationship between this and the context in which it occurs (Berger & Luckman, 1966). With this view we see a re-emergence of the notion of

consciousness and the intentionality of human existence receives valence within the research context. But social constructionism moves beyond this modernist view of self with agency at its core and embraces the postmodernist view that incorporates the role of context in the construction of identity (Gergen, 2001b). Multiple perspectives on an issue or topic provide the researcher with a varied understanding of how that issue appears to different people as a result of their different interpretations of the issue. In this manner one might argue we are able to see more of the 'truth' associated with that issue (Berger & Luckman, 1966) and this is reflected in our interpretation and conclusion.

The modernist view of the individual is based on the binary notion of self/other and has resulted in individualism dominating our construction of society. A good example of this is seen in our educational systems where we place high commitment on the development of individual thought and achievement. The prospectuses sent out to prospective students state an emphasis on, and commitment to, individual goals and personal development. Inherent in these statements is the absence of communal responsibility and the manner in which individual development can contribute to societal wellbeing. In essence, the value we place on the individual is defined by the absence of an equal commitment to the collective. Students are positioned as individuals who must be 'independent' and 'self-reliant' and can potentially isolate students within the learning environment: We become what Gergen (1999) describes as *isolated souls* doomed to enter and leave the world as *self* with everyone else defined as *other* and therefore different and separate from.

Viewing the person as a relational being rather than one half of the self-other dyad changes the focus of the debate. Once again drawing on Gergen's (1999) analogy, we focus on the game of chess rather than the component pieces. The game is played by moving the individual pieces across the board, but the pieces gain relevance from the game. As individuals we are at the same time constructed by, and constituents of society; we understand ourselves and find meaning and relevance from our roles

and place within the collective, while at the same time society is constructed by the individuals that comprise it. In this way social constructionism values the role of the person in contributing to the whole but recognises the influence of the collective in creating the individual. There is a synergistic relationship between the collective and the person without which both cease to have meaning and relevance (Gergen, 1999, 2001b). This relationship is played out in the separateness that some students feel within university and the struggle they have in finding meaning in their role of 'student' as well as in their course. It is also manifest in the research process with each party in the interview setting contributing something to the shared understanding of the issue. The participant and the interviewer are each individual 'pieces' playing the specific culturally defined roles of 'researcher' and 'respondent'. The process of the interview allows both the emergence of the individual experience and the creation of a combined understanding of the phenomenon.

The Relevance of Language

In discussing a socially constructed world one needs to examine the role of language because it is via language that we communicate, create and share the socially constructed norms and values that permit engagement and participation in a collective (Berger & Luckman, 1966; Shotter, 1993) and it is through language that society and the individual come into being. Therefore, we cannot understand either the collective society or our role as an individual without understanding the way each is constructed by the language we choose to describe them and this is particularly so when looking at the experience of students. For instance, the term 'student' brings with it certain assumptions and rules: As a student we are to 'learn' which assumes a degree of 'ability' to learn and 'commitment' to do so. To some degree the term 'student' implies novice or unknowing and consequently, consciously or unconsciously academic staff can ignore the fact that students often have a vast wealth of experience that they bring to the classroom. If this knowledge were valued and included in the discussion and debate within the learning context it would not only enhance the learning but would validate the individuals within that context. The

role of student also presupposes the role of 'teacher' as someone from whom we can learn and therefore each is constructed by the other as a function of the definitions we apply to the roles.

However, each of these roles also undergoes transformation as a function of our gender, age, ethnicity and the different cultural norms of each society. For a traditional Asian student the role of student is passive and the teacher is viewed in high esteem as a person of knowledge to be respected. In this reality it is inappropriate for the student to question or debate the teacher. For some it is even disrespectful to ask a question in order to clarify understanding for to do so implies that the teacher has failed to impart knowledge adequately and therefore is not competent. This interpretation of the roles does not hold in most Western schools and certainly not once we get to university. The notion of questioning and debating ideas and perspectives is desired and often encouraged at all levels of education. Therefore, it is possible for different interpretations to be made as a function of these differing norms; the Australian academic who wants student to debate and challenge these perspectives might be confronted by the International student who constantly defers to her judgement and reiterates her every utterance. It might lead the lecturer to assume the student lacks the capacity for critical thought and thus lead her to be overly judgemental or harsh with this student. The student too is likely to feel the dissatisfaction of the teacher and strive harder to please, resulting in discontent for both. It is within these dynamically constructed relationships that we develop a shared meaning of what we come to understand as reality. With different constructions, meanings, and understandings being possible from the same utterances, the role and power of language takes a position of greater importance in society. Therefore research conducted within a social constructionist epistemology is more likely to involve a heavy reliance on the spoken word through conversation, interviews, narrative, and similar (Gergen, 2001b; Padgett, 2004).

By accepting the social constructionist view of the world that reality is constrained by the socio-cultural-historical-temporal space in which it occurs and by the persons involved in it

we are required to use research methodologies that are able to extract the degree of detail often obscured by more traditional methods. Qualitative methodologies provide the means to seek a deeper understanding and to explore the nuances of experiences not available through quantification. By utilising these methodologies we are able to expand on the ‘*what*’ questions of human existence asked by positivism to include the ‘*why*’ and ‘*how*’ questions asked by constructionism. Positivism emphasises the individual as the sole creator of his or her destiny and the binary notion of self/other is reinforced, whereas qualitative methodologies accept the person and society as co-constructors of his or her reality and the synergy of person and society is recognised.

Consequently, it can be argued that the use of qualitative methodologies is predicated upon social constructionism and the adherence to a social constructionist philosophy requires the use of qualitative research methods. In this manner we see a natural relationship between interview techniques as a data collection method and a social constructionist epistemology. This is a very different situation than the positivist researcher who might employ qualitative methods to collect some data; this is not qualitative research. Understanding the relationship between philosophy and methodologies makes the selection of appropriate methods easier because we understand the foundation upon which that choice is predicated. It also identifies our role in the research process as co-constructors of the reality that is the research process. We bring to our research our worldviews complete with bias and prejudice – it is not possible to separate the *me* from the research. The research process then becomes one of co-construction: In partnership with our respondents we create an interpretation of his or her reality. The importance of language in the process and the power of language to shape and determine our understanding of that reality is self-evident and so too is the use of interviews in understanding that construction.

Conclusion

At a personal level, understanding the relationship between my view of reality (ontology) and the meaning I ascribed to knowledge and its creation (epistemology) was

fundamental in being able to articulate the rationale for my research design and methodology. Once I saw the clear relationship between my epistemology and my methods the entire study made much more sense. The fact that I intuitively knew the only way to explore the issue of retention was to understand the individual and highly diverse experiences of students from their perspective highlights that my worldview is a deep seated integral part of who I am as a person and as a researcher. The fact that I now have the intellectual understanding of why these relationships exist simply provides me with the language to legitimise my perspective to a scientific audience; it does not change the essential components of *me*. It is somewhat ironic though that having survived my journey of personal and intellectual discovery and constructing a chapter in my thesis that explained the relationships between these components I was advised that a ‘theoretical perspective’ was unnecessary and I should remove the whole chapter. Not only did I reject this advice on my thesis I reject it as a philosophy. I believe it is essential for researchers to understand who they are, what they hold true, and to understand the inherent bias and prejudice that we are all subject to as a function of our context: And it is critical that we understand these relationships before we embark on our research. One cannot ignore the role of the person in the research process and this is equally true of the researcher as it is of the participant.

I don’t regret a single moment of the struggle and frustration that I experienced in trying to understand the relationship between epistemology and methodology because I emerged from the experience with a greater degree of clarity about who I am and the researcher I can become. I am also genuinely grateful to the opposition I received from the person who told me it was irrelevant to understand these relationships – had I not experienced this I might not have examined my belief system and its connections to the research process quite so deeply.

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