The Hitchhikers Guide to Paradigms: Tripping on Methodology

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Abstract

This paper was written with the novice social science researcher in mind who is perhaps struggling with their understanding of the terms ‘paradigm’ and methodology’ and what the implication each has for their research. A paradigm serves as an intellectual boundary that captures a researcher’s ontological, epistemological and methodological assumptions. As a human construction paradigms are not open to confirmation in any conventional sense and must, as stated by Guba and Lincoln (1998), be “accepted simply on faith” (p. 200) relying on the persuasive rhetoric of its champion. Methodology refers to the study or considerations of a research process or set of principles used by proponents of a discipline to accept or reject knowledge. It is not, as some mistakenly believe, simply a study of techniques and methods but rather, it is a study of a disciplines’ principles. It is through methodology that a researcher can learn to accept or reject knowledge and as such provides the guiding strategy for research design and selection of research methods to be adopted in the course of a study.

Introduction

Summer et al. (1990) argue that all scholarly/academic disciplines “have a philosophy, a set of attitudes, values and beliefs” that not only attempt to “establish the ultimate aim of the discipline [but also] the choice of constructs (theories and models) … and the choice of methods by which research” is accomplished (p. 362). Such schema are referred to as paradigms. Social scientists have crafted numerous paradigms based on specific worldviews through which they assume valid or useful understanding of social phenomena can be generated. Particular research methods undertaken for any project must be consistent with the foundational assumptions of the chosen paradigm if conclusions are to be considered valid or trustworthy. Guba and Lincoln (1998) argue, “questions of method are secondary to questions of paradigm” (p. 195). Questions of validity or rigor are always paradigm specific.

My intention in this paper is to clarify what is meant by the term ‘paradigm’ and to examine paradigm schema in social science research. I will then critique the framework provided by Burrell and Morgan (1979). A number of writers have suggested that the Burrell and Morgan framework, since its publication, has played a pivotal role in the philosophical debates in social science research (see for example, Laughlin, 1995; Lowe, 2001, 2004; Kelly and Lowe, 2001). This undertaking is particularly useful to the novice researcher starting out of his or her academic path who may be struggling with their understanding of the terms ‘paradigm’ and
‘methodology’ and the implication each has for their research as it displays a range of methodological alternatives in terms of four sets of meta-theoretical assumptions.

Paradigms

Sarantakos (1998) suggests that there is limited agreement on the definition of the term ‘paradigm’. Gioia and Pitre (1990) however, argue that a paradigm is a set of propositions that explain how the world is perceived from a particular point of view. Such propositions crafted together may be used to form, establish or impose a particular belief system that Denzin and Lincoln (1998) claim “attach the user to a particular worldview” (p. 4). Bogdan and Biklen (1992) claim that a paradigm is a “loose collection of logically held together assumptions, concepts, or propositions that orient thinking and research” (p. 33). Guba and Lincoln (1998) concur with this view and state that these rudimentary beliefs are “basic in the sense that they must be accepted simply on faith (however well argued); [as] there is no way to establish their ultimate truthfulness” (p. 200). It is thus argued in this paper that a paradigm or worldview is a rudimentary set of beliefs (metaphysics) or assumptions that may be implicit or made explicit and are used to guide a researcher’s inquiries.

Guba and Lincoln (1998) argue that a paradigm “represents a worldview that defines, for its holder, the nature of the ‘world’, the individual’s place in it, and the range of possible relationships to that world and its parts” (p. 200). In their explanation, Guba and Lincoln usefully draw our attention to the fabricated qualities of such paradigms and worldviews. They argue that all paradigms are “inventions of the mind and hence subject to human error. No construction is or can be incontrovertibly right; advocates of any particular construction must rely on persuasiveness and utility rather than proof in arguing their position” (p. 202). Through their own reification of these conceptual schemas, however, Guba and Lincoln generate a misleading grammatical form through which the author(ity) of the creator and his/her responsibility for, or within, this conceptual schema is obscured. Authors and users of paradigms have available to them previously established knowledge and truth claims. These may be consciously or unconsciously reproduced or challenged in scholarly work, policy and practice.

Guba (1990 cited in Denzin and Lincoln, 1998, p.26) describes a paradigm as the ‘net’ that contains the researcher’s ontological, epistemological and methodological premises. Ontological premises are beliefs about existence, and about physical and social phenomena within a given paradigm; epistemological premises are articulations about what passes as ‘truth claims’ concerning such phenomena and how we can ‘know’ them; and methodological premises are a study of the appropriateness of a particular method(s) within a given paradigm and the validity of findings generated by that method.

Attempts to address a research question are necessarily influenced by researchers’ assumptions about the world and their grounding in, or selection of, an overall paradigm. The question one begs to ask is; how does a researcher form their assumptions? These assumptions may be based upon researchers’ trust in, or commitment to, previously established truth claims (now parading as ‘knowledge’). But as Ragland (2006) argues, this knowledge itself has been socially constructed and is thus a social fabrication based merely on more or less plausible belief statements. Ragland further claims that these assumptions have a dual purpose – to serve as
blinkers so that the researchers’ focus is directed “in a particular direction” (p.173) whilst simultaneously eliminating other vistas in the process. Differences in such assumptions will allow for different ways of approaching the research question, practical conduct of inquiry, interpretation of findings, and strategy choices (Gioia and Pitre, 1990; Guba and Lincoln, 1998). Such choices are not politically neutral. Reason (1998) claims that dominant groups establish “centres of power … [through which they] have a monopoly on the production and use of knowledge” (p. 149). He suggests that many positivist researchers, deluded by their paradigm-specific belief in the possibility of researcher objectivity and/or neutrality, are incapable of ‘seeing’ that the very paradigm in which they operate so uncritically has been established to help maintain the status quo.

Positivists are not unique in taking-for-granted a specific paradigm for sense-making and not all researchers choosing to work within a positivistic paradigm are unaware of the vulnerability of the assumptions they are working with. Unlike the era of Church domination of knowledge construction and truth patrol in the pre-Enlightenment era, a broader range of paradigms is now available to researchers and practitioners to make potentially useful contributions to the enhancement of our understanding of social phenomena, at least in theory. Knowing the possibilities and limitations of one’s choice of paradigm suggests more careful and humble consideration of the ‘truth claims’ to be made, based on a given piece of research. An acknowledgement of the vulnerability of ‘truth claims’ to possible discredit from another point of view is a part of a scholarly maturation. However, becoming alert to the range of potentially useful paradigms for sense-making is a mammoth task. Academics have provided a number of classification schemas, some of which will be discussed next.

Paradigm Classifications

In order to provide a map of commonly used paradigms, Burrell and Morgan (1979) crafted a two-by-two matrix “founded on mutually exclusive views of the social world” (p. viii). The matrix represents their understanding of some of the philosophical assumptions that ‘underwrite’ different approaches to social science research in a two-dimensional format:

- a subjective-objective dimension,
- regulation-radical change dimension

Morgan and Smircich (1980) adapted the Burrell and Morgan (1979) matrix format to produce a time-line style continuum ranging from 'positivist approach' to a 'phenomenological' standpoint on their subjective–objective scale. Chua (1986) classifies methodological perspectives as mainstream, interpretive and critical. Guba and Lincoln (1989) draw a distinction between two very broad research methodologies namely scientific and naturalistic. Firestone (1987); Creswell (1994, 1998); Bogdan and Biklen (1992); Alvesson and Skoldberg (2000); and Crabtree and Miller (1992) classify methodologies as either quantitative or qualitative.

Guba and Lincoln (1998) posit that because paradigms are a human construction they are not open to confirmation in any conventional sense; thus, there is no way to
promote one paradigm over another simply on the basis of ‘fundamental’ criteria. The choice of paradigm or premises from which to tackle the task at hand is a manifestation of researchers’ worldviews and is influenced by their ontological, epistemological and methodological assumptions. For some researchers, however, the selection of a paradigm does not appear to be a matter of conscious choice. They appear to be so embedded in their worldview that they are unable or unwilling to recognise that their facts and findings are generated from a schema of assumptions that are debatable. My paper addresses those researchers who understand that there are diverse ways of conceptualising phenomena and, who wish to enhance their understanding of the implications of their choices. How does a researcher choose an appropriate paradigm for a specific piece of research?

Academic literature contains many examples of classifications of methodological orientation (see Burrell and Morgan, 1979; Morgan and Smircich, 1980; Chua, 1986; Guba and Lincoln, 1989; Creswell, 1998). Creswell (1994) suggests that before researchers decide which paradigm is appropriate from the quantitative-qualitative range it is advisable that they employ a paradigm selection process based on five criteria. The criteria he proposes are:

- A conscious awareness of the worldview on which the research is to be based; in other words, the ontological, epistemological and methodological assumptions from which choices about the usefulness or otherwise of quantitative and qualitative methods are to be made.

- The training and experience of the researchers – do the researchers possess technical/scientific writing skills or, are they experienced with a more literary form of writing.

- The researchers’ psychological attributes – do the researchers have a low-threshold for ‘risk’? Are they more comfortable with a rules and procedures orientated form of study? Do the researchers have a high threshold for ‘risk’ and are they more comfortable with a flexible type of research approach?

- Has the phenomenon been previously and uncontroversially identified in the literature? Or, does the phenomenon need to be explored and (newly) articulated?

- The ultimate audience for the final study – a choice of paradigm is one that the audience will understand or at least accept as a legitimate approach to the task undertaken.

Creswell (1994) appears to base the classification of paradigms on the distinction between quantitative/qualitative styles of research method. Crabtree and Miller (1992) suggest that quantitative methods are usually used for “explanation-testing and control” whereas qualitative methods are more helpful for “identification, description and explanation-generation” (p. 6). Polkinghorne (1991) argues that these two methods of research approaches “are not oppositional” (p. 112) but that qualitative research methods are particularly well suited to work with data that have multiple levels of meanings. Rudestam and Newton (1992), although supporting the view that these two broad approaches are not strictly oppositional, suggest that a qualitative study emphasises the “thick description of a relatively small number of subjects with the context of a specific setting” (p. 39). Although quantitative research has
dominated the social sciences in the past (Mathews and Perera, 1996) Creswell (1998) claims “qualitative inquiry represents a legitimate mode of social and human science exploration” (p. 9) as quantitative research is “incapable of addressing … complex social ramifications” (Baker and Bettner, 1997, p. 293). This view is supported by Rosen (1991) who likewise argues that social processes are not captured in hypothetical deductions, covariance and degrees of freedom.

Social constructivists and phenomenologists emphasise that attempts at understanding social process involves attempts at getting inside the world of those generating those social processes. ‘Meaning making’ is an important concern for qualitative researchers who are attempting to represent the participants’ perspectives as knowledge is subject to ongoing interpretation and reinterpretation.

**Methodology Selection**

Methodology refers to the study or considerations of a research process or set of principles used by proponents of a discipline to accept or reject knowledge. Thus, Morgan and Smireich (1980), and Llewellyn (1993) argue that methodology (the philosophical choices made by the researcher) precedes and, ultimately, provides the guiding strategy for the research design and selection of research methods adopted in a course of study.

As a researcher it is important that much thought be given to selecting a methodology that is compatible with the study’s focus and goals. When selecting a strategy researchers run the risk of assessing each project not on its merits, but rather, adopting methods of research they feel most comfortable with. Llewellyn (1992; 1993) and Lowe (2001) point out that it is vital researchers select the methodological perspective that is appropriate for the research rather than try to fit the research to the methodological perspective they are comfortable with.

Aitken and Gaffikin (1987) emphasise that methodological study is not a study of techniques and methods but rather a study of a discipline’s principles. They suggest that it is only through methodological studies that research in any discipline can “learn to accept or reject knowledge” (p. 5). Such emphasis on the necessary examination between philosophy and action in research is not new. Machlup (1978) rather harshly observed that only ‘literate’ people used the word ‘methodology’ correctly in connection with philosophy. ‘Semititerate’ people used the term ‘methodology’ in an overly simple connection with methods and techniques.

Some authors have classified methodology strategies based on the central interest of the investigator. Tesch (1990) for example organised approaches or strategies into four branches of a flowchart. Miller and Crabtree (1992), on the other hand, categorised research traditions under ‘domains’. These domains included lived experience, the individual; behaviour/events; the social world; culture; communication/talk; and practice and process. Jacob’s (1987) classification system revolved around what she also titled ‘traditions’; namely, ecological psychology; holistic ethnography; ethnography of communication; cognitive anthropology and symbolic interactionism. Strauss and Corbin (1990) wrote about grounded theory, ethnography, phenomenology and life histories. Denzin and Lincoln (1994) also talked about grounded theory, ethnography, phenomenology as well as clinical
research and biographical traditions. Burrell and Morgan (1979) wrote of radical humanist; radical structuralist interpretive and functionalist methodology. It is vitally important that researchers do not view this veritable smorgasbord of approaches frivolously and that much thought is given to selecting a methodology that is compatible with the study’s focus and goals.

The Burrell and Morgan (1979) Model

Although not without their critics (see for example Chua, 1986; Hopper and Powell, 1985) the Burrell and Morgan (1979) framework has had a considerable impact on the philosophical debates in social science research. Laughlin (1995) and Lowe (2004) suggest that Burrell and Morgan (1979) have done the most toward designing and developing a classification schema for understanding broad streams of social science research methodologies. Others believe that Burrell and Morgan’s (1979) two-by-two matrix has provided a useful vehicle with which to display the range of methodological alternatives that are available to researchers (Lowe, 2001; Kelly and Lowe, 2001). Kelly and Lowe (2001) claim that Burrell and Morgan’s (1979) framework provided the means with which social science researchers could “re-orient their adoption of a scientific methodology” in order to provide “a broad approach to understanding and knowledge creation in human affairs” (p. 1).

Burrell and Morgan (1979) believed it was advantageous to view the social sciences in terms of four sets of meta-theoretical assumptions related to ontology, epistemology, human nature and methodology. They argue that these four sets of assumptions provide a powerful tool in the analysis of social theory, with the first three assumptions having a direct impact on the fourth assumption – methodology. This view is supported by Llewellyn (1993; 1992) who claims that methodology is “dependent on the values and beliefs of those engaged in the research process: both researchers and sponsors of research” (1992, p. 18). Figure 1 outlines the assumptions that are relevant to understanding the nature of social science from the two broad oppositional perspectives.

**Figure 1**

<table>
<thead>
<tr>
<th>The subjective-objective dimension</th>
<th>The objectivist approach to social science</th>
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<tbody>
<tr>
<td>Nominalism</td>
<td>Ontology</td>
</tr>
<tr>
<td>Anti-positivism</td>
<td>Epistemology</td>
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<tr>
<td>Voluntarism</td>
<td>Human nature</td>
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<td>Determinism</td>
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The Burrell and Morgan (1979) Model
Burrell and Morgan (1979) suggest that, based on the above model, social phenomena can be viewed from “four distinct sociological paradigms which can be utilised for the analysis of a wide range of social theories” (p. 23). They argue that it is not easy for a researcher to switch paradigms and that inter-paradigm activities are even rarer as this would require radical changes in meta-theoretical assumptions. Thus they argue that it is important for researchers to have a solid understanding of their paradigm because it affects the concepts and analytical tools used to conduct their research. Their model (or ‘intellectual map’ as they refer to it in their text) is in the form of a two-by-two grid, developed from well established bipolar views of society and how change might come about and, the nature of problems in society and how they might be addressed (Morgan and Smircich, 1980). Each paradigm defines an intellectual perspective through which a different view of social reality can be expressed and endorsed. The four paradigms as seen in Figure 2 are:

- The Radical Humanist Paradigm
- The Radical Structuralist Paradigm
- The Functionalist Paradigm
- The Interpretive Paradigm

Each paradigm shares a common set of features with each of its horizontal and vertical neighbours but not so their diagonal opposite. However, regardless of any commonality of features each paradigm stands alone generating distinctive analysis of social life that is “in fundamental opposition to those generated in other paradigms” (Burrell and Morgan, 1979, p. vii).

Figure 2

Four Paradigms for the Analysis of Social Theory

<table>
<thead>
<tr>
<th>Subjective</th>
<th>Objective</th>
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<tbody>
<tr>
<td>Radical Humanist</td>
<td>Radical Structuralist</td>
</tr>
<tr>
<td>Interpretive</td>
<td>Functionalist</td>
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The Sociology of Radical Change

The Sociology of Regulation

(Source: Burrell and Morgan, 1979, p. 22)

A description of the four paradigms will now be given.
The Radical Humanist Paradigm

The view that human actors create the social worlds they live in and are prevented from achieving their full potential because of the constraints they consciously and subconsciously subscribe to underpins the radical humanist paradigm. Researchers working from this paradigm are concerned with the sociology of radical change from a subjective perspective. They present society as having a limiting social order and that if people are to achieve their full potential they must rise above these limitations. Chua (1986) believes “human potentiality is restricted by prevailing systems of domination which alienate people from self-realization” and that ideological constructs may be embedded in our “taken for granted beliefs about acceptable social practices” (p. 619).

The radical humanist paradigm provides the means with which to critique ‘the status quo’ from the viewpoint that ‘the status quo’ is a social construction whereby the actors ‘perform’ “within a matrix of inter-subjective meanings” (Chua, 1986, p. 621). It is necessary therefore, for researchers to ‘learn’ the language of the players within this matrix. Although radical humanist researchers learn the language of their subject they are also aware that it is the very language itself that may be a medium of repression and social power (Burrell and Morgan, 1979) as ideological constructs may be embedded in the language itself (Chua, 1986). This view is supported by Jonsson and Macintosh (1997) who claim that merely producing narratives of meaning systems is not simply an act of translation and interpretation of the individual’s beliefs, actions and communication practices but rather is “first and foremost a political act” (p. 378) as words equate to power.

The radical humanist paradigm is orientated towards radical change, modes of domination, emancipation, deprivation and potentiality. Researchers in this paradigm share the assumption that there are structures that run below the surface of social existence which shape and drive the individual’s social interactions including communication patterns and behaviour (Burrell and Morgan, 1979; Jonsson and Macintosh, 1997). With reference to Figure 1, those who work within the radical humanist paradigm approach the above concerns from a nominalist, anti-positivist, voluntarist and ideographic standpoint. As a result the radical humanist paradigm is positioned in the top left quadrant of the matrix as the researchers’ are committed to exposing and removing restrictive conditions, systems and ideologies that prevent human potentialities from emerging (Chua, 1986).

The Radical Structuralist Paradigm

Where the radical humanist differs from the radical structuralist is that emancipation from restrictive structures is achieved through the raising of individual’s self-conscious processes thus the end result is not necessarily pre-determined as each actor is independent and free-willed. Radical structuralist researchers on the other hand, are concerned with the sociology of radical change from an objectivist perspective. They are committed to radical change, emancipation and potentiality by concentrating on structural relationships within a realist social world. Researchers in this paradigm share the assumption that “radical change is built into the very nature and structure of contemporary society” (Burrell and Morgan, 1979, p. 34).
Radical structuralist researchers do not consider the ‘freeing’ of people from the stifling social structures that are abundant in contemporary society as an incremental process, but rather achieved through sweeping extremist political and economic conflict. Furthermore, they believe that it is their job to expose the various power relationships endemic in the social structures in which we live.

With reference to Figure 1, this paradigm approaches the above concerns from a realist, positivist, determinist and nomothetic standpoint. As a result the radical structuralist paradigm is positioned in the top right quadrant of the matrix as researcher see ‘change’ occurring not as a response to the raising of individual’s self-conscious processes but as a result of change to concrete structures as reality is seen to exist outside the minds of the human actors. Thus, while both the radical humanist and the radical structuralist are focused on the emancipation of humanity, they approach it from different angles.

As noted earlier, the radical humanist seeks to empower individuals to achieve their full potential by bringing about change to restrictive social structures by raising individual’s self awareness to his ‘true’ situation whereas the radical structuralist seeks emancipation by changing the restrictive structures directly. In this sense the radical structuralist has a more clear-cut end in sight – to bring about change to restricting social structures and conditions that prevent individuals from achieving their full potential. However, both the radical humanist and radical structuralist are seeking to contribute to an understanding of oppression and discrimination that takes place primarily on the basis of socio-economic status and class (Tashakkori and Teddlie, 2003).

The Functionalist Paradigm

Researchers working from the functionalist paradigm are concerned with the sociology of regulation from an objectivist perspective. They are committed to a philosophy of social engineering as the basis of social change. Burrell and Morgan (1979) claimed that the functionalist paradigm is the dominant framework for studying the development, structure and function of society - a view later supported by the research findings of Broadbent (1992) and Baker and Bettner (1997).

Functionalist researchers share the assumption that reality is a concrete process and as such lend itself to precise observation and measurement. They present the world as highly rational and orientated towards social order and work towards “stability or maintenance of the status quo” (Gioia and Pitre, 1990, p. 585). They seek to generate knowledge that can be used to provide solutions to problems characterising people as passive objects rather than makers of social reality. In relation to accounting researchers emphasize the importance of means rather than ends (Chua, 1986). Functionalist researchers stress the importance of understanding order, equilibrium and stability in society and in seeking ways to maintain them via “empirical analysis of concrete relationships in an external social world” (Morgan and Smircich, 1980, p. 493).

The functionalist researcher adheres to the view that human affairs can be studied in the manner of the natural sciences using a deductive form of logic – theories and hypotheses are tested in a cause-and-effect order. They can use static design whereby
concepts, variables and hypotheses are selected before the study begins and remain fixed throughout the study thus separating theory from observations that may be used to verify or falsify a theory (Chua, 1986; Guba and Lincoln, 1998).

With reference to Figure 1, those that work from the functionalist paradigm approach the above concerns from a realist, positivist, determinist and nomothetic standpoint. As a result the functionalist paradigm is positioned in the bottom right quadrant of the matrix as it seeks to understand society and its composite parts at an objective level that “specifies the precise nature of laws, regularities and relationships among phenomena” (Morgan and Smircich, 1980, p. 493).

The Interpretive Paradigm

The interpretive researcher is concerned with the sociology of regulation from a subjectivist perspective. Researchers working from this paradigm (along with the functionalist paradigm) are committed to ideological perspectives, that address research issues examining natural order and regulation while at the same time “ignoring modes of domination, conflict and radical change” (Morgan and Smircich, 1980, p. 492). However, the interpretive researcher rejects the view that human affairs can be studied in the manner of the natural sciences instead is concerned with the sociology of regulation from a subjective perspective.

Interpretive researchers are concerned with trying to understand society as it is. They see social reality as emergent and subjectively created (Baldvinsdottir, Hagberg, Johansson, Johansson and Marton, 2003). Social order is assumed (Chua, 1986) and “people are purposeful and basically orderly” (Hooper, 2001, p. 59). Conflict is viewed as dysfunctional needing to be resolved through communication.

The interpretive researcher attempts to grasp the meanings that people apply to the symbols and structures of the world around them (Baker and Bettner, 1997). These structures are viewed as inseparable from the human psyche and mould the world in distinct ways (Giorgi and Pitre, 1990). By adopting an interpretive methodology the researcher is seeking to understand the deeper meanings that these structures have for the human actor. Thus the interpretive researcher seeks explanations from within the frame of reference of the participant rather than the researcher (Burrell and Morgan, 1979).

Interpretive research relies on observation and linguistic cues (Hooper, 2001) in order to “enrich people’s understanding of the meanings of their actions” (Chua, 1986, 615). Interpretive researchers do not believe in the neutrality of the world of facts but rather they believe in a shared consensus of individual actors’ interpretation of meaning (Baker and Bettner, 1997). Thus interpretive research is unique – it has no technical application as universal laws underpinning reality are unlikely to be determined (Lehman, 2006).

With reference to Figure 1, proponents of the interpretive paradigm approach the above concerns from a nominalist, anti-positivist, voluntarist and ideographic standpoint. As a result the interpretive paradigm is positioned in the bottom left quadrant of the matrix as the researchers seek to understand society and its composite parts at a subjective level. It appears on the left of the objective-subjective continuum as researchers share the assumption that reality is a “projection of human
imaginations” (Morgan and Smircich, 1980, p. 494) and as such challenges the notion that social processes must conform to certain criteria or universal laws (Chua, 1986).

**Conclusion**

The importance of this paper is that it has been written with the fledgling social science researcher in mind who may be struggling with their understanding of the terms ‘paradigm’ and ‘methodology’ and the implication each has for their research. By providing a snapshot of different paradigm classification schemas that are currently being used in social science research it is intended to inform the reader of alternative methodologies and their underlying assumptions that can be used for conceptualising phenomena. A critique of the Burrell and Morgan (1979) framework was provided as an illustration of the range of methodological alternatives that are available to researchers.

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