

Assessing Philosophical Foundations of Mixed Methods Research

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Abstract

A variety of philosophical positions have been proposed and developed to motivate, justify, and guide mixed methods research. This chapter provides a brief overview of the main positions in the debate over the philosophical foundations of mixed methods research. It shows that ‘philosophical foundations’ means differently while different positions provide ‘philosophical foundations’ in different senses. It also highlights the significance of the collaboration between researchers and philosophers in the examination of the philosophical foundations of mixed methods research.

Key Words

Mixed methods research, pragmatism, transformative paradigm, indigenous paradigm, dialectical stance, dialectical pluralism, performative paradigm, realism, methodological pluralism, Evidential Pluralism, causal pluralism

1. Introduction

Mixed methods research, as a methodological movement, emerged in the late 1980s.¹ It was mainly developed as a solution to the famous paradigm wars between quantitative research and qualitative research with their underlying philosophical assumptions. However, there is an immediate and urgent question to be addressed for anyone who embraces mixed methods research: how can one mix two methodologies with the conflicting philosophical assumptions? It is widely received that quantitative research and qualitative research differ radically in their ontological, epistemological, and axiological assumptions (e.g. [Guba, 1990](#)). Any attempt to integrate quantitative and qualitative methods or data needs to reconcile these incompatible philosophical assumptions in some way. Therefore, the philosophical foundations of mixed methods research have been extensively examined since its birth. There are three central issues of the philosophical foundations of mixed methods research.

Motivational issue: What motivates mixed methods research?

Justificatory issue: What justifies mixed methods research?

Practical issue: What guides mixed methods research?

The motivational issue is basically a why question: why does one use mixed methods in research? The justificatory issue is concerning the possibility of mixed methods: are mixed methods viable from a philosophical point of view? The practical issue is more about how to design a mixed methods study or integrate quantitative and qualitative elements in a single study.

For the past four decades, a variety of philosophical positions have been developed to answer these questions, including the pragmatist position (e.g. Johnson & Onwuegbuzie, 2004; Morgan, 2007; Teddlie & Tashakkori, 2009; Feilzer, 2010; [Johnson et al., 2017](#); Creswell & Plano Clark, 2018), the transformative position (e.g. Mertens, 2003, 2007; [Mertens et al., 2010](#)), the indigenous position (e.g. [Wilson, 2008](#); [Chilisa, 2012](#); Romm, 2018), the

¹ If not specified, mixed methods research refers to a methodology or a methodological orientation in this chapter.

dialectical position (e.g. Greene et al., 1989; Greene, 2006; Greene & Hall, 2010), the dialectical pluralist position (e.g. [Johnson, 2017](#)), the performative position ([Schoonenboom, 2019](#)), and the realist position (e.g. Maxwell & Mittapalli, 2010). However, there is still no consensus on the philosophical foundations of mixed methods research. What is worse, there is no systematic, critical examination of these positions, especially from a philosopher's point of view. To a great extent, the debate over the philosophical foundations of mixed methods research is an in-house game among some philosophically minded mixed methods researchers. Very few philosophers of science has closely engaged in this important issue in the social sciences. This is very unfortunate. I contend that more dialogues between researchers and philosophers on this issue will lead to fruitful philosophical and methodological implications.

This edited volume provides a comprehensive examination of the philosophical foundations of mixed methods research, contributed by both researchers and philosophers. Part I offers new defences of seven main approaches, written by leading mixed methods researchers. Part II features critical reflections from philosophers' point of view. It offers a platform to encourage a dialogue between mixed methods researchers and philosophers of science.

2. Thus Researchers Spoke

In a recent essay, I propose that there are three different senses of philosophical foundations of mixed methods research in the literature.

- a) Weak sense: Philosophical foundationsA allow the possibility of the integration of both quantitative and qualitative methods/data/designs.
- b) Moderate sense: Philosophical foundationsB provide a good reason to use mixed methods in (at least some) social scientific research.
- c) Strong sense: Philosophical foundationsC justify a normative thesis that mixed methods research should be encouraged in (at least some) social scientific research.

([Shan, 2022](#), pp. 6–7)

Martina Y. Feilzer argues for the pragmatist position as a 'weak' sense of philosophical foundations in 'A Pragmatist Approach to Mixed Methods Research'. She highlights two distinctive features of pragmatist thought: anti-representational and anti-dualist. Pragmatist thought is anti-representational in the sense that it denies that research needs to represent reality in a corresponding way, while it is anti-dualist in the manner that it does not endorse the dualist perspectives on the research and its object or on positivism and constructivism. Feilzer argues that the pragmatist position provides a 'weak' sense of philosophical foundations of mixed methods research by justifying the possibility of the integration of quantitative and qualitative elements in research, while questioning the necessity of a search for a 'strong' sense of philosophical foundations of mixed methods research.

In 'The Philosophical Foundations of a Transformative Approach to Mixed Methods', Donna Mertens defends the transformative position as what I called an 'axiology-oriented' philosophical foundation ([Shan, 2022](#), p. 5). She maintains that all researchers need to pay attention to ethical issues and aim at an increase in justice ultimately. To this end, Mertens argues that researchers need to address factors that perpetuate discrimination, work in a culturally responsive manner, and promote sustainable actions for transformative change. This axiological assumption is coupled with the transformative ontological and

epistemological assumptions, which motivate the use of mixed methods in practice. Mertens concludes that taking a transformative position will ultimately help to provide a basis for improving justice and contribute to a transformed society.

In 'Philosophical Underpinnings of Mixed Methods: Decolonizing Evaluation Practice Through Decolonizing Paradigms', Bagele Chilisa argues for an indigenous position. It consists of a set of distinctive ontological, epistemological, and axiological assumptions, which radically differ from the Euro-Western ones. Chilisa argues that an indigenous position, by highlighting connectedness and relationality, promotes interaction of knowledge production structures and the importance of building relationships with and among participants and with the environment to improve the quality of data, and provide pathways towards equitable and sustainable futures.

In 'The Dialectic Stance: Navigating Difference', Jori N. Hall argues that the dialectical position offers a guide to mixed methods research. She begins with a brief overview of the historical development of dialectics in philosophy and social science. Hall notes that there are four assumptions of the dialectic position: differences between philosophical positions exist and are important; these differences cannot be reconciled; all these positions represent legitimate but partial way to understand the world; and dialectical engagement between different positions and methods can result in new knowledge or better understanding. She argues that the dialectical position helps to navigate these differences by guiding mixed methods research design and data analysis.

In 'Dialectical Pluralism and Integration in Mixed Methods Research', R. Burke Johnson further develops his dialectical pluralistic position, which was originally proposed to complement the dialectical position by articulating its philosophical assumptions (see [Johnson, 2017](#)). According to dialectical pluralistic position, there are multiple kinds of social reality, different epistemologies, and multiple ethical theories and values. Johnson argues that researchers should engage with these different ontologies, epistemologies, axiologies, methods, and methodologies dialectically and empirically. To some extent, this dialectical pluralism can be viewed as a synthesis of the pragmatist, dialectical, and pluralist positions. Johnson contends that the dialectical pluralist position is important for providing justification of and guidance for mixed methods research, especially equal-status mixed methods research.

In 'A Performative Approach to Mixed Methods Research', Judith Schoonenboom argues for the performative position as a 'strong' sense of philosophical foundations of mixed methods research. She explores the foundational idea of the performative position. Schoonenboom maintains that different research worlds come into being through research methods and concepts. Accordingly, she argues that the aim of mixed methods research can be construed as an exploration, creation, and coordination of different worlds. Therefore, Schoonenboom concludes that mixed methods research should be encouraged in social scientific research from a performative point of view.

Contra Schoonenboom, Joseph A. Maxwell argues that there is only one mind-independent world. He defends a particular realist position in 'A Realist Approach for Mixed Methods Research'. Maxwell defines realism as the view that (1) entities exist in a mind-independent way and (2) our theories and perceptions of the world are inherently our fallible constructions. He argues that this realist position plays an important role in designing and conducting mixed methods research, especially in the studies of mind, culture, diversity, causation, and research design. In particular, Maxwell argues that a realist approach to causation well reflects the situationally contingent feature of causal mechanisms.

3. Thus Philosophers Spoke

Philosophers seem quite critical of these positions. In ‘Mixed Methods Research and Deweyan Pragmatism Reconsidered’, Gert Biesta critically examines the view that pragmatism is the most appropriate paradigm for mixed methods research. His central argument is twofold. On the one hand, Biesta challenges the view that pragmatism is ‘the best paradigm for mixed methods research’. He argues that the concept of paradigm is too ambiguous to be helpful in the discussion and problem-solving is not the only aim of social research. Thus, that ‘whatever works is the best methodology’ oversimplifies and distorts the logic behind mixed methods research. On the other hand, Biesta shows how Dewey’s pragmatism and perspectivalism make sense of mixed methods research. In summary, Biesta cracks down a particular version of the argument that pragmatism provides philosophical foundations of mixed methods research, while argues for a new version of the argument that pragmatism provides philosophical foundations of mixed methods research.

In ‘Mixed Methods Research and Critical Realism Reconsidered’, Rosa W. Runhardt challenges the tenability of Maxwell’s realism as a philosophical foundation of mixed methods research. She argues that there is a tension between the realists’ emphasis on the situational contingency of causal mechanisms and its proposed combination with population-level association studies in mixed methods research. In addition, Runhardt argues that Maxwell’s realism is incompatible with Evidential Pluralism, which has been regarded as a philosophical foundation of mixed methods research in causal enquiry. She concludes that evidential pluralism provides a more promising foundation than Maxwell’s realism.

In ‘Mixed Methods and Causal Ontology’, Christopher Clarke argues for the significance of the ontological issues in mixed methods research. He argues that different ontological assumptions about the nature of causation have different methodological consequences. In particular, Clarke argues that in political science, the methodological status of triangulation depends on one’s causal ontology. He suggests that the ontological issues ought to be taken seriously in mixed methods research in the social sciences generally.

In ‘Evidential Partnerships and Multi-Method Research in Political Science: Methodological, Evidential, and Causal Pluralisms’, Sharon Crasnow suggests that various forms of multi-method research in political science should be regarded as examples of evidential partnership. She argues that evidential partnership can be motivated and justified by three types of pluralism: methodological pluralism, evidential pluralism, and causal pluralism, while admitting that causal pluralism leaves open the possibility that mixed methods research might not be always the best methodology in causal enquiry.

4. Remarks

As I have argued earlier ([Shan, 2022](#)), the pragmatist position offers a weak, axiology-oriented foundation in the sense that it merely justifies the possibility of the integration of quantitative and qualitative elements in a single study. It highlights the significance of the methodological need (viz., problem-solving) and downplays the significance of the ontological and epistemological commitments. However, Feilzer does not regard this as a weakness or a disadvantage of the pragmatist position. She doubts the necessity of a search for a strong philosophical foundation of mixed methods research. Moreover, Feilzer warns that there is a danger of calling for a strong philosophical foundation, because it ‘may ignite a different set of paradigm wars by fighting over the most appropriate and coherent single paradigm for mixed methods research’. For Feilzer, mixed methods research may just need a weak foundation like the pragmatist position.

The transformative position is clearly stronger than the pragmatist position. It provides good reasons to use mixed methods in social research rather than justify the possibility of the use of mixed methods. According to the transformative position, social research ultimately aims at a more just and democratic society, and mixed methods research is helpful to achieve this aim. In addition, the transformative position is stronger than the pragmatist position in another sense: the transformative position addresses all of the motivational, justificatory, and practical issues, while the pragmatist position is implicit on the practical issue. In other words, the pragmatist position only provides the justification of mixed methods research in a retrospective way: a given mixed methods research design is possible if it solves problems. However, the pragmatist position itself does not provide guidance on how to design and conduct mixed methods studies. By contrast, the transformative position, as Mertens shows, informs mixed methods research design. Thus, the transformative position provides a moderate, axiology-oriented philosophical foundation.

The indigenous position is similar to the transformative position. Both highlight the diversity of culture-based social realities and pay attention to inequalities of knowledge systems and create strategies for knowledge systems to interact. Like the transformative position, the indigenous position also provides a moderate foundation, as it does not argue for a normative thesis that mixed methods research ought to be preferred to quantitative or qualitative research.² However, the indigenous position is distinctive: it is based on distinctive indigenous relational ontological, epistemological, and axiological assumptions, while the transformative position is still largely framed by the Euro-Western concepts such as justice and democracy. In addition, the indigenous position differs from the transformative position in the way that the latter is an axiology-oriented position, while the former is fundamentally ontology-oriented. As the name suggests, the core of the transformative position is an axiological thesis with a transformative aim. The indigenous position stems from an indigenous theory of social ontology: relational ontology. Such a distinctive ontological theory leads to distinctive epistemological and axiological assumptions which motivate and justify the use of mixed methods. Thus, the indigenous position offers a moderate, ontology-oriented foundation of mixed methods research.

By contrast, the dialectical positions provide a strong, axiology-oriented foundation by calling for close engagement of different methodologies in respectful dialogue. Hall shows that adopting a dialectical position may have fruitful consequences in research. However, there is a further meta-justification problem: why ought one to take the dialectical position? In addition, the dialectical position does not say much about the practical issue. As Hall admits, ‘there is no prescription for employing the dialectic stance’. In short, the dialectical position is implicit on why one should adopt it and how one can apply it in research. Johnson’s dialectical pluralist position can be viewed as a refined and strengthened version of the dialectical position by articulating the ontological, epistemological, and axiological assumptions and providing more explicit guidance for mixed methods researchers. In other words, the dialectical pluralist position addresses all the motivational, justificatory, and practical issues. Moreover, Johnson argues that the dialectical pluralist position motivates and justifies equal-status mixed methods research, which to a great extent responds to one of my earlier concerns, the problem of scope (Shan, 2022, p. 8): how widely should mixed methods research be encouraged? It seems that Johnson is optimistic about wide scope of mixed methods research, given that the ‘most challenging sort of’ mixed methods research can be motivated and justified by the dialectical pluralist position. Although the basic idea of the

² See [Chilisa and Phatshwane \(2022\)](#), for a discussion of the indigenous position and qualitative research.

dialectical and dialectical pluralist positions is appealing, it is difficult to see how it can be applied in practice. Let us consider Johnson's dialectical pluralist ontological principle:

Recognise multiple kinds of reality and the presence of different ontologies and the tensions they produce as a strength to be embraced rather than a weakness that stunts growth. Researchers can produce from this a new, practical ontological mix or package of relevant ideas for each research study.

It is unclear how one can embrace two conflicting ontologies in a single study. For example, in causal enquiry, as Clarke argues, 'different ontological assumptions about the nature of causation entail different conclusions about what mixed methods research needs to do in order to deliver successful causal inferences'. One possible solution is, as Johnson and his associates ([Johnson et al., 2019](#)) suggest, to appeal to causal pluralism, which is the view that there are different types of causal relationships out there. By making a commitment to causal pluralism, mixed methods researchers may be able to accommodate different, conflicting ontological assumptions in their research design. That said, this poses a limit of the scope of mixed methods research. In causal enquiry, mixed methods research ought to be encouraged only in the cases that causal pluralism is assumed.³

Maxwell's realist position provides a moderate, ontology-oriented foundation. It is ontology-oriented in the sense that the realist ontological assumptions play a key role in the motivation and justification of the use of mixed methods. It is moderate in the sense that it only provides some good reason to use mixed methods. As Maxwell himself emphasises:

I'm not arguing that realism is the single 'correct' approach to mixed methods research, only that it has insights and advantages that other stances lack, and that it is thus a valuable conceptual tool in a researcher's toolkit. My purpose . . . is to indicate areas where I think a realist perspective can be useful for mixed methods researchers.

However, a main problem for the realist position is that it fails to justify the indispensability of quantitative methods, as Runhardt argues. [Maxwell \(2012\)](#) employed the realist position to motivate and justify qualitative research, but it is dubious that it can be equally applied to mixed methods research.

Schoonenboom's performative position is particularly interesting. It was originally somehow built upon Johnson's dialectical pluralist position. As [Schoonenboom \(2019, p. 295\)](#) admits, 'The ontology and epistemology of the performative paradigm stem from dialectical pluralism'. However, it is clearly different from the dialectical pluralist position: the performative position provides a strong, ontology-oriented foundation, whereas the dialectical position offers a strong, axiology-oriented foundation. Schoonenboom explicitly argues for a particular theory of social ontology: worlds are results of our research and do not exist mind independent. Accordingly, different research methods contribute to create different worlds. Thus, mixed methods research is well motivated and justified given that all research is assumed to create and coordinate worlds.

It is clear that this volume does not provide the reader with a definite answer to the question concerning the philosophical foundations of mixed methods research. Neither does it cover

³ Jon Williamson and I argue that Evidential Pluralism, whose basic idea is that one ought to have both evidence of correlation and of mechanism in order to establish a causal claim, motivates and justifies the use of mixed methods ([Shan & Williamson, 2023](#), chapter 4). Given that Evidential Pluralism assumes causal monism, it seems inconsistent with the implication of the dialectical pluralist position.

all the relevant issues. There is much more to explore in the future. For example, do we really need a strong sense of philosophical foundations of mixed methods research? Are ontological assumptions indispensable to motivate and justify the use of mixed methods? Is the tripartite analysis (by examining ontological, epistemological, and axiological assumptions) a useful tool to analyse and examine the philosophical foundations of mixed methods research? That being said, I contend that these issues can be more promisingly explored with the collaboration between researchers and philosophers.

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