

Abstract

In order to establish a causal claim, one needs to establish both that the putative cause and effect are correlated and that there is a mechanism linking the former to the latter that can explain this correlation. This *evidential pluralism* thesis has led to some very fruitful work in the philosophy of the biomedical sciences and to suggestions for improvements to evidence-based medicine. This project will investigate whether the thesis also applies to the social sciences. Can it be used to provide foundations for 'mixed methods research' in the social sciences? Can it lead to improvements in evidence-based social policy?

Context

Russo and Williamson (2007) argued that in the health sciences, in order to establish a causal claim one needs to establish two things: (i) that the putative cause and effect varies are correlated (the presence of cause is associated with the presence of the effect) and (ii) that there is some mechanism of action (i.e., there exists a mechanism that explains instances of the putative effect by appeal to the putative cause and that can account for the extent of the correlation). This thesis is now known as the *Russo-Williamson thesis* or as *evidential pluralism*.

This thesis has led to very fruitful philosophical work on the role of mechanisms in the health sciences (e.g., Clarke et al. 2014; Parkkinen 2016) and to suggestions for improvements to the methods for evaluating evidence advocated by the evidence-based medicine movement (Parkkinen et al. 2018).

Despite a wealth of philosophical work on mechanisms in recent years (e.g., Illari et al. 2011; Glennan & Illari 2016), the question of whether and how the evidential pluralism thesis applies to the social sciences has been relatively unexplored. This project seeks to redress this imbalance.

Objectives

The overarching research question is: *Can the evidential pluralism thesis be fruitfully applied to the social sciences?*

This overarching question will be divided into four more specific questions:

Scope. How widely does the evidential pluralism thesis hold in the social sciences?

Explanation. Can evidential pluralism help to explain the co-existence of disparate philosophical approaches to the social sciences?

MMR. Can the thesis be used to provide new foundations for mixed methods research?

EBP. Can the thesis be used to suggest improvements to evidence appraisal for evidence-based policy in the social sciences?

Significance and originality

A concrete answer to the Scope question will be of broad interest to **philosophers of science and philosophers of causality**. There is some controversy surrounding the evidential pluralism thesis, even in the health sciences, and the question of its scope in the social sciences will help to inform this debate surrounding the thesis.

The social sciences are riven by methodological disagreements, with different camps allying themselves to different philosophies. If this pluralism of philosophies could be partially explained by the importance of evidential pluralism, that would be of interest to both **social scientists and philosophers of social science**.

Mixed-methods research (MMR) seeks to mix qualitative and quantitative methods in the social sciences. This approach has been an important theme in the social sciences in recent years, but there is a wide variety of ways of understanding mixed methods research and there continues to be controversy around its use. A positive answer to the MMR question will be of interest to **social scientists and philosophers of science** alike, as it would help to put these methods on a firmer footing and would help researchers to understand their proper use.

Evidence-based methods have recently been exported from medicine to the social sciences and there is a lot of dogma and debate around their use. The main concern is that these methods tend to over-emphasise the importance of large statistical studies (especially randomised studies) to the exclusion of more qualitative evidence, when in fact these two kinds of evidence are mutually supportive. The evidential pluralism thesis has led to the development of a more inclusive approach to evidence evaluation in medicine (the EBM+ approach). A similar development in the social sciences would be of interest to a broad range of **social scientists, and to epistemologists and philosophers of social policy**.

Methodology

The core project team will consist of the PI (Jon Williamson), who will take overall lead of the project and work on the project 33%, and an RA (to be recruited) who will work full time on the project. The core team will engage with three further philosophers who are experts on evidential pluralism and the methodology of the social sciences: Nancy Cartwright (Durham), Christopher Clarke (Cambridge) and Federica Russo (Amsterdam).

In year 1, the RA will focus initially on the development of several case studies which will help to address the *Scope* question. Case studies will include epidemiological and psychological studies on the effect of socio-economic conditions on health; mixed methods studies on the causes of migration; economics studies on the economic impact of migration; and studies on the impact of cash transfer programs. The RA and PI will work together to properly formulate the evidential pluralism thesis and to assess its applicability to the case studies and beyond.

Year 2 will mainly be devoted to the *Explanation* and *MMR* questions. These questions are connected because different methods tend to be allied to different philosophies. For example, social scientists sometimes associate quantitative approaches with logical positivism and qualitative approaches with critical realism. In turn, quantitative approaches tend to seek to establish causation by searching for robust correlations, while qualitative approaches often seek to establish causation by means of understanding underlying mechanisms of action. Thus it seems that mixed methods might naturally be allied to evidential pluralism, and the need for evidential pluralism might explain the prevalence of apparently incompatible philosophies. Much of year 2 will be devoted to developing a thorough understanding of the extent to which these connections bear scrutiny.

Year 3 will focus on the *EBP* question. The RA and PI will develop practical guidance for the assessment of evidence of mechanisms in the social sciences, with a particular focus on its application to evidence-based social policy. While the main outputs of the research on the other questions will be journal articles, the *EBP* findings will be presented by means of a short handbook for research scientists interested in evidence-based social policy. (This handbook will be analogous to that of Parkkinen et al. (2018), which is targeted at those working with evidence-based medicine.)