Evidential Pluralism in the Social Sciences

Yafeng Shan and Jon Williamson
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This volume contends that Evidential Pluralism—an account of the epistemology of causation, which maintains that in order to establish a causal claim one needs to establish the existence of a correlation and the existence of a mechanism—can be fruitfully applied to the social sciences. Through case studies in sociology, economics, political science and law, it advances new philosophical foundations for causal enquiry in the social sciences. The book provides an account of how to establish and evaluate causal claims and it offers a new way of thinking about evidence-based policy, basic social science research and mixed methods research. As such, it will appeal to scholars with interests in social science research and methodology, the philosophy of science and evidence-based policy.

Yafeng Shan is Assistant Professor of Philosophy of Science at the Hong Kong University of Science and Technology. He is the author of Doing Integrated History and Philosophy of Science: A Case Study of the Origin of Genetics and the editor of New Philosophical Perspectives on Scientific Progress.

Jon Williamson is Professor of Reasoning, Inference, and Scientific Method at the University of Kent, UK. His books include Evaluating Evidence of Mechanisms in Medicine, Lectures on Inductive Logic, Probabilistic Logics and Probabilistic Networks, In Defence of Objective Bayesianism and Bayesian Nets and Causality.
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Evidential Pluralism in the Social Sciences

Yafeng Shan and Jon Williamson
YS: To Zifei with love.

JW: To Kika, Charlie and Anouk with love.
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Preface

Evidential Pluralism is a new philosophical account of causal enquiry. It espouses two kinds of pluralism. The first, object pluralism, holds that in order to establish a causal claim, one normally needs to establish two things: that the putative cause and effect are appropriately correlated, and that there is an appropriate mechanism complex linking the putative cause and effect which can account for the extent of the observed correlation. The second, study pluralism, holds that in order to assess a causal claim, one normally needs to assess relevant association studies and mechanistic studies where available. Association studies are studies that test whether the putative cause and effect are correlated, while mechanistic studies test for hypothesised features of a mechanism complex linking the putative cause and effect.

In this book, we argue that Evidential Pluralism can be fruitfully applied to the social sciences. This application is fruitful in three respects: Evidential Pluralism can explain and validate successful examples of causal enquiry; it can help us understand the general structure of causal enquiry; and it can help to inform practice in the social sciences. With regard to informing practice, Evidential Pluralism can help researchers ascertain how best to establish a causal claim of interest, and it can help evaluators assess causal claims that have been put forward by other researchers.

These arguments appeal to a mixture of philosophical theory building and close analysis of practice in the social sciences. We begin with the theory building. Evidential Pluralism was originally proposed in the context of the biomedical sciences. In Chapter 1, we develop a general account of Evidential Pluralism that is not tied to any particular domain of application. We devote some space to carefully stating Evidential Pluralism, explaining the relevant terminology and trying to avoid potential misconceptions. We also motivate the theory and sketch its application to the biomedical sciences. While Evidential Pluralism is an epistemological theory—concerned with how to establish and assess causal claims—we outline one particular philosophical theory of the nature of causality that coheres well with Evidential Pluralism.

In Chapter 2, we explore some views that might be thought of as historical precursors of Evidential Pluralism, including the approaches of Claude Bernard, W.F.R. Weldon and John Goldthorpe. We also note some differences between
Evidential Pluralism and analytic sociology, and some differences between Evidential Pluralism and Roy Bhaskar’s critical realism.

The book then turns to methodological developments in the social sciences that are motivated by Evidential Pluralism. In Chapter 3, we argue that Evidential Pluralism leads to a new account of evidence-based policy assessment, which we call EBP+. EBP+ provides the capability to assess mechanistic studies alongside the association studies that are the bread and butter of present-day evidence-based policy assessment. This can lead to better-informed judgements of the effectiveness of social interventions, and thus to better social policy. We compare this new account to related approaches, such as realist evaluation.

In Chapter 4, we argue that Evidential Pluralism provides new philosophical foundations for mixed methods research in the social sciences. Mixed methods research mixes quantitative and qualitative research methods and data. After providing an account of the context within which mixed methods research emerged, we explore the question of its philosophical foundations. We sketch standard approaches to the foundations of mixed methods research and note certain limitations to these standard approaches. We then argue that the account of causal enquiry at the heart of Evidential Pluralism requires a thorough consideration of both quantitative and qualitative methods and so provides strong motivation for mixed methods research in causal enquiry. Evidential Pluralism also provides practical guidance on how to integrate quantitative and qualitative studies.

Chapter 5 responds to four potential objections to Evidential Pluralism. The first two are objections to object pluralism: an objection that establishing correlation and mechanism is not sufficient for establishing causation, and an objection that establishing correlation and mechanism is not necessary for establishing causation. Next, we consider an objection based on causal pluralism—the view that there are multiple concepts of cause in use in the social sciences. Finally, we respond to concerns about how to define mechanisms in the social sciences.

While Parts I and II of the book (Chapters 1 to 5) are pitched at a very general level so as to apply right across the social sciences, Part III (Chapters 6 to 10) seeks to address considerations that are specific to particular social sciences.

Chapter 6 illustrates the advantages of applying Evidential Pluralism to sociology. We show that Evidential Pluralism can shed light on the use of evidence in causal enquiry in sociology by means of two examples: one involving the connection between socioeconomic status and health, and one concerning the link between family background and educational attainment. We also show that Evidential Pluralism generalises and motivates certain approaches to the methodology of causal enquiry in sociology, including that of Morgan and Winship.

In Chapter 7, we turn to economics. Again, we begin by considering two examples: the link between the legalisation of abortion in the USA in the 1970s and the subsequent decline in the crime rates in the 1990s, and the link between unemployment and crime. These two examples highlight the roles of association studies and mechanistic studies in causal enquiry in economics. We argue that Evidential Pluralism can help us to understand the structure of causal enquiry in
economics, and discuss in more detail the role of mechanisms and of theory in economics. Finally, we address concerns about causal pluralism in economics.

Chapter 8 discusses Evidential Pluralism in political science. We see that Evidential Pluralism can account for the need for a diversity of methods in political science, and we examine a case study concerning the role of resources in shaping strategies of violence in rebellions. We discuss causal pluralism in political science and show how Evidential Pluralism coheres well with process tracing, which is a well entrenched method for causal enquiry in political science, as well as multi-method large-N qualitative analysis, which is a newly emerging approach.

Chapter 9 considers law. Law is often taken to presuppose a concept of cause that is autonomous from that used in philosophy: this is partly because causal claims in the law are constrained by legal rules about liability, while causal claims elsewhere are not. We argue that while Evidential Pluralism applies directly to our usual notion of cause, a slightly modified version of Evidential Pluralism can shed light on causation in the law. This modification requires considering what we call ‘liability-tracing mechanisms’ in place of regular mechanisms.

Chapter 10 suggests that Evidential Pluralism also applies to other social sciences, including anthropology, psychology, and demography, for example. Thus Evidential Pluralism has broad scope in the social sciences. We close the book by making some general comments about the overall approach and by suggesting some potential avenues for further research.

We hope that this book provides a good example of what might be called epistemology-driven philosophy of science. Much work in the philosophy of social science is driven by metaphysics or conceptual analysis—by views about the nature of social reality or about general concepts employed in the social sciences. That is not the only way to proceed. The approach that underpins this book is one which focuses on epistemological questions surrounding how to establish, confirm and assess causal claims in the social sciences, in order to develop a theory of causal enquiry. This account of causal enquiry, if successful, can then be viewed as a constraint on the metaphysics of causality or on an analysis of the concept of cause. If a theory of the nature or concept of cause can validate and explain a successful account of causal enquiry, so much the better for that theory. On the other hand, if the theory is incompatible with the successful account of enquiry, then it can be viewed as challenged, or undermined, by scientific practice. Exactly which theories are compatible with Evidential Pluralism is an interesting question for further research.
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Some text previously appeared in the following published works:


Part I

Philosophical Framework
1 Evidential Pluralism

§1 What is Evidential Pluralism?

Evidential Pluralism is an account of causal enquiry. Throughout this book, we take causal enquiry to include both establishing causal claims and assessing causal claims. Evidential Pluralism can be expressed as follows:

Evidential Pluralism. In order to establish a causal claim, one normally needs to establish two propositions: that the putative cause and effect are appropriately correlated, and that there is some mechanism complex involving the putative cause which is responsible for the putative effect and which can account for the extent of the correlation. So, in order to assess a causal claim, one normally needs to assess relevant association studies and mechanistic studies where available.

In this section, we explain in detail what Evidential Pluralism says. In the next section, §2, we explain why Evidential Pluralism is plausible. Russo and Williamson (2007, §§1–4) put forward the thesis that establishing causation in the health sciences requires evidence of mechanisms in addition to evidence of probabilistic dependencies. Evidential Pluralism is a development of this thesis, and we shall sketch its use in the health sciences in §3. The Russo-Williamson thesis was clarified and developed by Gillies (2011); Illari (2011); Clarke et al. (2014); Gillies (2019); Williamson (2019a), amongst others. We discuss some points of clarification in §4. Evidential Pluralism is a theory about the epistemology of causality—about how we can identify causal relationships. However, Russo and Williamson (2007) used this theory to argue for a particular account of the nature of causality, namely epistemic causality. We introduce epistemic causality in §5. In this book, however, we do not commit to any particular account of the nature of causality—we leave this question open. This book is primarily about the epistemology of causality in the social sciences.

Let us begin by clarifying what Evidential Pluralism says. This is best done with the help of a diagram, Figure 1.1.

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