

# Contents

<i>List of Figures</i>	vii
<i>Foreword</i> <i>Vincent F. Hendricks and Duncan Pritchard</i>	viii
<i>List of Contributors</i>	ix
<i>Introduction</i> <i>Vincent F. Hendricks and Duncan Pritchard</i>	1
1 Defending a Sensitive Neo-Moorean Invariantism <i>Tim Black</i>	8
2 Knowledge, Luck and Lotteries <i>Duncan Pritchard</i>	28
3 Reidian Externalism <i>Michael Bergmann</i>	52
4 The Present and Future State of Epistemic Deontologism <i>Nikolaj Nottelmann</i>	75
5 Epistemic Logic and Epistemology <i>Boudewijn de Bruin</i>	106
6 The Semantic Turn in Epistemology: A Critical Examination of Hintikka's Logic of Knowledge <i>Troy Catterson</i>	137
7 The Plausibility-Informativeness Theory <i>Franz Huber</i>	164
8 The Place of Coherence in Epistemology <i>Erik J. Olsson</i>	192
9 Reliability, Margin for Error, and Self-Knowledge <i>Paul Egré</i>	215
10 Consider the System <i>Jeffrey Helzner</i>	251

11	Knowability, Possibility and Paradox <i>Berit Brogaard and Joe Salerno</i>	270
12	The Value Turn in Epistemology <i>Wayne Riggs</i>	300
13	How to Naturalize Epistemology <i>Ram Neta</i>	324
14	Knowledge and the Heuristics of Folk Epistemology <i>Finn Spicer</i>	354

# Introduction

*Vincent F. Hendricks and Duncan Pritchard*

*Roskilde University and University of Edinburgh*

This volume attempts to achieve something entirely novel: to provide a snapshot of the new work that is being conducted in epistemology, written by the up-and-coming figures in this area. With that goal in mind, we have assembled a talented group of epistemologists and asked them to tell us what they have to offer to the subject. The result is a collection of articles which are both important and, perhaps unsurprisingly, quite idiosyncratic in places as regards the outlook that is offered on this area of philosophy.

As one would expect, a large number of the articles are primarily devoted to offering new approaches to the classical problems of epistemology. For example, Tim Black ('Defending a Sensitive Neo-Moorean Invariantism') opens the volume by offering a new approach to the problem of scepticism, one that is able to capture the common-sense anti-sceptical intuitions that underlie the Moorean response to scepticism – such as the claim that we are able to know the denials of sceptical hypotheses – while at the same time providing the theoretical foundations for such common-sense claims (something noticeably lacking in Moore's own writings on scepticism).

In particular, Black claims that one can motivate a neo-Moorean anti-sceptical position by appropriating the 'sensitivity' principle, which claims, roughly, that if one knows a proposition then one would not have believed that proposition if it had been false. What is startling about this contention is that it is a commonplace in the epistemological literature to claim that the adoption of this principle – at least if not tempered in some way by an additional commitment to contextualism – results in the denial of the closure principle for knowledge (roughly, that if one knows one proposition, and knows that this proposition entails a second proposition, then one also knows that second proposition), and thus results in a very different response to the problem of scepticism. This is because it is usually thought that while most of our everyday beliefs are sensitive, most of our beliefs in the denials of sceptical hypotheses (scenarios

which we know are inconsistent with ordinary scenarios) are *insensitive*. Black's claim, however, is that the sensitivity principle, properly understood, has no such implication, in that our anti-sceptical beliefs can indeed be sensitive. Accordingly, this principle can be put into service in a neo-Moorean response to scepticism with the principle of closure intact.

Interestingly, the issue of how one might know the denials of sceptical hypotheses also crops up in Duncan Pritchard's contribution to the volume ('Knowledge, Luck and Lotteries'), where he sets out the main contours of what he calls an 'anti-luck' epistemology. Pritchard's key claim is that we should take seriously the widely held intuition that knowledge excludes luck as a means of offering a theory of knowledge. His proposal is that we should first offer an account of luck and then combine this with an account of the manner in which knowledge is a luck-excluding concept. In doing so, he claims, we end up with an anti-luck epistemology, one that captures our deeply held intuitions about how the nature of knowledge excludes luck.

Pritchard maintains that this new approach can cast light on the traditional problems of epistemology. In particular, he claims that such an approach motivates the adoption of a 'safety' principle for knowledge, which holds, roughly, that if one knows a proposition then in most nearby possible worlds in which one forms one's belief in this proposition on the same basis as in the actual world, one's belief continues to be true. There are a number of advantages to offering such a principle. It can deal with Gettier-style cases, for example, and can also be used to show how we are able to know the denials of sceptical hypotheses (though note that the explanation Pritchard offers in this respect is different to Black's), thereby enabling us to motivate a certain kind of direct response to the sceptical problem. Notoriously, however, there have been a number of seemingly intractable problems raised for various formulations of the safety principle. In response, Pritchard tries to show in the paper how one can use an anti-luck epistemology to delineate a formulation of the safety principle which is immune to such problems, and he highlights the advantages of the formulation of safety that he adopts on this basis by considering how it deals with the so-called 'lottery puzzle'.

Pritchard notes in his paper that an anti-luck epistemology is naturally allied to an externalist theory of knowledge. In his contribution to this volume ('Reidian Externalism'), Michael Bergmann also makes the case for a form of epistemic externalism which is motivated on novel grounds, though his approach is very different. Bergmann's claim is that we should look to the works of the eighteenth-century Scottish philosopher Thomas

Reid for the motivations for epistemic externalism. Here we thus have a new wave in epistemology that proceeds by re-evaluating the theses put forward by a historical figure.

In particular, Bergmann sees in Reid a form of common-sense epistemology which makes use of a 'proper function' thesis. This view, claims Bergmann, has the resources both to see off its internalist rivals and to deal with the classical problems in epistemology – such as the problem of scepticism – in a fashion that is far more persuasive than competing proposals that are currently 'live' in the literature. Bergmann describes in detail how a common-sense Reidian externalist response to scepticism would function, and explains how such a view does not in fact face the sort of problems – such as, that it is guilty of some sort of vicious epistemic circularity or that it licenses philosophical irresponsibility – that one would typically regard the position as facing.

In 'The Present and Future State of Epistemic Deontology', Nikolaj Nottelmann discusses one of the central issues in epistemology, both contemporary and classical; that of the status and role of epistemic deontology. Inspired by the normative element of belief adoption, contemporary epistemic deontologists pay homage to the idea that epistemic attitudes like belief carry a deontological element in the sense that the agent holding the belief is *epistemically* blameworthy or praiseworthy for holding the very belief in question. Nottelmann develops some basic tenets for a theory of epistemic blameworthiness, isolates the key notions and issues to be further developed, and points to significant areas of application, in particular with respect to 'the legal theoretical question of the basis of criminal guilt in a certain type of negligence cases'.

While Black, Pritchard, Bergmann and Nottelmann are concerned to offer new approaches to standard problems in mainstream epistemology, a number of other contributors to the volume have instead written papers on issues that sit at the interface of formal and mainstream work in the theory of knowledge, reflecting this emergent area of debate in epistemology. This attempt to wed these two areas of epistemology – which, until relatively recently, have seen little in the way of cross-fertilization, despite an obvious overlap in their theoretical concerns – was started by Jaakko Hintikka in his seminal 1962 work, *Knowledge and Belief: An Introduction to the Logic of the Two Notions*. Epistemic logic has since grown into a mature technical discipline, but its philosophical significance is still somewhat neglected. Several of the papers in this volume remedy this unfortunate neglect.

In 'Epistemic Logic and Epistemology', Boudewijn de Bruin takes epistemic logic for a tour of contemporary epistemology and highlights the

significance of epistemic and doxastic logics for traditional epistemological issues like radical scepticism, G.E. Moore and auto-epistemology, the relation between knowledge and belief, and verificationism. He then demonstrates how epistemic logic, when conjoined with various other philosophical logics, serves important roles in modelling other important mainstream epistemological concerns, such as the relationships between knowledge and causality, reliability, agent interactions and validity and temporality.

In 'The Semantic Turn in Epistemology: A Critical Examination of Hintikka's Logic of Knowledge', Troy Catterson provides a useful introduction to the semantics of the logic of knowledge and to how these semantics should be epistemically interpreted. Catterson then goes on to argue that despite the great formal advantage of considering the Hintikkan concept of knowledge to be the logic of the natural-language notion of knowledge, it re-invites many of the recalcitrant problems of traditional epistemology in a Cantorian fashion. Catterson discusses these paradoxes and examines the pros and cons of different solutions.

In 'The Plausibility-Informativeness Theory', Franz Huber brings the classical epistemological concept of confirmation starting from Rudolf Carnap and C.G. Hempel up to date. As Hempel noted, information and truth may be two conflicting aims of scientific inquiry, and it was this insight which in the end led him to abandon the aim of truth in favour of confirmational information. Since then, formal-learning theorists – in particular, Clark Glymour, Kevin Kelly and Oliver Schulte – have proved on numerous occasions that one may confirm forever while heading nowhere near the truth. Huber argues that it is possible to formulate a logic of theory assessment which unites these two aims and at the same time sheds new light on Carnap's confirmational analysis and on confirmation in general.

Conflict and resolution between central epistemological notions is also taken up by Erik Olsson in his contribution to the volume, 'The Place of Coherence in Epistemology'; not with respect to truth and information, but rather to truth and coherence. Olsson offers an overview of the latest developments in the philosophical research focused on coherence and truth treated probabilistically. The probabilistic framework is then shown to offer a means for turning the 'purely philosophical' or theoretical considerations related to truth and coherence into an exact study through probability calculus. Olsson vividly traces the history of this change and isolates some key unsolved problems, demonstrating again the great advantage of using formal methods in epistemology.

Treating knowledge as a composite consisting of true, justified beliefs has been the predominant idea in epistemology since Plato. Of course, this conception has been regularly challenged, and in no small part Gettier's *succès de scandale* counterexamples from the 1960s to a large extent fixed the subsequent agenda for epistemology. The justification condition of the tripartite definition of knowledge has been under particularly extensive scrutiny, especially in light of reliability analyses of knowledge which aim to provide a Gettier-proof account of knowledge which makes no use of the notion of justification, at least as it is standardly conceived. More recently, Timothy Williamson has defended the view that knowledge is a primitive notion, partly on the grounds that a composite analysis, like the standard justified true belief account, is doomed to fail for reasons of circularity. All the same, however, on this view knowledge does entail some form of reliably formed belief under adequate *forcing* conditions. In 'Knowledge, Reliability, and Margin for Error Principles', Paul Egré initially sets out to refine and systematize the modal concept of reliability to be found in Williamson's account and provide suitable constraints on margin of error principles. Egré distinguishes various notions of reliability and use these to evaluate the bounds of application of margin of error principles. In the end Egré criticizes the Williamsonian thesis that knowledge is non-transparent and argues that the modularity of knowledge is required to avoid unpleasant paradoxical conclusions due to Williamson's assumptions.

One can delineate two key goals of epistemological theorizing. The first is to offer a plausible account of knowledge which is sceptic-proof, while the second involves modelling the dynamics of epistemic and doxastic logics. Both of these goals may be subsumed under the one unifying goal which is to account for the rationality of inquiry. This last goal is of course of equal importance to both mainstream and formal epistemology, while the first goal has probably taken centre stage only in mainstream epistemology, and the second goal has generally been pursued by more formally inclined thinkers.

In 'Consider the System', Jeffrey Helzner offers a detailed discussion based on changing views and revising beliefs in the light of Isaac Levi's epistemological theory in which the dynamics of epistemics and doxastics are taken to be *the* central issue in epistemology. One issue is to formulate prescriptions for change of beliefs, yet another is to study how the value of these recommendations for changing views can depend upon context. The idea is that the prescriptive value of a theory must be supplemented by the circumscription of a set of contexts in which the theory under consideration has the value in question. Helzner sets

out the framework for such a study and then takes Levi's epistemology for a performance test in the light of this framework. He then relates the view adopted in the paper to other suggestions put forth by formal epistemologists.

One of the main areas in which mainstream and formal epistemologists have engaged with one another in recent years has been regarding Frederick Fitch's famous paradox of knowability. This paradox appears to show that the characteristic anti-realist claim that all truths are knowable can be straightforwardly converted into the absurd thesis that all truths are known. This apparent *reductio* of anti-realism has naturally prompted a great deal of debate.

In their contribution to the volume ('Knowability, Possibility and Paradox'), Berit Brogaard and Joe Salerno cast new light on this controversy. They begin by critically evaluating several prominent proposals for resolving the paradox of knowability; in particular, those offered in recent work by Neil Tennant and Jon Kvanvig. In their stead, Brogaard and Salerno offer a new solution to the problem, one that builds on insights found in Kvanvig's response concerning the special role that quantified expressions play in modal contexts.

This renewed focus on the overlap between formal and mainstream epistemology naturally gives rise to meta-epistemological questions about the nature of the philosophical methodology employed in epistemology, and whether, in particular, formal and mainstream approaches utilize a common methodology in this regard. Meta-epistemological questions are also the primary focus of a number of papers in this volume, reflecting a new introspection on the part of philosophers regarding the very practice and goals of philosophy.

Wayne Riggs, for example, in his contribution to the volume ('The Value Turn in Epistemology'), argues that epistemology needs to take a 'value turn' akin to the 'linguistic turn' taken by Anglo-American philosophy at the turn of the twentieth century. In particular, he argues that the traditional problems of epistemology should be dealt with by first attending to questions of epistemic value. Riggs's idea is that it is only once we have an answer to the question of why knowledge and other epistemic standings like justification are valuable that we can begin to make progress on these traditional problems.

One could construe Riggs as arguing for a new way to do traditional epistemology. In their contributions to this volume, however, Ram Neta ('How to Naturalize Epistemology') and Finn Spicer ('Knowledge and the Heuristics of Folk Epistemology') are proposing something far more radical, something which constitutes a decisive break from traditional

epistemological theorizing altogether. Neta's claim is that we should 'naturalize' our epistemology in a number of key ways. In particular, he argues that epistemology should treat epistemic kinds like knowledge as natural kinds which have an empirically discoverable essence, and which can thus be studied scientifically through a new branch of cognitive science. According to Neta, the traditional role of the philosopher in the epistemological enterprise should also change as a result. On Neta's view, for example, the appeal to intuitions, which is so characteristic of mainstream epistemology, is cast out in favour of a more empiricist approach to evaluating philosophical theories. Neta goes on to describe his view – which he terms *teleological naturalism* – by contrasting it with some of the main naturalized epistemologies currently being put forward in the literature.

Spicer takes a similarly radical line, and like Neta also calls the traditional philosophical appeal to intuitions when it comes to theory evaluation into question. Spicer's approach is also subtly different, however, in that he is specifically concerned to examine what he calls our *folk epistemology*, using the concepts and techniques familiar to those who have engaged with the issues of folk psychology in the cognitive sciences. In doing so he outlines a number of heuristics that might plausibly form part of our folk epistemology, such as an anti-luck heuristic whereby we evaluate whether an agent has knowledge via consideration of the possibility of error involved. Spicer claims that with these heuristics outlined as working hypotheses, one can then empirically study our folk-epistemological intuitions to see whether such a heuristic is indeed part of our folk epistemology. Spicer thus outlines a truly empirical approach to epistemology, and he highlights the theoretical utility of approaching the epistemological project in this way by bringing the philosophical strategy that he sets out to bear on recent contextualist work in the theory of knowledge.

We can detect, then, three main themes emerging in these papers, and thus in cutting-edge contemporary epistemology more generally. The first concerns new mainstream treatments of the old mainstream problems. The second concerns a renewed interest in applying techniques from formal epistemology to mainstream issues. And the final theme concerns radical meta-epistemological theorizing about the nature of the epistemological project. All three themes in contemporary epistemology are well-represented by the articles collected here, which illustrates the vibrant state of this area of philosophy.