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This book is intended to play two roles. On the one hand, it is a textbook. It is intended as an introduction to the theory of knowledge for readers with some intellectual sophistication but without an extensive knowledge of philosophy. We do not think that this goal is incompatible with a commitment to scholarship, but we have attempted to be sensitive to the fact that some technical issues are tangential to the main strands of the book. We have occasionally relegated issues and sources that will be of interest primarily to advanced readers to footnotes and hope that our liberal attitude toward footnotes will be useful to those pursuing further research in epistemology.

On the other hand, this book is an attempt to say what is true in epistemology, and in this latter guise it is aimed as much at the professional philosopher as at the student.

The book endeavors to play both roles by taking its principal task to be that of mapping out the logical geography of epistemology in a way that enables the reader to see how the issues and theories fit together. A taxonomy of epistemological theories is constructed, and then the different kinds of theories are discussed in terms of their place in the taxonomy. We have done our best to present each general variety of epistemological theory in the best possible light. Then we have tried to raise only those objections to the theories that reflect very general features of them. We have tried to avoid raising objections that might be met by tinkering with details. In this way we have been led to reject all of the more familiar kinds of epistemological theories (foundations theories, coherence theories, probabilist theories, and reliabilist theories). That exhausts most of the logical geography of epistemology and leaves us with only a small verdant landscape to explore—the region of what we call “nondoxastic internalist theories”. These are theories that insist that the justifiability of a belief is a function exclusively of the internal states of the believer, but also insist that we must include more than the believer’s beliefs among those internal states. In particular, the believer’s perceptual states and memory states can be relevant to what she is justified in believing even when she has no beliefs about what perceptual states and memory states she is in.

We begin with a discussion of the problems of knowledge by reviewing skepticism and by rehearsing some of the particular conundrums that have motivated epistemology. We then turn to standard issues in the theory of justification. In chapter two, we discuss foundationalism. Chapters three and four concern coherentism and externalism, respectively. These first four chapters follow a course that will be familiar from other treatments of topics in epistemology. Starting in chapter five, however, we offer a set of discussions that seem to us to be neglected in epistemology.
but sorely needed. We attempt to describe what epistemic normativity is, and how norms are able to regulate our epistemic conduct. Too often, epistemologists seem satisfied to limp along with a conception of normativity that is inherited from metaethics or, worse, to avoid the question entirely. We hope that this chapter will be of interest to a wide philosophical audience, as normativity is a crucial component of philosophical theorizing.

In chapter six we reflect on the questions of what epistemic rationality is and what the methodology of epistemology should be. Epistemologists sometimes conduct their research without critically evaluating how they go about using philosophical intuitions to create a theory of knowledge or justification. It might reasonably be asked, “why should we think that using philosophical intuitions will reveal anything about knowledge?” We want to face that challenge directly. In addition, the discussion of methodology is an appropriate time to introduce one of the central topics of epistemology in the last decade, namely the status of epistemological naturalism. Our view is naturalistic, but our naturalism is quite different from the views that are commonly associated with that label.

One of our main concerns in this book is to integrate epistemology into a naturalistic view of human beings as a kind of biological information processor. We have tried to do this by exploring how we might build an intelligent machine that is capable of interacting with its environment and surviving in a hostile world. Very general constraints having to do with limited computational powers lead to a machine many of whose features reproduce initially surprising aspects of human epistemology. The epistemology of such a machine will almost automatically be a variety of the kind of naturalistic nondoxastic internalism that we have described. In chapter seven, we explore the details of the epistemic norms that arise out of the insights gained by taking this design stance in epistemology. The seventh chapter is presented in a style that may be unfamiliar to philosophical readers, as we do not shy away from taking a stand on the specific implementational details of rational norms. We offer this discussion because we view working out the details of epistemic norms in the context of AI to be a powerful tool for revealing our own rationality. We maintain that philosophers should not be averse to employing a range of intellectual tools in their understanding of human knowledge. While we grant that it is possible to skip the seventh chapter without misunderstanding our position, we hope that students and professionals alike will appreciate the need for providing a logically precise specification of our epistemic norms.

To a certain extent the core of this book grew out of two journal articles by Pollock: “Epistemic Norms” (Synthese) and “My Brother, the Machine” (Nous). The former provides the positive theory of the book, and some material from the latter provides, in a sense, the theoretical underpinning for the positive theory. Jointly, they comprise chapter five. The rest of the book consists of a discussion of competing theories and was written as more or less an introduction to chapter five. In the
end, the discussion of competing theories became as important as the
the positive theory because of the light the discussion throws on the
general structure of epistemology and epistemological problems. The
second edition extends the theory developed in the first edition by incor-
porating some of the results of the OSCAR project. Chapters six and
seven incorporate material from several recent journal articles and book
chapters, and rely upon results defended in Pollock’s *Cognitive Carpentry*.

We wish to thank the publishers of the following articles for allowing us
to reprint parts of these articles: “Procedural epistemology—at the inter-
faced of Philosophy and AI” (*Blackwell Guide to Epistemology*), “Procedural
epistemology” (*The Digital Phoenix: How Computers are Changing
Philosophy*), “Reasoning about change and persistence: a solution to the
frame problem” (*Nous*), “The theory of nomic probability” (*Synthese*), and
“Justification and defeat” (*Artificial Intelligence*).

We have many debts to acknowledge in this second edition. Some of
these debts are shared, as they were incurred during a time when we
were both at the University of Arizona. Still, it is easiest at this point for
to express ourselves separately:

The first edition of this book profited from philosophical discussion
of its topics with many of my colleagues and students. Those who stand
out most prominently in my mind are Keith Lehrer, Alvin Goldman,
Steven Schiffer, Stewart Cohen, John Carroll, George Smith, Bob Audi,
and Hilary Kornblith. Others too numerous to mention have helped me
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— John Pollock,
Tucson, Arizona

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— Joe Cruz
Northampton, Massachusetts