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Readings in Formal Epistemology

Sourcebook

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On June 1, 2011, we received an email from Horacio, expressing his pleasure in our successful cooperation that was drawing to a close and his eager anticipation of the published book. This would turn out to be the last correspondence we received from our friend. Horacio died on July 14, 2011. This anthology would not have seen the light of day without Horacio's encyclopedic knowledge and fine scholarship, his original angle of approach to philosophy, and his constant ambition to push the formal epistemology agenda forward. Horacio will never see our joint work in print, but we will continue his quest and honor his legacy by dedicating this book to him.

Vincent F. Hendricks
Johan van Benthem

Preface

"Formal epistemology" is a term coined in the late 1990s for a new constellation of interests in philosophy, merging traditional epistemological concerns with new influences from surrounding disciplines like linguistics, game theory, and computer science. Of course, this movement did not spring to life just then. Formal epistemological studies may be found in the classic works of Carnap, Hintikka, Levi, Lewis, Kripke, Putnam, Quine, and many others.

Formal epistemology addresses a growing agenda of problems concerning knowledge, belief, certainty, rationality, deliberation, decision, strategy, action, and agent interaction – and it does so using methods from logic, probability theory, computability theory, decision theory, game theory, and elsewhere. The use of these formal tools is to rigorously formulate, analyze, and sometimes solve important issues of interest to philosophers but also to researchers in other disciplines, from the natural sciences and humanities to the social and cognitive sciences and sometimes even the realm of technology. This makes formal epistemology an interdisciplinary endeavor practiced by philosophers, logicians, mathematicians, computer scientists, theoretical economists, social scientists, cognitive psychologists, etc.

Although a relative newcomer, formal epistemology is already establishing itself in research environments and university curricula. There are conferences, workshops, centers, and jobs in formal epistemology, and several institutions offer courses or seminars in the field.

Yet no volume is in existence comprising canonical texts that define the field by exemplars. Lecturers and students are forced to collect influential classics and seminal contemporary papers from uneven sources, some of them hard to obtain even for university libraries. There are excellent anthologies in mainstream epistemology, but these are not tuned to new fruitful interactions between the mainstream and a wider spectrum of formal approaches.

Readings in Formal Epistemology is intended to remedy this situation by presenting some three dozen key texts, divided into five subsections: Bayesian Epistemology, Belief Change, Decision Theory, Logics of Knowledge and Belief, and Interactive Epistemology. The selection made is by no means complete but

hopefully representative enough for an accurate picture of the landscape. This collection will hopefully serve as a study and research companion while also helping shape and stimulate a flourishing new field in philosophy and its broader intellectual environment.

Pittsburgh, PA, USA — Horacio Arló-Costa
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On the way to compiling this volume, we have been assisted by many people. Jeffrey Helzner and Gregory Wheeler gave us valuable suggestions for texts to include. We are grateful for their assistance in the selection process. Many authors represented in this volume provided us with essential copies of their papers while also giving important input on the organization of this collection. We thank them for their kind help. We would have liked to have included even more seminal papers, but due to limitations of space, and the fact that some copyrights were either impossible trace or too expensive to obtain, we ended up with the current selection. We are furthermore indebted to Springer Science and Business Media for taking on this project, especially Ties Nijssen, Christi Lue, and Werner Hermens. The editors also acknowledge the generous funding provided by the Elite Research Prize from the Danish Ministry of Science, Technology, and Innovation awarded to Vincent F. Hendricks in 2008.

Finally, this volume would not have seen the light of day without the constant efforts of Henrik Boensvang and Rasmus K. Rendsvig in communicating with relevant parties, collecting the required permissions, and compiling all the papers patiently and efficiently while paying painstaking attention to detail. In the process, they have more than earned the right to the title of assistant editors of *Readings in Formal Epistemology*.

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