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REASONING

This interdisciplinary work is a collection of major essays on reasoning: deductive, inductive, abductive, belief revision, defeasible (non-monotonic), cross cultural, conversational, and argumentative. They are each oriented toward contemporary empirical studies. The book focuses on foundational issues, including paradoxes, fallacies, and debates about the nature of rationality, the traditional modes of reasoning, as well as counterfactual and causal reasoning. It also includes chapters on the interface between reasoning and other forms of thought. In general, this last set of essays represents growth points in reasoning research, drawing connections to pragmatics, cross-cultural studies, emotion, and evolution.

Jonathan E. Adler is a professor of philosophy at Brooklyn College and the Graduate School, CUNY. His D. Phil. in philosophy is from Oxford University. His main areas of research and publication are epistemology, philosophy of psychology, informal logic, ethics, and philosophy of education. He is the author of *Belief's Own Ethics*.

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REASONING

Studies of Human Inference and Its Foundations

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* Denotes contributions new to this volume.

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Preface

This is a collection of essays on reasoning – deductive, inductive, abductive, belief-revision, defeasible, cross-cultural, conversational, argumentative – oriented toward contemporary empirical research. The study of reasoning is, of course, a major focus of investigation in both philosophy and psychology, and this volume attempts to combine these perspectives. Philosophy, especially logic and philosophy of science, inspired psychology's interest in deduction, induction, and other forms of inference. In the past thirty years, the focus of common interest has greatly enlarged to include causal reasoning, cross-cultural comparisons, moral reasoning, and argumentation. There is increasing attention to reasoning as a response to new information or change of belief (belief-revision or defeasible reasoning), which is a far-reaching concern in epistemology. These advances, along with the more than twenty-year debate on rationality, have made reasoning a focal point of cognitive science research and reflections.

Three additional paths also are now converging on reasoning as major research interests. The first is a focus on fallacious reasoning and its reduction through education, which usually goes under the banner of informal logic or critical thinking. Second, the development of pragmatics, particularly following Grice's foundational contribution, has given rise to fruitful applications to traditional reasoning tasks. A number of commentators in the rationality debate have suggested connections between performance on those tasks and conversational expectations. These suggestions are coming in for experimental testing and some corroboration. Third, and last, neuroimaging studies suggest that the contrasts between inductive and deductive reasoning, and, more surprisingly, between thinking about different ethical dilemmas, are realized by distinct areas of brain activity. This volume takes up these issues, along with the more traditional ones.

The idea for this volume began when Adler searched fruitlessly for a collection for a graduate seminar on reasoning. Rips could not do better, because existing anthologies on reasoning were quite out of date. We have tried to choose topics for this book to fill this gap, concentrating on central and emerging issues that are underrepresented elsewhere. We have largely avoided the topic of practical reasoning because it has been much less studied empirically, is more oriented toward philosophical issues, and is well represented in a recent collection (Millgram's *Varieties of Practical Reasoning*). Similarly, there are excellent collections of work in both decision making and analogical reasoning that allowed us to focus on other topics here.

We hope this volume will interest students of reasoning in philosophy, psychology, and cognitive science and that it will inspire the teaching of interdisciplinary courses on reasoning. Readers will, of course, find their way to those sections of the book most relevant to their interests, but we have planned the sequence of chapters to begin with foundational topics that may illuminate issues in the rest of the book. The introductory chapter and the essays in Part I provide (mostly philosophical) background on the general topic of reasoning and rationality. The remaining two parts of the book more evenly comingle work by psychologists and philosophers. Part II focuses on the traditional "ductions" – deduction, induction, abduction, and a few others – and Part III features new trends or less traditional topics, such as the relation of reasoning to pragmatics, cross-cultural research, modularity, and biology. Readers can concentrate on just the psychological or just the philosophical chapters in Parts II and III, but we sincerely hope they won't. Part of our own excitement in putting together this book came from juxtaposing work from these fields that we believe deserve closer linkage. To cite just one example, we think there is much to glean by reading Davidson and Williams on relativism alongside Burnett and Medin's and Nisbett, Peng, Choi, and Norenzayan's chapters on reasoning across cultures.

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We have included previously published papers that we deem of special importance to ongoing work, but many of the chapters (labeled with asterisks in the Table of Contents) appear here for the first time. We feel especially fortunate in being able to persuade some of the leaders in the field to set out their points of view on earlier research and to comment on recent trends. Some of these new contributions are detailed summaries and updates of earlier research; others tackle new problems or outline newly emerging research domains. We thank these contributors for their patience during the preparation of this anthology. Our thanks to Blakely Phillips, as well, for her major assistance with the indexing. And special thanks to our families for not deserting us in what was an unexpectedly lengthy and complicated process.

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