A Method for Logic:
New Edition of an Old Standard

By Gil Lahav

EVER SINCE ARISTOTLE SET OUT TO CLASSIFY THE SYLLO-gisms of proper argumentation, logic has been recognized as the essential language of reasoned discourse. As the basic instrument of philosophy, and the method by which reliable conclusions in any domain of inquiry are to be reached, the study and explication of logic deserves the utmost care and attention. Irving Copi and Carl Cohen, in the preface to the ninth edition of their *Introduction to Logic*, affirm the importance of their subject matter:

> Nothing more useful can be learned in college than the principles of clear and accurate thinking: how to acquire and process new informa-tion, and how to reason about and judge competing claims.

Copi and Cohen treat their subject with precisely the kind of clarity and com-prehensiveness that an exposition of this often complex and abstruse discipline demands.

Their textbook is organized in a systematic way that makes it useful both as a course book and as a reference book, with a glossary of logical terms which also serves as a subject index, a summary of the rules of inference and quantifi-cation, bold face type for all important concepts and their explication, and reca-pitulations after each chapter. It also offers practical techniques for diagram-ming complex arguments and solving logical puzzles. The book is especially helpful for its inclusion of so many illustrations, taken from actual philosophi-cal, political and scientific debates, and for the many solutions to the exercises that it provides. Like mathematics, logic involves a problem-solving task that is improved only through practice, and an *Introduction to Logic* gives students of logic ample opportunity to hone the preci-sion and depth of their reasoning.

BOOK REVIEWED

Introduction to Logic,
Ninth Edition
by Irving M. Copi
and Carl Cohen
New York: MacMillan, 1994.

The book is divided into three major topics: Language, Deduction and Induction. The section on language is divided into four chapters, the first two of which explore the uses of language in argumentation, inquiry, and discussion, and the last two of which focus on fallacies and definitions. The chapter on the uses

of language underscores the importance of emotively neutral language and examines the distinction between disagreements of belief and disagreements of attitude. The book's thorough treatment of logical fallacies includes an exposition of twelve fallacies of relevance and five fallacies of ambiguity. The chapter on definition distinguishes three kinds of disputes and five kinds of definitions and their purposes. It also examines the construction of denotative and connotative definitions, and then formulates and explains the five rules that traditionally apply to definitions by genus and difference.

Part two of the book, devoted to deduction, is comprised of six chapters: "Categorical Propositions," "Categorical Syllogisms," "Arguments in Ordinary Language," "Symbolic Logic," "The Method of Deduction," and "Quantification Theory." Throughout the book, and especially in the section on deduction, the authors do an excellent job of explaining the logic of logic. For example, they not only describe the deductive techniques of symbolizing and manipulating the material conditional, but they also explain the logician's rationale for distinguishing material implication from other kinds of implication (*e.g.*, causal, decisional, definitional) and for assigning a truth value of T to counterfactuals.

However, students and professors seeking a treatment of deeper and more technical topics in logic will be disappointed to discover that the authors do not discuss Frege's proofs for the soundness and completeness of deductive logic. The authors also leave out any treatment of compactness, decidability, and the law of identity. The clarity with which Copi and Cohen explain the topics that they do cover may leave the more advanced student wishing that excluded topics like Gödel's Theorem could have been examined or at least discussed briefly.

The last section of *An Introduction to Logic* deals with methods of induction. This part of the book includes the following five chapters: "Analogy and Probable Inference," "Causal Connections: Mill's Method of Experimental Inquiry," "Science and Hypothesis," "Probability," and "Logic and the Law." This last section of the book both summarizes the mechanical aspects of making probabilistic inferences and provides an interesting introduction to the methods of empirical inquiry and the nature of scientific explanation. Also noteworthy is the last chapter's discussion of the differences between how logic can function in a philosophical debate and how it can function in a court of law. Those students looking to prepare for the Law School Admissions Test could certainly benefit from this book. It provides one with ample opportunities to exercise one's analytical skills while systematically outlining some useful methods for solving logic problems and for extracting the premises, assumptions and conclusion of an argument.

To the benefit of those seeking to improve their habits of reasoning, Copi and Cohen have taken a systematic, precise, and clear approach to logic, while pointing out the continual relevance of logic to problem-solving and effective persuasion, inside and outside of the academy. φ