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The Logic of Real Arguments

This new and expanded edition of *The Logic of Real Arguments* explains a distinctive method for analysing and evaluating arguments. It discusses many examples, ranging from newspaper articles to extracts from classic texts, and from easy passages to much more difficult ones. It shows students how to use the question 'What argument or evidence would justify me in believing P?', and also how to deal with suppositional arguments beginning with the phrase 'Suppose that X were the case.' It aims to help students to think critically about the kind of sustained, theoretical arguments which they commonly encounter in the course of their studies, including arguments about the natural world, about society, about policy and about philosophy. It will be valuable for students and their teachers in a wide range of disciplines including philosophy, law and the social sciences.

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Preface to the first edition

This book arose out of my experience of teaching logic. Like many others I hoped that teaching logic would help my students to argue better and more logically. Like many others, I was disappointed. Students who were well able to master the techniques of logic seemed to find that these were of very little help in handling real arguments. The tools of classical logic – formalisation, truth-tables, Venn diagrams, semantic tableaux, etc. – just didn't seem to apply in any straightforward way to the reasoning which students had to read in courses other than logic. At the same time I felt that it ought to be possible to give students some guidance – some procedure – which would help them to extract and to evaluate arguments from written texts and which would help them to write good arguments of their own. I wanted the procedure to be non-formal but to build upon the insights of traditional logic; this book attempts to realise that objective.

Many other teachers of logic and philosophy have had much the same experience in the past two decades and the result has been the emergence of what is now called the 'informal logic and critical thinking movement' in North America. One of the first books in this tradition was Monroe Beardsley's *Practical Logic*, a book which is still well worth reading over thirty years on. Stephen Toulmin's *The Uses of Argument* is another classic attempt at providing an alternative framework for understanding reasoning. However, Michael Scriven's *Reasoning* has probably been the most influential contribution to the field: it marks a watershed since which interest in the subject has grown very rapidly. For a very useful bibliography, see *Informal Logic: The First International Symposium*, edited by J. Anthony Blair and Ralph H. Johnson.

The Logic of Real Arguments is a contribution to the literature in a field which is already very extensive and it makes no attempt to be comprehensive. However, it is distinctive in various ways. For example the focus of interest is not so much on everyday reasoning as on theoretical argument of the kind that university and college students encounter in the course of their work. The book considers mainly sustained theoretical arguments about the natural world, about society, about policy or about philosophy – the sort of argument which is *complex, important* but *hard to handle*.

The general method of argument analysis which is presented (see especially Chapter 2) is intended to apply to a wide range of such written

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arguments – expressed in ordinary language. The method employs diagramming techniques to represent the structure of arguments, and an alternative, linear representation, is provided for those who hate diagrams. However, the distinctive feature of the method explained here is its use of the Assertibility Question,

What argument or evidence would justify me in asserting the conclusion C?

This question is used both in discovering an author's intended argument and in evaluating that argument. It is used and discussed extensively throughout the book and the philosophical assumptions underlying its use are explained in Chapter 11.

Another distinctive feature of this book is its treatment of 'suppositional reasoning'. Most informal logic/critical thinking texts make no mention of this at all (though Stephen Thomas's *Practical Reasoning in Natural Language* (3rd edn) is a notable exception). The reasoning considered in most texts employs only *assertions*, i.e. propositions which have been presented as being true. However, many arguments (particularly in theoretical contexts) reach their conclusion not by asserting their starting points but by assuming or supposing something 'for the sake of argument' – as when an atheist says, 'Suppose there is a God . . .' In Chapter 8 we explain how to handle such reasoning and how to diagram it, using ideas due originally to Gottlob Frege. This necessitates revising what is normally said about reason and conclusion indicators; these are systematically ambiguous in a way that most texts fail to notice.

Since it will be clear that many of the theoretical contexts in which we are interested are scientific or pseudo-scientific we also have a chapter on scientific argument. This involves giving an account of Hume's ideas on the role of observation and induction, of Popper's conception of scientific method in terms of conjectures and refutations and of Thomas Kuhn's work on paradigms, normal science and scientific revolutions. Since the message of this book is that one cannot escape epistemology (in evaluating reasoning) the teacher who wishes to employ the approach of this book further in, say, the historical domain might wish to supply a similar chapter on historical method.

Much of the book consists in discussing particular examples of reasoning: the sources range from Thomas Malthus to Karl Marx and from Caspar Weinberger to Charles Darwin. There is also an Appendix which outlines some of the basic ideas of classical elementary formal logic. This contains an extensive explanation of the notion of (deductive) validity in terms of the notion of 'logical form' (logical structure). Furthermore, the notation of propositional and predicate logic, truth-tables and semantic tableaux are all introduced in so far as they are relevant to what has gone before. The book concludes with a large number of carefully selected exercises. Those who are

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sceptical of the value of methods like the ones expounded in this book tend to underestimate how hard students find it to grasp and evaluate arguments. One way to see this is to choose an exercise from the book and see how well students can handle it with and without the methods explained here. No doubt there is room for extending and improving these methods but experience strongly suggests that they are a real help.

I have enjoyed writing this book. Many people have helped and encouraged me in the course of writing it and it is a pleasure to thank them now. The Nuffield Foundation and the University of East Anglia generously supported work on an earlier draft of the text and this enabled Dr Anne Thomson to help me with much of the initial work. This got the project off to a good start. Many colleagues and students have supplied me with examples and have helped to clear my thoughts in the course of presenting these ideas at UEA over recent years. I should like to thank them all, especially Martin Hollis, for his unflagging encouragement. Muriel Parke, Pat Earl and Val Striker produced beautiful typescript from my messy manuscript. My University and Cambridge University Press have been helpful and supportive throughout. More recently I have learned a great deal from Professor John Hoaglund's excellent conference at Christopher Newport College, Newport News, Virginia, from Professor Frans van Eemeren's wide-ranging work on argumentation in Amsterdam and from Professor Richard Paul's pioneering work on 'strong critical thinking'. Ideas in this field are developing very rapidly and I am conscious of how much I owe to many valuable conversations with all of them.

Finally, affectionate thanks to my wife Sarah and to my children Daniel, Max and Susannah for extensive practice in arguing my case.

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Preface to the second edition

This second edition differs from the first mainly by the addition of two new chapters. These deal with some fascinating arguments about the existence of God and about how our minds and bodies interact. Although this approach to teaching students how to analyse and evaluate arguments was first published in 1988, many students and teachers still find it useful and instructive, and this seems to be especially true in Philosophy departments, hence the choice of new topics. The general approach has not been changed here, but the new examples illustrate applications of my approach in particular contexts – some especially philosophical and one which is rhetorically powerful. It has been a pleasure to write this second edition and I particularly want to thank Nicholas Everitt for reading the new chapters and making very helpful suggestions; I often accepted these but, needless to say, the resulting work is my responsibility. Again I also wish to thank Cambridge University Press for their help and patience and my wife and family for theirs too.

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