



# Aristotle's first principles

Terence Irwin.

# ARISTOTLE'S FIRST PRINCIPLES

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CLARENDON PRESS · OXFORD

Oxford University Press, Walton Street, Oxford OX2 6DP

Oxford New York Toronto  
Delhi Bombay Calcutta Madras Karachi  
Petaling Jaya Singapore Hong Kong Tokyo  
Nairobi Dar es Salaam Cape Town  
Melbourne Auckland  
and associated companies in  
Berlin Ibadan

Oxford is a trade mark of Oxford University Press

Published in the United States  
by Oxford University Press, New York

© Terence Irwin 1988  
Reprinted (new as paperback) 1990 (twice)

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*British Library Cataloguing in Publication Data*

Irwin, Terence  
Aristotle's first principles.  
1. Ancient Greek philosophy. Aristotle  
I. Title  
185

ISBN 0-19-824290-5 (Pbk.)

*Library of Congress Cataloguing in Publication Data*

Irwin, Terence.  
Aristotle's first principles/Terence Irwin.  
Bibliography: p.  
Includes index.  
1. Aristotle. 2. Methodology—History. I. Title.  
B485.174 1988 185—dc19 . 88—12507  
ISBN 0-19-824290-5 (Pbk.)

Printed in Great Britain by  
Biddles Ltd., Guildford and King's Lynn

## PREFACE

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On 5 October 1971, I wrote a short paper on *Metaphysics* 1004b25–6, for a tutorial with G. E. L. Owen at Harvard. Since then I have intermittently pursued some lines of inquiry connected with that passage; the current result of them is this book. The first chapter gives a survey of its contents, and some idea of the main argument. I try to explore some connexions between different areas of Aristotle's philosophy, and to suggest how issues and doctrines in one area may affect his views in another. Whether or not the main thesis of this book is found convincing, I hope it will seem profitable to examine some of the connexions I discuss, and to see how they affect our views about the coherence and plausibility of Aristotle's doctrines.

While I would like to have formed original and convincing views on all the questions I discuss, I cannot claim to have done this. On many points I rely on views that other people have made quite familiar (though hardly standard, given the extent of healthy disagreement in the study of Aristotle). On the other hand, though I cover more topics than are usually covered in a single book on Aristotle, this book is not a general survey; it is quite selective, and it does not attempt to give a balanced impression of Aristotle as a whole. Still, I hope I have provided enough detail to give the uninitiated reader some idea of the main questions, and of some of the main approaches to them, and also to give both the less advanced and the more advanced student some idea of the reasons for my conclusions. While this is not an introductory book, I hope it will be accessible to reasonably persistent readers who have not read much about Aristotle, but are willing to read Aristotle fairly closely; in the main text I try not to presuppose familiarity with the present state of scholarly and philosophical discussion.

The notes discuss some points of detail, and indicate some of my views on issues that have been discussed by other writers on Aristotle. They come after the main text, on the assumption that many readers will find it easier to read the main text before tackling the issues that are raised in the notes. The general excellence of the 'secondary literature' on Aristotle, extending from the Greek commentators to the present, is unrivalled (as far as I know) by what has been written on any other philosopher; and therefore I would like to have done more justice to it than I have. The reader should not anticipate the systematic and judicious selection that would certainly be desirable. I especially regret the brevity of my discussion of some complex issues and of the views

that have been expressed about them. It will be even clearer to many readers that my account of Aristotle's views raises many large philosophical questions that I have not pursued very far, and that the positions I do take often leave many objections unanswered.

I am pleased to be able to acknowledge the award of fellowships from the Society for the Humanities at Cornell University, the National Endowment for the Humanities, and the American Council of Learned Societies. The generosity of the Warden and Fellows of All Souls College (in 1982-3), and of the President and Fellows of Magdalen College (in 1987), allowed me to spend a year and a half in Oxford under highly favourable conditions. It was both beneficial and pleasant to discuss Aristotle with Oxford Aristotelians, especially Michael Woods, Christopher Taylor, and David Charles.

I have already mentioned Gwil Owen; and readers who know his work (especially Owen [1965]) will see its influence throughout this book. Ever since I began to think about Aristotle I have benefited from John Ackrill's candid and challenging papers and lectures, and from his incisive and encouraging criticisms. I have had the good fortune to teach in the humane, friendly, and stimulating environment of Cornell philosophy, and hence to learn from other people who have been here, especially from David Brink, Eric Wefald, Alan Sidelle, Sydney Shoemaker, Henry Newell, Nicholas Sturgeon, John Fischer, and Richard Boyd. Helpful written suggestions and corrections by David Brink, Jennifer Whiting, and Susan Sauvé have considerably improved earlier drafts of this book. I have been especially influenced by four recent studies of issues in Aristotle: Ide [1987], Whiting [1984], Shields [1986], and Sauvé [1987]. I have been even more influenced by the authors of these studies; they have invariably offered acute, constructive, and friendly criticism and discussion, and they have improved my views on many more points than I could readily identify. Above all, I have received thorough and relentless criticism, numerous corrections and suggestions, and unwavering help and encouragement, from Gail Fine.

The Delegates, staff, and readers of the Press have treated this book in the tolerant, efficient, and helpful way that I have found to be characteristic of them.

T.H.I

Cornell University,  
Ithaca, New York  
5 October 1987

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I  
THE EMERGENCE OF  
THE PROBLEM

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# THE PROBLEM OF FIRST PRINCIPLES

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## 1. FIRST PRINCIPLES

When Aristotle explains in general terms what he tries to do in his philosophical works, he says he is looking for 'first principles' (or 'origins'; *archai*):

In every systematic inquiry (*methodos*) where there are first principles, or causes, or elements, knowledge and science result from acquiring knowledge of these; for we think we know something just in case we acquire knowledge of the primary causes, the primary first principles, all the way to the elements. It is clear, then, that in the science of nature as elsewhere, we should try first to determine questions about the first principles. The naturally proper direction of our road is from things better known and clearer to us, to things that are clearer and better known by nature; for the things known to us are not the same as the things known unconditionally (*haplôs*). Hence it is necessary for us to progress, following this procedure, from the things that are less clear by nature, but clearer to us, towards things that are clearer and better known by nature. (*Phys.* 184a10–21)<sup>1</sup>

The connexion between knowledge and first principles is expressed in Aristotle's account of a first principle (in one sense) as 'the first basis from which a thing is known' (*Met.* 1013a14–15). The search for first principles is not peculiar to philosophy; philosophy shares this aim with biological, meteorological, and historical inquiries, among others. But Aristotle's references to first principles in this opening passage of the *Physics* and at the start of other philosophical inquiries imply that it is a primary task of philosophy.<sup>2</sup>

It is easy to see why Aristotle says we should begin with what is better known and more familiar to us (*EN* 1095a2–4); we have to begin with the beliefs we initially accept. But his account of the goal of inquiry is more puzzling. He suggests that the first principles are known and clearer 'by nature' or 'unconditionally', even if they are less well-known and less clear to us. Aristotle explains the point by analogy. Someone may be a 'natural musician', because he is naturally suited for it, even if he never learns music, and so never becomes a musician: 'And presumably what is known unconditionally is not what is known to everyone, but what is known to those in a good intellectual condition, just as what is unconditionally healthy is what is healthy for those in a

good bodily condition' (*Top.* 142a9–11; cf. *EE* 1235b30–1236a6, 1237a16–18).<sup>3</sup> First principles are known unconditionally because they are naturally appropriate for being known.<sup>4</sup> The beliefs we begin with are 'prior to us' (i.e. 'prior from our point of view'), since they are what we begin from; but the principles we find will be 'prior by nature', and when we have found them they will also be 'prior to us'; for then we will recognize that they are more basic and primary than the principles we began from.<sup>5</sup>

The first principles we find will include beliefs and propositions. But Aristotle also regards things—non-linguistic, non-psychological, non-propositional entities—as first principles. We come to know, e.g., that there are four elements, and this proposition that we know is a first principle; but the four elements themselves are also first principles and are prior and better known by nature. Actually existing things are first principles because they explain other things, and our knowledge of the world requires us to know the explanatory relations in it. To have scientific knowledge (*epistêmê*) about birds is to be able to explain why birds are as they are and behave as they do. The things and processes that explain others are basic and fundamental; when we have found them, we have found the first principles of birds. What is prior and better known by nature is both the propositional principle about, e.g., atoms, and the real principle mentioned in the proposition—the atoms themselves. We grasp both sorts of principles at the same time and in the same way.<sup>6</sup>

It is intelligible that when Aristotle speaks of first principles, he speaks indifferently of propositions and of the things they refer to. For the relations between non-propositional things in the world, not the relations between our beliefs, make one rather than another proposition a first principle. We grasp propositional first principles, and they become 'known to us', when our beliefs match the appropriate propositional principles that match the appropriate non-propositional principles. Once we believe a propositional first principle, we certainly connect it to our other beliefs in specific ways; but the beliefs and the connexions do not make it a first principle. It is a first principle because of the facts external to our beliefs, and we have the correct beliefs in the correct connexions only in so far as we describe the relations between facts independent of our beliefs. Let us say that in so far as we do this, we grasp 'objective' (propositional) first principles describing the (non-propositional) first principles of an objective reality.<sup>7</sup>



## 2. REALISM

In so far as Aristotle claims that objective first principles must be known by nature, he commits himself to a metaphysical realist conception of knowledge and reality. For he claims that the truth and primacy of a propositional first principle is determined by its correspondence to non-propositional first principles. What is 'known by nature' is not something that happens to be adapted to our cognitive capacities, or to play a special role in our theories or beliefs. It is known by nature because it is a primary feature of the world, and it is known to us only if we are in the right cognitive condition to discover what is really there. The belief we hold when we are in the right sort of cognitive condition does not itself constitute our grasp of an objective first principle; for it is logically possible for us to have coherent, simple, powerful, well-tested theories, meeting all the canons of proper inquiry, without having found objective principles. The primacy of the objective principle makes our belief the grasp of a principle, not the other way round.

Aristotle's remarks about truth show his commitment to metaphysical realism. If you were sitting, and now stand, the statement 'You are sitting' was true, and became false; but he denies that the statement itself has undergone change (of the ordinary sort); he prefers to say that a statement or belief remains unchanged, but receives a different truth-value (the respect in which it is said to change) because the things themselves change (*Catg.* 4a21–37).

This might be construed as a commonsense remark with no great theoretical significance. But in fact it rests on Aristotle's more general conviction that the facts about the world determine the truth of statements, but the converse is not true.

In the cases where two things reciprocate in implication of being, still, if one is in some way the cause of the being of the other, it would reasonably be said to be naturally prior. And clearly there are some cases of this sort. For that there is a man reciprocates in implication of being with the true statement about it; for if there is a man, the statement by which we say there is a man is true, and this reciprocates—for if the statement by which we say there is a man is true, there is a man. Nonetheless, the true statement is in no way the cause of the thing's being (i.e. of its being the case that there is a man), whereas the thing appears in a way the cause of the statement's being true—for it is by the thing's being or not being that the statement is said to be true or false. (*Catg.* 14b11–23)

The asymmetry in explanation described here is taken to be a defining feature of truth about objective reality.<sup>8</sup> In claiming that truth is correspondence to the facts, Aristotle accepts a biconditional; it is true that *p* if and only if *p*. But he finds the mere biconditional inadequate for the asymmetry and natural priority he finds in the relation of