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## ARISTOTLE ON TIME

Aristotle's definition of time as "a number of motion with respect to the before and after" has been branded as patently circular by commentators ranging from Simplicius to W. D. Ross. In this book Tony Roark presents an interpretation of the definition that renders it not only non-circular, but also worthy of serious philosophical scrutiny. He shows how Aristotle developed an account of the nature of time that is inspired by Plato while also thoroughly bound up with Aristotle's sophisticated analyses of motion and perception. When Aristotle's view is properly understood, Roark argues, it is immune to devastating objections against the possibility of temporal passage articulated by McTaggart and other twentieth-century philosophers. Roark's novel and fascinating interpretation of Aristotle's temporal theory will appeal to those interested in Aristotle, ancient philosophy, and the philosophy of time.

TONY ROARK is Associate Professor of Philosophy at Boise State University. His work has appeared in journals such as *Mind*, *Ancient Philosophy*, *Apeiron*, and *History and Philosophy of Logic*.

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*A Study of the Physics*

TONY ROARK

*Boise State University*



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*For Keenan,  
whose four-year-old syllogisms about crocodiles and human  
animals were no less endearing for their invalidity.*

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## *Preface*

“It’s about time.” These words were inscribed in a card given to me by my cohorts and professors upon successfully clarifying my dissertation proposal in 1996. The inscription was intended as a bit of good-natured ribbing and word play, but it was prophetic, for this book has taken far too long to write. It began its life as my doctoral dissertation, written at the University of Washington under the capable and supportive supervision of Professors S. Marc Cohen, David Keyt, Jean Roberts, and Cass Weller. I defended the dissertation in 1999, and since that time I have subjected it to prolonged and radical surgery: superfluous sections have been excised, essential but missing arguments and analyses have been added, and the remaining original material has been improved (or so I hope) in various ways.

Even though the final product bears a weak resemblance to its original incarnation, I owe a deep debt of gratitude to the individuals mentioned above, not only for their help in writing the dissertation, but also for their unwavering kindness and friendship.

I am profoundly grateful for the material support of the National Endowment for the Humanities, which provided a Summer Stipend in 2005 to work toward the completion of this book.<sup>1</sup> I wish I could have lived up to my optimistic projections for finishing it around that time, but I am confident that it is better for the extra attention it has received in the interim.

The Division of Research and the College of Arts and Sciences at Boise State University provided additional material support for my research in the form of a Faculty Research Associates Program Grant, also awarded in 2005.

<sup>1</sup> Any views, findings, conclusions, or recommendations expressed in this publication do not necessarily reflect those of the National Endowment for the Humanities.

Several parts of this book have been published previously in different form as journal articles, and I wish to extend my gratitude to the editors of those journals for granting permission to reprint that material here. In particular, portions of Chapter 3 were published under the title “Why Aristotle Says There Is No Time without Change” in *Apeiron*;<sup>2</sup> parts of Chapters 4 and 5 appeared in *Ancient Philosophy* under the title “Aristotle’s Definition of Time Is Not Circular”;<sup>3</sup> a section of Chapter 12 was included in a themed edition of *Philosophical Writings* under the title “Aristotelian Temporal Passage”;<sup>4</sup> and some of the critiques of Ursula Coope’s interpretation throughout appeared in *Mind* as part of my review of her *Time for Aristotle*.<sup>5</sup>

The members of the Aristotelian Society of Boise were tremendously good sports in working through my manuscript in progress and providing helpful suggestions. I’ve benefited immensely from their feedback and friendship.

Hilary Gaskin and Joanna Garbutt at Cambridge University Press have both been delightful to work with. Among Hilary’s other editorial duties, she secured two outstanding readers whose anonymous comments on the manuscript prompted me to rethink and sometimes revise various parts of the book. I’m quite certain that my revisions fall short of their suggestions, but I am no less grateful to them for that fact. Emma Wildsmith, my project manager, was tremendously helpful in assembling the index. Christopher Feeney served as my copy editor, and his efficiency was matched only by his thoroughness.

Finally, it would have been impossible to complete this book without the loving support of my family, especially that of my wife Gayle. It takes a rather special person to put up with a philosopher at home, and Gayle is certainly that. My children, Keenan and Elizabeth, also deserve my thanks for their patience and good character. Since this is my first book, it seems appropriate to dedicate it to my first child.

This book is for you, Keenan. And it’s about time.

<sup>2</sup> Roark (2004).    <sup>3</sup> Roark (2003).    <sup>4</sup> Roark (2005).    <sup>5</sup> Roark (2009).

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## *Abbreviations*

### ARISTOTLE

<i>An.</i>	<i>On the Soul (De Anima)</i>
<i>An.Post.</i>	<i>Posterior Analytics</i>
<i>An.Pr.</i>	<i>Prior Analytics</i>
<i>Cael.</i>	<i>On the Heavens (De Caelo)</i>
<i>Cat.</i>	<i>Categories</i>
<i>GA</i>	<i>Generation of Animals</i>
<i>GC</i>	<i>On Generation and Corruption</i>
<i>HA</i>	<i>History of Animals</i>
<i>Insomn.</i>	<i>On Dreams (De Insomnis)</i>
<i>Int.</i>	<i>On Interpretation (De Interpretatione)</i>
<i>MA</i>	<i>Movement of Animals (De Motu Animalium)</i>
<i>Mem.</i>	<i>On Memory (De Memoria)</i>
<i>Met.</i>	<i>Metaphysics</i>
<i>Meteor.</i>	<i>Meteorology</i>
<i>NE</i>	<i>Nicomachean Ethics</i>
<i>PA</i>	<i>Parts of Animals</i>
<i>Phys.</i>	<i>Physics</i>
<i>SE</i>	<i>Sophistical Refutations (Sophistici Elenchi)</i>
<i>Sens.</i>	<i>Sense and Sensibilia (De Sensu et Sensibili)</i>
<i>Somn.</i>	<i>On Sleep and Waking (De Somno et Vigilia)</i>
<i>Top.</i>	<i>Topics</i>

### PLATO

<i>Cra.</i>	<i>Cratylus</i>
<i>Epin.</i>	<i>Epinomis</i>
<i>Phd.</i>	<i>Phaedo</i>
<i>Phil.</i>	<i>Philebus</i>

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<i>Prm.</i>	<i>Parmenides</i>
<i>Rep.</i>	<i>Republic</i>
<i>Sph.</i>	<i>Sophist</i>
<i>Tht.</i>	<i>Theaetetus</i>
<i>Ti.</i>	<i>Timaeus</i>

Translations of *Physics* IV.10–14 are my own. The remaining translations of Aristotle are adapted from those collected in Barnes (1984). Translations of Plato are adapted from those collected in Cooper (1997), except where noted. Where a particular translation of either philosopher is problematic or otherwise interesting, I credit the translator in a footnote. Translators of other figures are credited in footnotes.