

HISTORY AND PHILOSOPHY OF BIOLOGY

The Biological Foundations of Action

Derek M. Jones



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Philosophers have traditionally assumed that the difference between active and passive movement could be explained by the presence or absence of an intention in the mind of the agent. This assumption has led to the neglect of many interesting active behaviors that do not depend on intentions, including the “mindless” actions of humans and the activities of non-human animals. In this book Jones offers a broad account of agency that unifies these cases. The book addresses a range of questions, including: When are movements properly attributed to whole agents, rather than to their parts? What does it mean for an agent to guide its action? What distinguishes agents from other complex systems? What is the relationship between action and adaptive behavior? And why might the study of living systems be the key to understanding agency?

This book makes an important contribution to current philosophical debate on the nature and origins of agency. It defines action as a uniquely biological process and recasts human intentional action as a specialized case of a broader and more common phenomenon than has been previously assumed. Uniting findings from philosophy, cognitive science, psychology, biology, computer science, complexity theory and ethology, this book will be of interest to students and scholars working in these areas.

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History and Philosophy of Biology

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This series explores significant developments in the life sciences from historical and philosophical perspectives. Historical episodes include Aristotelian biology; Greek and Islamic biology and medicine; Renaissance biology; natural history; Darwinian evolution; nineteenth-century physiology and cell theory; twentieth-century genetics, ecology, and systematics; and the biological theories and practices of non-Western perspectives. Philosophical topics include individuality, reductionism and holism, fitness, levels of selection, mechanism and teleology, and the nature-nurture debates, as well as explanation, confirmation, inference, experiment, scientific practice, and models and theories vis-à-vis the biological sciences.

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Rasmus Grønfeldt Winther is Associate Professor of Philosophy at the University of California, Santa Cruz (UCSC) and Visiting Scholar of Philosophy at Stanford University (2015–2016). He works in the philosophy of science and the philosophy of biology and has strong interests in metaphysics, epistemology, and political philosophy, in addition to cartography and geographic information systems (GIS), cosmology and particle physics, psychological and cognitive science, and science in general. Recent publications include “The Structure of Scientific Theories,” *The Stanford Encyclopaedia of Philosophy* and “Race and Biology,” *The Routledge Companion to the Philosophy of Race*. His book with University of Chicago Press, *When Maps Become the World*, is forthcoming.

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