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Philosophy*

A COMPANION TO THE PHILOSOPHY OF TIME



Edited by
HEATHER DYKE AND
ADRIAN BARDON

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A Collection to the Philosophy of Time

Edited by
Heather Dyke and Adrian Bardon



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A Companion to
the Philosophy of Time

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*For Ian, Ruby and Damian (H.D.)
and
For Janna, Zev and Max (A.B.)*

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Introduction

HEATHER DYKE AND ADRIAN BARDON

There are certain areas of interest to which scholars and students of nature and the human condition have returned again and again. Since antiquity, scholars have inquired into the best kind of life and the best kind of society; our origins as humans, and the origins of the universe; the nature of consciousness and the mind's relation to nature; and the fundamental elements of reality itself – what is real, and what is interpretation or illusion? When we go back as far as we have written evidence, we discover that some of the earliest scholars thought that the key to figuring out what is real, vs. what is mere interpretation or projection, lies in understanding time and its perception. This sense of the centrality of time persists in much of the most vital contemporary work in philosophy and associated sciences. The study of time has never been more dynamic and interdisciplinary than it is right now.

It is not easy – to put it mildly – to extricate time itself from our lived experience of the world. The student of nature needs to find a perspective, to see the forest for the trees. Physicists, neuroscientists, and the like collect data and theorize about time and time-perception, but philosophy is the discipline that has taken on the conceptually difficult task of sorting out what we actually can learn, from empirical studies, about the world on the one hand, and about ourselves on the other.

This text covers the philosophy of time with greater breadth than any previous collection. Further, where other collections covering the philosophy of time have focused on contemporary work, this is the first also to tackle the historical development of the philosophy of time. (In fact, Part I, in focusing on the history of the philosophy of time, to the best of our knowledge represents the first ever collection of essays on this subject.)

Part I features essays on the philosophy of time from the pre-Socratic period through the twentieth century. Parts II and III reflect, respectively, on the physics and metaphysics of time, and on the study of the experience of time.

Together, Parts II and III address the fundamental question of contemporary time studies: distinguishing between time as it is in itself, and time as we humans perceive

and experience it; between the *scientific* and *manifest* images of time. These two images are often in tension, and one goal of the philosophy of time is to reconcile them. According to our manifest image of time, we all share a common ‘now,’ and time is dynamic, carrying us forward towards the future. But according to the scientific image of time, it is not dynamic, but static, and no moment of time is ontologically privileged, so the ‘now’ of lived experience must be an illusion: a mistaken projection of our perspective on to temporal reality itself. The essays here constitute examinations of both the manifest and the scientific images of time, together with philosophical attempts at teasing them apart, and reconciling the tensions between them. As in Part I, many of these essays reflect the close partnership between philosophy and the natural sciences in the study of time.

This volume brings together experts in the various branches of the philosophy of time from around the world. Some are distinguished contributors to major developments in this field in recent decades, others are rising stars. All of them bring wisdom and clarity to the topics covered here. In the remainder of this introduction we present a brief summary of each chapter.

1. The History of the Philosophy of Time

The pre-Socratic philosopher Parmenides’ *On Nature*, which argues for the ideality of time and change, may be the oldest surviving example of extended philosophical argumentation. Parmenides’ contemporary, Heraclitus, took the opposite position, claiming that change is the most fundamental aspect of reality. Ronald Hoy explains their rationales and argues that we can find echoes of their views in, respectively, the theory of relativity and quantum mechanics.

Next, Niko Strobach explains Zeno’s four paradoxes of motion, intended to support Parmenides’ rejection of the reality of change. Strobach looks at Aristotle’s famous critique of Zeno, as well as the contemporary relevance of the paradoxes.

Aristotle remained a central figure for Western philosophy and science for two thousand years. His examination of time in Book IV of his *Physics* was one of his most important and enduringly influential products. Andrea Falcon provides a close analysis of Aristotle’s puzzle-based approach to a relationist account of time.

The Stoics were known for the twin doctrines of determinism and fatalism. Fatalism is the doctrine of the timelessness of truth and the consequent fixedness of the future. Ricardo Salles gives an account of the reasons for and against fatalism, as that doctrine was elaborated by leading logician and Stoic Chrysippus.

Jon McGinnis canvasses medieval accounts of time as they related to creationist accounts of the age of the world. The competing accounts by Jewish, Christian and Muslim philosophers and theologians discussed by McGinnis include those of Avicenna, Augustine, Ibn Tufayl, Moses Maimonides, and Thomas Aquinas, among others.

Isaac Newton departed from the classical and medieval traditions with an extremely influential realism (or substantivalism) about time, introduced in connection with his laws of motion. Eric Schliesser offers an assessment of Newton’s realism that departs from the traditional understanding: namely, Schliesser argues that Newton thought of