

Philosophy of Science

**Volume 37
1970**

**Reprinted with the permission of the original publisher
by
Periodicals Service Company
Hudson, NY
2021**

Printed on acid-free paper.

**This reprint was reproduced from the
best original edition copy available.**

NOTE TO THE REPRINT EDITION:

**In some cases full page advertisements which do not add to
the scholarly value of this volume have been omitted.
As a result, some reprinted volumes may have irregular pagination.**

PHILOSOPHY OF SCIENCE

*Official Journal of the Philosophy of
Science Association*



VOLUME 37, NUMBER 1

March, 1970

PHILOSOPHY OF SCIENCE

JOURNAL OF THE PHILOSOPHY OF SCIENCE ASSOCIATION

EDITORIAL BOARD:

- RICHARD S. RUDNER, Department of Philosophy, *Washington University*, St. Louis, Missouri 63130, *Editor in Chief*
- ERNEST W. ADAMS, Department of Philosophy, *University of California*, Berkeley, California 94720
- GUSTAV BERGMANN, Department of Philosophy, *University of Iowa*, Iowa City, Iowa 52240
- MAY BRODBECK, Department of Philosophy, *University of Minnesota*, Minneapolis, Minnesota 55455
- ARTHUR BURKS, Department of Philosophy, *University of Michigan*, Ann Arbor, Michigan 48104
- C. WEST CHURCHMAN, Graduate School of Business Administration, *University of California*, Berkeley, California 94720
- THEODOSIUS DOBZHANSKY, *The Rockefeller University*, New York, New York 10021
- ADOLF GRÜNBAUM, Department of Philosophy, *University of Pittsburgh*, Pittsburgh, Pennsylvania 15213
- EDWARD MADDEN, Department of Philosophy, *State University of New York*, Buffalo, New York 14214
- HENRY MARGENAU, Department of Physics, *Yale University*, New Haven, Connecticut 06520
- GERALD J. MASSEY, Department of Philosophy, *Michigan State University*, East Lansing, Michigan 48823, *Managing Editor*
- ALBERTO PASQUINELLI, Facoltà Di Lettere E Filosofia, Università Degli Studi Di Bologna, *University of Bologna*, Bologna, Italy
- WESLEY C. SALMON, Department of History and Philosophy of Science, *Indiana University*, Bloomington, Indiana 47401
- J. J. C. SMART, Department of Philosophy, *University of Adelaide*, Adelaide, Australia
- MELFORD E. SPIRO, Department of Anthropology, *The University of California at San Diego*, La Jolla, California, 92038
- PATRICK SUPPES, Department of Philosophy, *Stanford University*, Palo Alto, California 94301
- LEWIS K. ZERBY, Department of Philosophy, *Michigan State University*, East Lansing, Michigan 48823

BOOK REVIEWS:

James Van Evra, Department of Philosophy, *University of Waterloo*, Waterloo, Ontario, Canada

ASSISTANT EDITOR:

Charles R. Meyer, *Washington University*, St. Louis, Missouri, 63130

GOVERNING BOARD OF THE ASSOCIATION:

ADOLF GRÜNBAUM, *President*

ISRAEL SCHEFFLER, *Vice-President*

GERALD J. MASSEY, *Secretary-Treasurer*

CURT J. DUCASSE

MARY B. HESSE

JAAKKO HINTIKKA

RICHARD C. JEFFREY

ERNAN McMULLIN

HENRY MARGENAU

ERNEST NAGEL

RICHARD RUDNER

J. J. C. SMART

H. TORNEBOHM

© 1970 by The Philosophy of Science Association

MADE AND PRINTED IN GREAT BRITAIN BY
WILLIAM CLOWES AND SONS, LIMITED, LONDON AND BECCLES

Subscription price \$15.00 per Volume. Single numbers \$5.00.

For student subscriptions at the rate of \$5.00

per volume, address inquiries to the Managing Editor.

CONTENTS*

TELEOLOGICAL EXPLANATIONS IN EVOLUTIONARY BIOLOGY, FRANCISCO J. AYALA	1
THE AXIOMATIZATION OF PHYSICAL THEORIES, HERBERT A. SIMON.....	16
IF-ICULTIES, CHARLES L. STEVENSON	27
THEORIES AND THE TRANSITIVITY OF CONFIRMATION, MARY HESSE	50
PROBABILITY AND CONDITIONALS, ROBERT C. STALNAKER.....	64
SPECIAL RELATIVITY WITHOUT ONE-WAY VELOCITY ASSUMP- TIONS, Part I, JOHN A. WINNIE.....	81
SOME PROBLEMS OF PERCEPTION, DOUGLAS LEWIS.....	100
DISCUSSION: SCIENTIFIC REALISM, ONTOLOGY, AND THE SEN- SORY MODES, JOSEPH MARGOLIS	114
DISCUSSION: BIOLOGICAL SPECIES: LEHMAN'S THESIS, RONALD MUNSON	121
DISCUSSION: REPLY TO MUNSON, HUGH LEHMAN.....	125
DISCUSSION: AN EXAMINATION OF REICHENBACH ON LAWS, H. A. LAUTER.....	131
DISCUSSION: HISTORICAL CROSS SECTION LAWS AND AUSTIN'S SCEPTICISM IN "OTHER MINDS", DON SIEVERT	146
BOOK REVIEWS	153
<i>The Philosophy of Quantum Mechanics, D. I. Blokhintsev; Jeffery Bub—</i> <i>Quantum Physics and the Philosophical Tradition, Aage Peterson;</i> <i>Jeffery Bub—Lending a Hand to Hylas, Roy Wood Sellars; James Collins</i> <i>—Thought and Change, Ernest Gellner; Laird Addis</i>	
RECENT BOOKS	163
MEMBERSHIP LIST	165

* The contents of *Philosophy of Science* are indexed in *Science Citation Index*.