Scientific Papers of C.V. Raman

These volumes gather together for the first time the life's work of C.V. Raman, the celebrated Indian Nobel Laureate in Physics. The papers reflect the wide range of the author's scientific interests, many of them of historical value.

Volume I: The Light

1989 586 pp.; illus. \$49.95

Volume II: The Acoustics 1989 644 pp.; illus. \$49.95

Volume III: The Optics 1989 554 pp.; illus. \$49.95

Volume IV: The Optics of Minerals and Diamonds 1989 744 pp.; illus. \$49.95

Volume V: The Physics of Crystals

1989 850 pp.; illus. \$49.95

Volume VI: The Floral Colors and Visual Perception

1989 616 pp.; illus. \$49.95

Journey into Light Life and Science of C.V. Raman

G. VENKATARAMAN

This lively biography of C.V. Raman, the often misunderstood Nobel Prizewinning scientist, is required reading for anyone with a serious interest in the life of one of the extraordinary intellects of our century.

1989 588 pp.; illus. \$45.00

The Wellborn Science Eugenics in Germany, France, Brazil, and Russia

Edited by MARK B. ADAMS

Expert contributors examine the eugenics movements in Germany, France, Brazil, and the Soviet Union, and describe how geneticists and physicians participated in the development of policies concerning the improvement of hereditary qualities in humans.

1989 256 pp. \$35.00

Now in a new edition

Ideas of Space Euclidean, Non-Euclidean, and Relativistic, Second Edition

JEREMY GRAY

"Promises to become a classic text for those interested in considering changing mathematical perceptions of space. Gray's book is a pleasure to read."

--Historia Mathematica (on first ed.)

1989 256 pp.; 153 illus. cloth \$65.00 paper \$29.95

The Invented Universe The Einstein-De Sitter Controversy (1916–17) and the Rise of Relativistic Cosmology

PIERRE KERSZBERG

This volume gives readers a complete history of the development of relativistic cosmology in the first half of the twentieth century, and offers insights on how relativistic thinking contributes to some of the most enduring philosophical issues of our time.

1989 416 pp.; 48 illus. \$55.00

Darwin Without Malthus The Struggle for Existence in Russian Evolutionary Thought

DANIEL P. TODES

This is the first book in English to examine in detail the scientific work of nineteenth century Russian evolutionists, and the first in any language to explore the relationship of Russian theories to the economic, political, and natural circumstances in which they were generated.

1989 320 pp.; 12 photos \$45.00

To order, or for more information, please write:

Oxford University Press

200 MADISON AVENUE NEW YORK, NY 10016

Attn: Marketing Director for Science and Medical Books

Prices and publication dates are subject to change.

:Oxford:

Nomic Probability and the Foundations of Induction

JOHN POLLOCK, University of Arizona

In this book Pollock examines the subject of probabilistic reasoning, making general philosophical sense of objective probabilities and exploring their relationship to the problem of induction. 1989 320 pp. \$32.50

Nature's Capacities and Their Measurement

NANCY CARTWRIGHT, Stanford University

Cartwright here argues that capacities are essential in our scientific world, and that, contrary to empiricist orthodoxy, they can meet sufficiently strict demands for testability. 1989 288 pp.; illus. \$39.95

Laws and Symmetries

BAS C. VAN FRAASSEN, Princeton University

Van Fraassen here analyzes and rejects the arguments that there are laws of nature, or that we must believe there are, and argues that we should disregard the idea of law since it is an inadequate clue to science. 1989 412 pp.; 33 figures paper \$14.95 cloth \$55.00

Winner of the 1988 Lakatos Award

Incompleteness, Nonlocality, and Realism

A Prolegomenon to the Philosophy of Quantum Mechanics

MICHAEL REDHEAD, University of Cambridge

Examining the mystery of quantum mechanics, this introduction to physics addresses such topics as action-at-a-distance, holism, and whether quantum mechanics gives a complete account of microphysical reality. 1987 (paper 1989) 200 pp. paper \$17.95 cloth \$49.95

Introduction to the Philosophy of Science

ANTHONY O'HEAR, University of Bradford

In this balanced and up-to-date introduction, O'Hear discusses the growth of knowledge of science, the status of scientific theories and their relationship to observational data, the extent to which scientific theories rest on unprovable paradigms, and the nature of scientific explanations. 1989 256 pp. paper \$10.95 cloth \$39.95

The Emperor's New Mind

Concerning Computers, Minds, and the Laws of Physics

ROGER PENROSE, University of Oxford

In this absorbing and frequently contentious book, eminent physicist Roger Penrose puts forward his view that there are some facets of human thinking that can never be emulated by a machine. He takes the reader on a dazzling tour of the physics of consciousness as he examines what physics and mathematics can tell us about how the mind works, what they can't, and what we need to know to understand the physical processes of

January 1990 428 pp.; 143 linecuts \$24.95

Prices and publication dates are subject to change. To order, send check or money order to: Humanities & Social Sciences Marketing Department

To order by phone using major credit card, please call (212) 679-7300, ext. 7106.

Oxford University Press 200 Madison Avenue • New York, NY 10016

Ernst Mayr



TOWARD A NEW PHILOSOPHY OF BIOLOGY

Observations of an Evolutionist

"Mayr's power to discern biological connections and also to identify the telling example should excite unqualified admiration...[This] is a book to be developed, to be argued with, a book whose margins should be filled with excited scribblings."

-Philip Kitcher, Nature

"Mayr is the greatest living commentator on biology; and if biology is what you do, as a researcher, teacher, writer, or as amateur, then this is a book you should own."

-Colin Tudge, New Scientist

"If you are at all interested in evolution—as a historian, a philosopher, or, above all, as a practicing biologist—you really should read this book."

—Niles Eldridge, BioScience

Belknap Now available in paperback/\$14.95

Harvard University Press

79 Garden Street, Cambridge, MA 02138 (617) 495-2480

THE PHILOSOPHY OF SCIENCE ASSOCIATION

The Philosophy of Science Association is an international society dedicated to the furthering of studies and free discussion from diverse standpoints in the field of philosophy of science. To promote these objectives, the Association: holds biennial conferences and arranges for the publication of the proceedings of these conferences; publishes the quarterly journal, *Philosophy of Science*, which carries essays, discussion articles, and book reviews in the general area of philosophy of science; publishes the Association Newsletter which provides a channel for communication of such information as grants, jobs available, recent appointments, conferences, new periodicals and bibliographic notes; is an affiliated society of Section L of the American Association for the Advancement of Science: selects two representatives to serve on the National Academy of Sciences U.S. National Committee for the International Union for the History and Philosophy of Science; and is one of the national members of the International Philosophy of Science Association.

The Association is a non-profit corporation formed under the laws of the State of Michigan. It currently enjoys tax-exempt status under the U.S. Internal Revenue Code and contributions to the Association are U.S. tax deductible. The affairs of the Association are controlled by a Governing Board which is composed of the President of the Association, the President elect, the most recent Past-President, and eight members elected at large.

To supervise the various functions of the Association the Governing Board appoints individuals to serve as Executive Secretary of the Association, Editor-in-Chief of *Philosophy of Science*, Editor-in-Chief of the *PSA Newsletter*, and Editor-in-Chief of the *PSA Proceedings*.

Membership is available to all individuals who agree to the objectives of the Association as stated above and who also agree to reserve their copies of the journal for their personal use only. There are three classes of membership in the Association: full, associate, and student. Prima facie eligibility for full membership, is demonstrated by: 1) holding a Ph.D., D. Sci., or M.D. degree (or equivalent) in philosophy, science or a science related field. To be eligible for associate membership, one must simply be in agreement with the objectives of the Association. To be eligible for student membership, one must be a full-time student at an accredited institution of learning. Payment of annual dues entitles all members to receive the journal, Philosophy of Science, and the Association Newsletter at no charge. Reduced registration fees are also charged to members for the biennial meetings. Full members are entitled to hold office and vote in the Association's annual election of Governing Board members.

For 1988 the dues are \$35.00 for full and associate members and \$18.00 for student members. Memberships start at the beginning of a calendar year. Members who join during the course of the year will be sent back copies of all material for that year.

PROCEEDINGS OF THE BIENNIAL MEETINGS OF THE PHILOSOPHY OF SCIENCE ASSOCIATION

	THE THEODOFTH OF SCIENCE ASSOCIATION
1.	PSA 1976, Volume 1 (xxiv + 312 pp.) Edited by Frederick Suppe & Peter D. Asquith ISBN 0-917586-02-6 cloth \$ 8.50
2.	PSA 1976, Volume 2 (x + 618 pp.) Edited by Frederick Suppe & Peter D. Asquith ISBN 0-917586-03-4 paper \$ 6.25
3.	PSA 1978, Volume 1 (xxvi + 314 pp.) Edited by Peter D. Asquith & Ian Hacking ISBN 0-917586-06-9
4.	PSA 1978, Volume 2 (x + 478 pp.) Edited by Peter D. Asquith & Ian Hacking ISBN 0-917586-10-7 cloth \$22.50
5.	PSA 1980, Volume 1 (xxvi + 370 pp.) Edited by Peter D. Asquith & Ronald N. Giere ISBN 0-917586-14-X cloth \$ 9.50
6.	PSA 1980, Volume 2 (xviii + 678 pp.) Edited by Peter D. Asquith & Ronald N. Giere ISBN 0-917586-16-6 cloth \$23.75
7.	PSA 1982, Volume 1 (xxvi + 414 pp.) Edited by Peter D. Asquith & Thomas Nickles ISBN 0-917586-18-2
8.	PSA 1982, Volume 2 (xxiv + 730 pp.) Edited by Peter D. Asquith & Thomas Nickles ISBN 0-917586-19-0 cloth \$25.00
9.	PSA 1984, Volume 1 (xxii + 223 pp.) Edited by Peter D. Asquith & Philip Kitcher ISBN 0-917586-21-2
10.	PSA 1984, Volume 2 (xxiv + 903 pp.) Edited by Peter D. Asquith & Philip Kitcher ISBN 0-917586-24-7 cloth \$30.00
11.	PSA 1986, Volume 1 (xxiv + 521 pp.) Edited by Arthur I. Fine & Peter K. Machamer ISBN 0-917586-23-9
Prepaid orders are sent postage free. Checks in U.S. Dollars only should be made payable to the Philosophy of Science Association. Order from:	
	Philosophy of Science Association 18 Morrill Hall/Department of Philosophy Michigan State University East Lansing, MI 48824- 1036 Telephone (517) 353-9392
	100phone (017) 000-0002

PHILOSOPHY OF SCIENCE

Typescript. Typescript, double-spaced, should be submitted (in triplicate) to Professor Robert E. Butts, Department of Philosophy, Talbot College, University of Western Ontario, London, Ontario, Canada N6A 3K7. Typescripts will not be returned unless return postage is prepaid by cheque, money order, International Reply Coupons or Canadian stamps. A bibliographical list of cited references beginning with the author's last name, initials, followed by the year of publication in parentheses, should be headed 'References' and placed on a separate sheet in alphabetical order. Simple citations should then be made by employing in the text, rather than by footnote, the reference list by citing author and year of publication, for example, Jones (1958) or (Smith 1974, p. 46). A detailed guide to the new reference style appears in the March issue of each year. Discursive footnotes should be numbered consecutively throughout the typescript. An abstract (in triplicate) of approximately 100 words must accompany typescript. Typescript must not exceed 9,500 words, including abstract, footnotes and references. A word count must be submitted with each essay. Longer essays will be returned (at the author's expense) to be cut to the acceptable maximum. All illustrations must be professionally drawn and lettered. All formulas and equations should be put in such a form as to help minimize the number of printed lines in the journal. In the following examples the form on the right is preferable to that on the left:

(1)
$$p = -\frac{dx}{dy} = -\frac{dz}{dt}$$
 $p = -dx/dy = -dz/dt$
(2) $\frac{1}{x} \prod_{n=1}^{\infty} \frac{\left(1 + \frac{1}{a_n}\right)}{\left(1 - \frac{1}{b_n}\right)}$ $(1/x) \prod_{n=1}^{\infty} [(1 + 1/a_n)/(1 - 1/b_n)]$

Page charges. There is a two dollar per page publication charge for individuals who are not members of the Philosophy of Science Association.

Copyright. Manuscripts should be submitted to *Philosophy of Science* with the understanding that upon publication copyright will be transferred to the Philosophy of Science Association.

Reprints. Contributors of articles to this journal will receive, gratis, 25 reprints. Authors desiring additional reprints may order them by sending in, with their corrected galleys, the order forms that they will find enclosed with their galleys.

Reviews. Publications intended for review should be sent to Professor William Demopoulos, at the address given above.

Philosophy of Science is published quarterly, issues are dated March, June, September and December of each year. Correspondence concerning business matters should be addressed to Peter D. Asquith, Executive Secretary, Department of Philosophy, Michigan State University, East Lansing, Michigan 48824, U.S.A.

Membership and Subscriptions. Membership in the Philosophy of Science Association may be applied for by writing to the Executive Secretary of the Association. Membership dues are \$40.00 U.S.A. a year and include subscription to the journal. Subscription price for non-members is \$45.00 U.S.A. (\$46.00 non-U.S.A.) per volume. New subscriptions and renewals are entered to begin with the first issue of the current volume. Should any issue of the current volume be out of print at the time the subscription order is received, the pro-rata value will be refunded to the subscriber. Duplicate copies may be obtained (if available) from the Executive Secretary at the regular price of single issues (\$12.00). Subscriptions at a reduced rate of \$20.00 a year are available to qualified students; inquire of the Executive Secretary.

Published Quarterly By
THE PHILOSOPHY OF SCIENCE ASSOCIATION
18 Morrill Hall, Michigan State University
East Lansing, Michigan 48824
U.S.A.