

TABLE OF CONTENTS

PREFACE	v
MEMORIAL MINUTES: ALAN ROSS ANDERSON, IMRE LAKATOS	xi

SYMPOSIUM: THE UNITY OF SCIENCE

ROBERT L. CAUSEY/ <i>Unified Theories and Unified Science</i>	3
LAWRENCE SKLAR/ <i>Thermodynamics, Statistical Mechanics and the Complexity of Reductions</i>	15
THOMAS NICKLES/ <i>Theory Generalization, Problem Reduction and the Unity of Science</i>	33

CONTRIBUTED PAPERS: SESSION I

WILLIAM A. WALLACE/ <i>Galileo and Reasoning Ex Suppositione: The Methodology of the Two New Sciences</i>	79
J. V. STRONG/ <i>The Erkenntnistheoretiker's Dilemma: J. B. Stallo's Attack on Atomism in his Concepts and Theories of Modern Physics (1881)</i>	105

SYMPOSIUM: GENETICS, IQ AND EDUCATION

N. J. BLOCK/ <i>Fictionalism, Functionalism and Factor Analysis</i>	127
NORMAN DANIELS/ <i>IQ, Heritability, and Human Nature</i>	143
KENNETH KAYE/ <i>The IQ Controversy and the Philosophy of Education</i>	181

CONTRIBUTED PAPERS: SESSION II

HENRYK SKOLIMOWSKI/ <i>Evolutionary Rationality</i>	191
---	-----

LINDA WESSELS/Laws and Meaning Postulates (in van Fraassen's View of Theories)	215
PAUL FITZGERALD/Meaning in Science and Mathematics	235
PHILIP A. OSTIEN/Observationality and the Comparability of Theories	271

SYMPOSIUM:

SCIENCE EDUCATION AND THE PHILOSOPHY
OF SCIENCE

MICHAEL MARTIN/The Relevance of Philosophy of Science for Science Education	293
HUGH G. PETRIE/Metaphorical Models of Mastery: Or, How to Learn to Do the Problems at the End of the Chapter of the Physics Textbook	301
ROBERT PALTER/Philosophy of Science, History of Science, and Science Education	313

CONTRIBUTED PAPERS: SESSION III

RAIMO TUOMELA/Causes and Deductive Explanation	325
LAIRD ADDIS/On Defending the Covering-Law 'Model' <i>Comment:</i>	361
CARL G. HEMPEL/Dispositional Explanation and the Covering- Law Model: Response to Laird Addis	369
JAMES H. FETZER/The Likeness of Lawlikeness	377
PETER KIRSCHENMANN/Two Forms of Determinism	393
PETER A. BOWMAN/The Conventionality of Slow-Transport Synchrony	423

SYMPOSIUM:

TECHNOLOGY ASSESSMENT

TOM SETTLE/The Bicentenary of Technology Assessment	437
JOSEPH AGASSI/Assurance and Agnosticism	449

HENRYK SKOLIMOWSKI/Technology Assessment as a Critique of a Civilization	459
---	-----

SYMPOSIUM:

VELIKOVSKY AND THE POLITICS OF SCIENCE

LYNN E. ROSE/The Domination of Astronomy Over Other Disciplines	469
M. W. FRIEDLANDER/Some Comments on Velikovsky's Methodology	477
ANTOINETTE M. PATERSON/Velikovsky Versus Academic Lag (The Problem of Hypothesis)	487

SYMPOSIUM:

QUANTUM LOGIC

PETER MITTELSTAEDT/Quantum Logic	501
JOHN STACHEL/The 'Logic' of 'Quantum Logic'	515

CONTRIBUTED PAPERS: SESSION IV

I. I. MITROFF/Integrating the Philosophy and the Social Psychology of Science, or a Plague on Two Houses Divided	529
ROBERT M. ANDERSON JR./The Illusions of Experience	549

SYMPOSIUM:

DEVELOPMENT OF THE PHILOSOPHY OF
SCIENCE

GROVER MAXWELL/Some Current Trends in Philosophy of Science: With Special Attention to Confirmation, Theoretical Entities, and Mind-Body	565
ERNAN MCMULLIN/History and Philosophy of Science: A Marriage of Convenience?	585
HILARY PUTNAM/Philosophy of Language and Philosophy of Science	603

SYMPOSIUM:
HISTORY AND PHILOSOPHY OF BIOLOGY

KENNETH F. SCHAFFNER/ <i>Reductionism in Biology: Prospects and Problems</i>	613
MICHAEL RUSE/ <i>Reduction in Genetics</i>	633
DAVID L. HULL/ <i>Informal Aspects of Theory Reduction</i>	653
WILLIAM C. WIMSATT/ <i>Reductive Explanation: A Functional Account</i>	671

CONTRIBUTED PAPERS: SESSION V

NANCY DELANEY CARTWRIGHT/ <i>How Do We Apply Science?</i>	713
WILLIAM DEMOPOULOS/ <i>What is the Logical Interpretation of Quantum Mechanics?</i>	721
INDEX OF NAMES	729