

Table of Contents

Acknowledgments.....	VII
Introductory afterthoughts.....	IX
<i>1. Structural Dimensions.....</i>	<i>1</i>
Mac Lane, S.: <i>The Protean Character of Mathematics</i>	3
Lawvere, F. W.: <i>Categories of Space and of Quantity</i>	14
Ibarra, A. / Mormann, T.: <i>Structural Analogies Between Mathematical and Empirical Theories</i>	31
Rantala, V.: <i>Reduction and Explanation: Science vs. Mathematics</i>	47
Niiniluoto, I.: <i>Reality, Truth, and Confirmation in Mathematics – Reflections on the Quasi-empiricist Programme</i>	60
Breger, H.: <i>Tacit Knowledge in Mathematical Theory</i>	79
Grattan-Guinness, I.: <i>Structure-similarity as a Cornerstone of the Philosophy of Mathematics</i>	91
<i>2. Dimensions of Applicability</i>	<i>113</i>
Resnik, M. D.: <i>Applying Mathematics and the Indispensability Argument</i>	115
Torretti, R.: <i>Mathematical Structures and Physical Necessity</i>	132
Scheibe, E.: <i>The Role of Mathematics in Physical Science</i>	141
Schmidt, H.-J.: <i>The Status of Set-theoretic Axioms in Empirical Theories</i>	156
Da Costa, N. C. A. / Doria, F. A.: <i>Suppes Predicates for Classical Physics</i>	168
Howson, C.: <i>Mathematics in Philosophy</i>	192
<i>3. Historical Dimensions.....</i>	<i>203</i>
Dauben, J.: <i>Are There Revolutions in Mathematics?</i>	205
Echeverría, J.: <i>Observations, Problems, and Conjectures in Number Theory – The History of the Prime Number Theorem</i>	230
Knobloch, E.: <i>Historical Aspects of the Foundations of Error Theory</i>	253
Jahnke, H. N.: <i>A Structuralist View of Lagrange's Algebraic Analysis and the German Combinatorial School</i>	280

Otte, M.: <i>Constructivism and Objects of Mathematical Theory</i>	296
Feferman, S.: <i>Turing's "Oracle": From Absolute to Relative Computability – And Back</i>	314
Mahoney, M. S.: <i>Computers and Mathematics: The Search for a Discipline of Computer Science</i>	349
4. <i>Global Dimensions of Knowledge: Information, Implementation, and Intertheoretic Relations</i>	365
Mosterín, J.: <i>Theories and the Flow of Information</i>	367
Sneed, J. D.: <i>Structuralism and Scientific Discovery</i>	379
Moulines, C. U.: <i>Towards a Typology of Intertheoretical Relations</i>	403
Index of Names.....	413