

Contents

Editor's Introduction — V

Preface to the 1st edition [2000] — VII

Preface to the 2nd edition [2002] — XX

Preface to the 3rd edition [2005] — XXI

Preface to the 4th edition [2023] — XXII

Abbreviations — XXVII

Introduction — 1

Chapter 1

Kant on Problem-Solving and Scientific Research — 7

- 1 The Kantian system of pure philosophy — 7
- 2 The critique as a problem-solving theory — 11
- 3 Metaphysics of nature as a program of scientific research — 22

Chapter 2

Kantian Philosophical Methods — 25

- 1 Philosophical methods in the pre-critical writings — 25
- 2 The old method of analysis and synthesis — 27
- 3 Philosophical methods in critical writings — 31
- 4 An example: Kant's solution to the fundamental problem of transcendental philosophy by the method of analysis and synthesis — 37
- 5 The starting point of analysis — 42
- 6 Analysis properly speaking — 44
- 7 The problem of the resolution — 46
- 8 The metaphysical deduction — 47
- 9 The transcendental deduction — 52
- 10 Construction and proof of the principles of the understanding produced in the synthesis — 54
- 11 Further remarks on Kant's solution to the fundamental problem of transcendental philosophy — 57

Chapter 3

The Kantian Problem-Solver — 60

- 1 A general characterization of the Kantian theory of theoretical reason — 60
- 2 Theoretical reason as a system directed towards ends — 61
- 3 Operations that produce ends — 68
- 4 The two branches of the faculty of knowledge — 70
- 5 Receptivity — 71
- 6 Spontaneity — 75
- 7 Cognitive operations — 76
- 8 The control of operations through rules and maxims — 82
- 9 Definition of cognitive rule — 84
- 10 Constitutive rules of the understanding — 85
- 11 Merely regulative rules of reason — 87
- 12 Rules of the faculty of judgment — 88
- 13 The problem of proof theory — 89
- 14 Theoretical objects as values of transcendental unknowns — 91
- 15 Training a human problem-solver — 99

Chapter 4

Intuitive Data — 103

- 1 The problem of the constitution of intuitive knowledge — 103
- 2 Some methodological aspects of Kant's theory of intuitive knowledge — 105
- 3 Collective synthetic unity of intuitive representations — 110
- 4 Affinity of intuitive representations — 113
- 5 External relations among percepts — 115
- 6 Constructing extensive and intensive *quanta* — 116
- 7 Figures — 119
- 8 Some problems pertaining to the construction of extensive *quanta* — 123
- 9 The problem of the continuity of the outcomes of coalitions — 127

Chapter 5

Reference and Meaning — 130

- 1 Elements of Kant's theory of concepts — 130
- 2 Definitions — 134
- 3 Concepts of perception — 137
- 4 Concepts of experience — 140
- 5 Mathematical concepts — 141
- 6 Concepts of pure understanding — 142

- 7 The domains of interpretation of possible concepts — **143**
- 8 The constitution of the domain of interpretation of empirical concepts — **145**
- 9 The constitution of the domain of interpretation of mathematical concepts — **150**
- 10 The constitution of the domain of interpretation of the categories — **153**

Chapter 6

Truth — **155**

- 1 The Kantian idea of an *a priori* semantic theory of truth — **155**
- 2 Judgments of perception — **158**
- 3 Judgments of experience and judgments of mathematics — **160**
- 4 Transcendental truth and empirical truth — **161**
- 5 *A priori* objective interpretation of the quantity of judgments — **166**
- 6 The objective *a priori* interpretation of the quality of judgments — **170**
- 7 The *a priori* objective interpretation of relation — **172**
- 8 The principle of the excluded middle and the *reductio ad absurdum* — **187**
- 9 Observations on Kant's phenomenalism — **190**

Chapter 7

Object Problems — **192**

- 1 Empirical object problems — **192**
- 2 The principles of the understanding as an *a priori* framework for empirical research — **193**
- 3 Mathematical object problems — **198**
- 4 Postulates as mathematical problem-solving procedures — **200**

Chapter 8

System Problems — **206**

- 1 Origin and nature of the system problems — **206**
- 2 The method of the ideas — **209**
- 3 Relative presupposition — **212**
- 4 Schematism by analogy and symbolization — **214**
- 5 The rules of reflection transferred — **217**
- 6 An example: schematism by analogy of forces — **220**
- 7 Objects of schematized ideas and the noumena — **223**
- 8 Kant's research program for rational psychology — **224**
- 9 The research program for rational cosmology — **226**
- 10 The research program for the study of absolute empirical totalities — **229**
- 11 Metaphysics transformed into methodology — **229**

Chapter 9

Kant’s Dynamic Theory of Matter as a Research Program — 232

1 Dynamic definition of matter — **232**

2 Ideal mathematics — **234**

3 Dynamic explanations — **237**

4 Choosing between rival research programs — **239**

Afterword — 243

References — 246

Index — 251