

# Contents

## Part I Matter

<b>1</b>	<b>Philosophy as Worldview</b>	3
1.1	World and Worldview	4
1.2	Monism and Pluralism	6
1.3	Metaphysics: Commonsensical, Speculative, and Scientific	8
1.4	Determinism and Contingency, Causation and Chance	12
1.5	Epistemology: Skepticism, Subjectivism, Realism	13
1.6	The Epistemology-Ontology Connection	15
1.7	Practical Philosophy	19
1.8	The Political Connection	21
	Closing Remarks	22
<b>2</b>	<b>Classical Matter: Bodies and Fields</b>	23
2.1	Traditional Concepts and Principles: Mechanism	24
2.2	Further Features of the Classical Picture	29
2.3	The Decline of Mechanism: Fields	31
2.4	Additional Decline: Thermodynamics	33
2.5	Special Relativity	35
2.6	Gravitation	38
	Closing Remarks	38
<b>3</b>	<b>Quantum Matter: Weird But Real</b>	41
3.1	Meet the Quanton	43
3.2	Loss of Individuality	45
3.3	Loss of Vacuum and Stability	47
3.4	Neatness Lost	49
3.5	Irreducible Chance	54
3.6	Paradoxes	56
3.7	Materialism vs. Idealism	57
	Closing Remarks	59
<b>4</b>	<b>General Concept of Matter: To Be Is To Become</b>	61
4.1	Energy	62
4.2	Information	66

4.3	Digital Metaphysics . . . . .	68
4.4	What's Out There . . . . .	69
	Closing Remarks . . . . .	72
<b>5</b>	<b>Emergence and Levels . . . . .</b>	<b>73</b>
5.1	Physical Matter . . . . .	75
5.2	Chemical Matter . . . . .	78
5.3	Living Matter . . . . .	81
5.4	Thinking Matter . . . . .	84
5.5	Social Matter . . . . .	84
5.6	Artificial Matter . . . . .	85
5.7	Emergence . . . . .	86
5.8	Levels . . . . .	89
5.9	Epistemological Partner . . . . .	91
	Closing Remarks . . . . .	92
<b>6</b>	<b>Naturalism . . . . .</b>	<b>93</b>
6.1	Spiritualism . . . . .	95
6.2	Naturalism . . . . .	96
6.3	Phenomenalism . . . . .	102
6.4	Physicalism . . . . .	103
6.5	Biologism . . . . .	104
6.6	Naturalism's Three Musketeers . . . . .	108
6.7	Psychologism . . . . .	110
6.8	Naturalized Linguistics, Axiology, Ethics, Law, and Technology . . . . .	112
6.9	Neuro This and Neuro That . . . . .	117
	Closing Remarks . . . . .	118
<b>7</b>	<b>Materialism . . . . .</b>	<b>121</b>
7.1	Classical Materialism . . . . .	122
7.2	Dialectical Materialism . . . . .	124
7.3	Historical and Australian Materialisms . . . . .	127
7.4	Scientific Materialism: Emergent, Systemic, and Science-Based . . . . .	131
7.5	Materialist This and That . . . . .	134
7.6	Hylorealism . . . . .	138
7.7	Spirituality in a Material World . . . . .	139
	Closing Remarks . . . . .	139

## Part II Mind

<b>8</b>	<b>The Mind-Body Problem . . . . .</b>	<b>143</b>
8.1	Introductory Dialogue . . . . .	145
8.2	Science, Philosophy, and Religion Intersect . . . . .	146
8.3	Classical Psychoneural Dualism . . . . .	148
8.4	Mind Over Matter? . . . . .	151

8.5	Dualism is Hazardous . . . . .	154
8.6	Explaining Subjectivity Objectively . . . . .	156
	Closing Remarks . . . . .	157
<b>9</b>	<b>Minding Matter: The Plastic Brain</b> . . . . .	159
9.1	Psychoneural Identity . . . . .	160
9.2	Supervenience and Emergence . . . . .	162
9.3	The Plastic Brain . . . . .	163
9.4	Localization-Cum-Coordination . . . . .	166
9.5	Advantages of Psychoneural Monism . . . . .	171
9.6	The Qualia Objection to Psychoneural Identity . . . . .	172
9.7	Reduction and Merger . . . . .	176
	Concluding Remarks . . . . .	180
<b>10</b>	<b>Mind and Society</b> . . . . .	181
10.1	Development . . . . .	182
10.2	I and Us . . . . .	185
10.3	From Bonding Hormones to Mirror Neurons to Morals . . . . .	187
10.4	Evolution: Preliminaries . . . . .	189
10.5	Evolution: Biocultural . . . . .	192
10.6	What Makes Us Human . . . . .	195
	Closing Remarks . . . . .	198
<b>11</b>	<b>Cognition, Consciousness, and Free Will</b> . . . . .	201
11.1	Cognition and Knowledge . . . . .	201
11.2	Hebb's Hypothesis . . . . .	203
11.3	Thought, Proposition, Sentence . . . . .	205
11.4	Consciousness: The Holy Grail . . . . .	206
11.5	Kinds of Consciousness . . . . .	209
11.6	The Neuroscientific Approach . . . . .	213
11.7	The Dual Role of Consciousness . . . . .	214
11.8	The Self . . . . .	217
11.9	Free Will . . . . .	220
11.10	Explanation by Causes and by Reasons . . . . .	224
	Closing Remarks . . . . .	225
<b>12</b>	<b>Brain and Computer: The Hardware/Software Dualism</b> . . . . .	227
12.1	Do Computers Reason? . . . . .	228
12.2	The Computer Metaphor . . . . .	230
12.3	Criticism . . . . .	233
12.4	Software is Rather Hard . . . . .	234
12.5	Machine vs. Man? . . . . .	235
	Closing Remarks . . . . .	237
<b>13</b>	<b>Knowledge: Genuine and Bogus</b> . . . . .	239
13.1	Science and Pseudoscience . . . . .	240
13.2	Philosophical Matrix of Scientific Progress . . . . .	242
13.3	Pseudoscience . . . . .	246

13.4	Immaterialism in the Study of Matter . . . . .	247
13.5	Exploring the Unconscious: Fact and Fancy, Science and Business . . . . .	248
13.6	Speculative Evolutionary Psychology . . . . .	250
13.7	Borderline Minefields: Proto and Semi . . . . .	253
13.8	The Pseudoscience-Politics Connection . . . . .	255
13.9	Mercenary Science . . . . .	259
13.10	Philosophy: Genuine and Bogus, Proscience and Antiscience . . . . .	260
	Closing Remarks . . . . .	264

### Part III Appendices

<b>14</b>	<b>Appendix A: Objects</b> . . . . .	267
14.1	Individuals and Properties . . . . .	267
14.2	Material Objects . . . . .	269
14.3	Emergence and Levels . . . . .	271
14.4	State and Process . . . . .	272
14.5	Ideal Objects . . . . .	274
	Closing Remarks . . . . .	275
<b>15</b>	<b>Appendix B: Truths</b> . . . . .	277
15.1	Ontological Concept of Factual Truth . . . . .	278
15.2	The Correspondence Functions . . . . .	279
15.3	Methodological Concept of Truth . . . . .	281
15.4	Partial Truth . . . . .	281
15.5	The Problem is Still Open . . . . .	284
	Closing Remarks . . . . .	285
	<b>References</b> . . . . .	287
	<b>Index</b> . . . . .	305