CONTENT

Preface **9**

1 From the Incomprehensible to the Metaphysics of Physics **13**

1.1 On the Limits of the Explainable in the Theoretical Buildings of Natural Science 13

1.2 Paradoxes and Fuzziness in the Theoretical Buildings of the Natural Theoretical Buildings 15

1.3 Entanglement and Non-locality: Predictable in Theory, but not Causal Explainable Fundamental Characteristics of Physics 20

1.4 Presentation of Bell's Theorem and its Physical and Philosophical Implications 24

1.5 Philosophically Relevant Shadow-casts of a Holistic World 25

1.6 Ontological Questions: What do „Properties" Mean in the Context of Physical Objects, and What Can We Know? 27

1.7 Questions about the Reality of „Reality": How Real is Reality? 32

1.8 Change from the Science of Being to a Science of Becoming 40

2 Autopoiesis and Self-organization in Animate and Inanimate Systems **43**

2.1 Remarks on the Evolution of the Universe from a Physical Perspective 43

2.2 Introductory Considerations in Natural Philosophy on the Concept of Causality and the Emergence of Order between Determinism and Indeterminism 48

2.3 Non-equilibrium States and the Computable Non-computable 50

2.4 Order in Non-equilibrium States 52

2.5 General Remarks on Theories of Self-Organization 54

2.6 Attractors as Mathematical Models of Processes of Self-Organization 56

2.7 The Complex and the Indeterminate in the Context of Self-Organization 58

2.8 On the Notion of Autopoiesis 63

2.9 Singularity in Self-organizing Systems 65

2.10 Chaos and Hidden Order 70

2.11 Islands of the Irregular in the Structure of Time 73

2.12 The Concept of Information as Relation and Primordial Substance in the Center of Self-Organizing Processes 74

3 Living Systems in the Evolutionary Context 79
3.1 What is Life? Notes on Basic Forms of Organization 79
3.2 Semantics and Assignment of Meaning as Central Metaphor of Living Systems 80
3.3 Semantics-generating Processes as Evidence for a Finality of Evolution? . 85
3.4 Life as an Emergent Novelty in a Semantic Layered Structure of the World 92
3.5 The Transcendent Nature of Information in a Participatory Universe 96
3.6 From Natural Science to the Question of a Possible Sense of the Universe 98
3.7 Self-Organization of Matter as an Idea 101
3.8 Summary: „It from Bit". The Transition from Physics to Metaphysics..... 104

4 The Human Being as a Limited and Injured Being 109
4.1 What is Health? Notes on the History of Medicine 109
4.2 Concepts of Disease and Medicine 112
4.3 The Human Being and his Injured Body: Worldviews in the Medicine of Modernity 116
4.4 Disease and Chaos: Systems Theoretical Aspects 122
4.5 Illness and the Question of Meaning 125
4.6 Dying in Postmodernity..... 131
4.7 On the Relationship of Philosophy to the Medical Art..... 134
4.8 What is Understanding? Thoughts on a Hermeneutics of Medicine 142

5 Humans and Artificial Intelligence..... 149
5.1 Remark on the Concept of Intelligence..... 149
5.2 What can be Understood by Artificial Intelligence 152
5.3 On the Question of the Operationalizability of Thought 155
5.4 The Human and the Machine: A Review..... 162

6 Man in the 21st Century 173
6.1 An Apology of the Human..... 173
6.2 Questions about the Conception of Man in the Human Sciences in the 21st Century 180
6.3 Anthropocentrism or Posthumanism as a Future Option? 182

7 Metaphysics in the 21st Century 191
7.1 Intellectual-historical Remarks on the Relationship of Philosophy of Nature and Metaphysics 191
7.2 The Universe as a Metaphysically Constituted Process 195
7.3 Beyond the Explainable 198
7.4 The Experience of a Cosmic World Order in Human Consciousness 201
7.5 The Transcendent in the Immanent 204
7.6 Beyond the Subject-Object Separation: Coincidentia Oppositorum 207
7.7 Spirit and Matter 212
7.8 Duty to Metaphysics in the 21st Century 219

Literature 233