The Form of Becoming

Embryology and the Epistemology of Rhythm 1760–1830

Janina Wellmann

Translated by Kate Sturge

ZONE BOOKS · NEW YORK

Contents

Acknowledgments 9

Introduction: The Form of Becoming 13

PART I: A NEW EPISTEMOLOGY OF RHYTHM

- Literary Form 37
 Poetry as a Form of Thought: Klopstock 37
 The Alternation of Tones: Hölderlin 40
 The Prosody of Development: Karl Philipp Moritz 48
 Being Is a Rhythmical Relation: Novalis 53
 The Physiological Origins of Language:

 August Wilhelm Schlegel 56
- II Epigenetic Music 61
 Musical Rhythm as a Physiological Principle 63
 The Theory of Accents 69
 The "Natural Inclination" to Rhythm 71
- III Rhythmical Productivity in Schelling's

 Philosophy of Nature and Art 77

 Absolute and Finite in the Play of Rhythm 79

 The Rhythm of the Absolute 83

 Necessary Succession 85

PART 2: BIOLOGICAL RHYTHM

- IV Forms Out of Formlessness 89
 What Is Epigenesis? A Historiographical Problem 89
 Repetition, Pulse, Spiral: Wolff's Theory of Epigenesis 96
 Describing Constant Change 110
- V Sense and Verse: Goethe's Metamorphosis of Plants 111
 Continual Transformation 113
 The Alternation of Expansion and Contraction 115
 "Going Backward or Forward in the Selfsame Way" 117
 A Brief Cultural History of Metamorphosis 120
 Metamorphosis in Distichs 122
- VI The Rhythm of the Living World: Physiology circa 1800 135
 The Temper of the Life Force 135
 Physiological Times 140
 The Formations of Flow 144

PART 3: SERIAL ICONOGRAPHY

The Iconography of Motion 157
The Beginnings of Instructional Graphics 158
Military Drill 161
Pose and Series 163
The Law of Rhythm 176
Eighteenth-Century Drill 182
Vaulting, Dancing, Gymnastics: Beauty in Movement 190
Dance, Formation, Evolution: The Choreography of Motion 203
Handiwork 221

VIII	Epigenetic Iconography 231
	Malpighi 233
	The Image as an Aid to Seeing 235
	Painted Tables 241
	Soemmerring's Icones embryonum humanorum 245
	The Image as Argument 253
	Outline and Series: Tredern and Herold 259
	Döllinger's Circle 267

IX Folding into Being: Christian Heinrich Pander 273
 To Form Is to Fold 273
 A New Observational Regime 279
 "So We Selected": Constructing the Developmental Series 281
 An "Assemblage of Embryos": Pander's Plates 284

Karl Ernst von Baer and the Choreography of Development 301
 Folding Layers into Tubes 302
 From Fundamental Organs to Tissues 303
 From Line to Surface 305
 Rhythmical Choreography 308
 From Word to Image 309
 "The Rhythm of Their Organization" 318

Conclusion 321

Notes 325

Credits 405

Index 411