Contents

Prefe	ace Thought talk seminas Alasward moustant extension as t	11
	PART I: STARTING IN THE MIDDLE	
	ter one Me Why	17
2. 3.	Is Nothing Sacred? 17 What, Where, When, Why—and How? 23 Locke's "Proof" of the Primacy of Mind 26 Hume's Close Encounter 28	
	dea Is Born	35
2. 3. 4.	What Is So Special About Species? 35 Natural Selection—an Awful Stretcher 39 Did Darwin Explain the Origin of Species? 42 Natural Selection as an Algorithmic Process 48 Processes as Algorithms 52	
	rer three versal Acid	61
2. 3. 4.	Early Reactions 61 Darwin's Assault on the Cosmic Pyramid 64 The Principle of the Accumulation of Design 68 The Tools for R and D: Skyhooks or Cranes? 73 Who's Afraid of Reductionism? 80	

)4
3
24
19
37

CHAPTER NINE Searching for Quality	229
 The Power of Adaptationist Thinking 229 The Leibnizian Paradigm 238 Playing with Constraints 251 	
CHAPTER TEN Bully for Brontosaurus	262
 The Boy Who Cried Wolf? 262 The Spandrel's Thumb 267 Punctuated Equilibrium: A Hopeful Monster 282 Tinker to Evers to Chance: The Burgess Shale Double-Play Mystery 299 	
Controversies Contained	313
 A Clutch of Harmless Heresies 313 Three Losers: Teilhard, Lamarck, and Directed Mutation 320 Cui Bono? 324 PART III: MIND, MEANING, MATHEMATICS, AND MORA 	LITY
CHAPTER TWELVE The Cranes of Culture	335
 The Monkey's Uncle Meets the Meme 335 Invasion of the Body-Snatchers 342 Could There Be a Science of Memetics? 352 The Philosophical Importance of Memes 361 	
CHAPTER THIRTEEN Losing Our Minds to Darwin	370
 The Role of Language in Intelligence 370 Chomsky Contra Darwin: Four Episodes 384 Nice Tries 393 	
CHAPTER FOURTEEN The Evolution of Meanings	401
The Quest for Real Meaning 401 Two Black Boxes 412	

3. Blocking the Exits 419	
4. Safe Passage to the Future 422	
CHAPTER FIFTEEN	
The Emperor's New Mind, and Other Fables	428
1. The Sword in the Stone 428	
2. The Library of Toshiba 437	
3. The Phantom Quantum-Gravity Computer:	
Lessons from Lapland 444	
CHAPTER SIXTEEN	
On the Origin of Morality	452
1. E Pluribus Unum? 453	
2. Friedrich Nietzsche's Just So Stories 461	
3. Some Varieties of Greedy Ethical Reductionism 467	
4. Sociobiology: Good and Bad, Good and Evil 481	
CHAPTER SEVENTEEN	
Redesigning Morality	494
1. Can Ethics Be Naturalized? 494	
2. Judging the Competition 501	
3. The Moral First Aid Manual 505	
CHAPTER EIGHTEEN	
The Future of an Idea	511
1. In Praise of Biodiversity 511	
2. Universal Acid: Handle with Care 521	
Appendix	523
Bibliography	525
Index	551