

# Contents

Prologue	1
----------	---

## PART ONE: COSMOS

1. The Fundamental Nature of Reality	9
2. Poetic Naturalism	15
3. The World Moves by Itself	23
4. What Determines What Will Happen?	30
5. Reasons Why	38
6. Our Universe	47
7. Time's Arrow	54
8. Memories and Causes	60

## PART TWO: UNDERSTANDING

9. Learning about the World	69
10. Updating Our Knowledge	75
11. Is It Okay to Doubt Everything?	84
12. Reality Emerges	93
13. What Exists, and What Is Illusion?	105
14. Planets of Belief	115
15. Accepting Uncertainty	123
16. What Can We Know about the World without Actually Looking at It?	130



## CONTENTS

17. Who Am I?	139
18. Abducting God	144

### PART THREE: ESSENCE

19. How Much We Know	153
20. The Quantum Realm	159
21. Interpreting Quantum Mechanics	166
22. The Core Theory	172
23. The Stuff of Which We Are Made	178
24. The Effective Theory of the Everyday World	186
25. Why Does the Universe Exist?	195
26. Body and Soul	205
27. Death Is the End	215

### PART FOUR: COMPLEXITY

28. The Universe in a Cup of Coffee	225
29. Light and Life	237
30. Funneling Energy	244
31. Spontaneous Organization	250
32. The Origin and Purpose of Life	260
33. Evolution's Bootstraps	273
34. Searching through the Landscape	279
35. Emergent Purpose	291
36. Are We the Point?	302

### PART FIVE: THINKING

37. Crawling into Consciousness	317
38. The Babbling Brain	327
39. What Thinks?	336
40. The Hard Problem	348



## CONTENTS

41. Zombies and Stories	355
42. Are Photons Conscious?	363
43. What Acts on What?	372
44. Freedom to Choose	378

## PART SIX: CARING

45. Three Billion Heartbeats	387
46. What Is and What Ought to Be	394
47. Rules and Consequences	403
48. Constructing Goodness	412
49. Listening to the World	419
50. Existential Therapy	428
Appendix: The Equation Underlying You and Me	435
References	443
Further Reading	451
Acknowledgments	455
Index	457