

Contents

Foreword by Richard Dawkins

vii

PART 1: A NEW UNDERSTANDING OF THE BRAIN 1

- | | | |
|---|---|----|
| 1 | Old Brain—New Brain | 11 |
| 2 | Vernon Mountcastle's Big Idea | 21 |
| 3 | A Model of the World in Your Head | 29 |
| 4 | The Brain Reveals Its Secrets | 39 |
| 5 | Maps in the Brain | 57 |
| 6 | Concepts, Language, and High-Level Thinking | 69 |
| 7 | The Thousand Brains Theory of Intelligence | 91 |

PART 2: MACHINE INTELLIGENCE 113

- | | | |
|----|---|-----|
| 8 | Why There Is No "I" in AI | 119 |
| 9 | When Machines Are Conscious | 135 |
| 10 | The Future of Machine Intelligence | 145 |
| 11 | The Existential Risks of Machine Intelligence | 161 |

PART 3: HUMAN INTELLIGENCE	171
12 False Beliefs	173
13 The Existential Risks of Human Intelligence	185
14 Merging Brains and Machines	199
15 Estate Planning for Humanity	209
16 Genes Versus Knowledge	223
Final Thoughts	241
<i>Suggested Readings</i>	247
<i>Acknowledgments</i>	255
<i>Illustration Credits</i>	259
<i>Index</i>	261