

# Contents

<i>List of Explanatory Boxes</i>	viii
<i>The Story of This Book</i>	ix
<b>Part 1: What Is Science? What Is Knowledge?</b>	
Chapter 1: History of Science in the Anthropocene	3
Chapter 2: Elements of a Historical Theory of Human Knowledge	23
<b>Part 2: How Knowledge Structures Change</b>	
Chapter 3: The Historical Nature of Abstraction and Representation	37
Chapter 4: Structural Changes in Systems of Knowledge	65
Chapter 5: External Representations at Work	87
Chapter 6: Mental Models at Work	103
Chapter 7: The Nature of Scientific Revolutions	118
<b>Part 3: How Knowledge Structures Affect Society and Vice Versa</b>	
Chapter 8: The Economy of Knowledge	145
Chapter 9: An Economy of Practical Knowledge	170
Chapter 10: Knowledge Economies in History	190
<b>Part 4: How Knowledge Spreads</b>	
Chapter 11: The Globalization of Knowledge in History	247
Chapter 12: The Multiple Origins of the Natural Sciences	280
Chapter 13: Epistemic Networks	301
<b>Part 5: On What Knowledge Our Future Depends</b>	
Chapter 14: Epistemic Evolution	323
Chapter 15: Exodus from the Holocene	355
Chapter 16: Knowledge for the Anthropocene	377
Chapter 17: Science and the Challenges of Humanity	408
Glossary	417
Notes	435
References	469
Index	543