Contents

Notes on the Contributors IX
Foreword by Malcolm Longair XI
CHAPTER 1 Space-time and Cosmology 1
CHAPTER 2 The Mysteries of Quantum Physics 50
CHAPTER 3 Physics and the Mind 93
CHAPTER 4 On Mentality, Quantum Mechanics and the Actualization of Potentialities Abner Shimony 144
CHAPTER 5 Why Physics? NANCY CARTWRIGHT 161

CHAPTER 7 Response by Roger Penrose 173

APPENDIX 1 Goodstein's Theorem and Mathematical Thinking 186

CHAPTER 6 The Objections of an Unashamed Reductionist STEPHEN HAWKING 169

APPENDIX 2 Experiments to Fest Gravitationally
Induced State Reduction 193