

# Contents

List of Tables and Figures	vii
Preface	xi
1 Introduction	1
I. Experiment—Making or Breaking Theories	13
2 The Violation of Parity Conservation	15
3 The Meselson-Stahl Experiment: “The Most Beautiful Experiment in Biology”	32
4 Emil Konopinski and the Theory of $\beta$ -Decay	44
5 The Rise and Fall of the Fifth Force	57
II. The Search for What Is There	79
6 The Discovery of the Electron	81
7 The Road to the Neutrino	98
8 How Many Neutrinos?	117
9 The Appearance and Disappearance of the 17-keV Neutrino	132
10 The Missing Solar Neutrinos	146
11 Blas Cabrera and the Search for Magnetic Monopoles	169
III. The Trouble with Scientists	181
12 Robert Millikan and the Charge of the Electron	183
13 The Early Searches for Gravity Waves	193

14	Atomic Parity Violation: Do Mutants Die of Natural Causes?	210
15	Conclusion: No Easy Answers	227
	Glossary	231
	References	235
	Index	253