
Contents

Preface: What to Expect	vii
1 How (Not) to Look Ahead	1
2 Fatal Discontinuities	9
Natural Catastrophes	13
<i>Encounters with Extraterrestrial Objects</i>	16
<i>Volcanic Mega-eruptions and Collapses</i>	28
<i>Influenza Pandemics</i>	38
Violent Conflicts	49
<i>Transformational Wars</i>	50
<i>Terrorist Attacks</i>	58
Imaginable Surprises	66
3 Unfolding Trends	71
Energy Transitions	75
<i>Dominant Fuels, Enduring Prime Movers</i>	77
<i>Solar (Nuclear?) Civilization</i>	82
New World Order	91
<i>Europe's Place</i>	92
<i>Japan's Decline</i>	102
<i>Islam's Choice</i>	110
<i>Russia's Way</i>	120
<i>China's Rise</i>	129
<i>The United States' Retreat</i>	141
Place on Top	153
<i>Dominance and Decline</i>	154
<i>Globalization and Inequality</i>	163

4 Environmental Change	171
Global Warming and Its Consequences	172
<i>Rising Temperatures</i>	175
<i>Ocean's Rise, Dynamics and Composition</i>	181
<i>Ecosystems and Economies</i>	187
Other Global Changes	195
<i>Changing Water and Nitrogen Cycles</i>	196
<i>Loss of Biodiversity and Invasive Species</i>	203
<i>Antibiotic Resistance</i>	209
Biosphere's Integrity	212
5 Dealing with Risk and Uncertainty	219
Relative Fears	224
<i>Quantifying the Odds</i>	226
<i>Rational Attitudes</i>	231
Acting as Risk Minimizers	238
The Next 50 Years	243
Appendix A: Units and Abbreviations, Prefixes	255
Appendix B: Acronyms	257
References	259
Name Index	297
Subject Index	299