

CONTENTS

Preface	xi
Chapter 1: The Hidden Rules of Physics 1	
<i>In which I realize I don't understand physics anymore. I talk to friends and colleagues, see I'm not the only one confused, and set out to bring reason back to Earth.</i>	
Chapter 2: What a Wonderful World 17	
<i>In which I read a lot of books about dead people and find that everyone likes pretty ideas but that pretty ideas sometimes work badly. At a conference I begin to worry that physicists are about to discard the scientific method.</i>	
Chapter 3: The State of the Union 42	
<i>In which I sum up ten years of education in twenty pages and chat about the glory days of particle physics.</i>	
Chapter 4: Cracks in the Foundations 67	
<i>In which I meet with Nima Arkani-Hamed and do my best to accept that nature isn't natural, everything we learn is awesome, and that nobody gives a fuck what I think.</i>	
Chapter 5: Ideal Theories 88	
<i>In which I search for the end of science but find that the imagination of theoretical physicists is endless. I fly to Austin, let Steven Weinberg talk at me, and realize how much we do just to avoid boredom.</i>	
Chapter 6: The Incomprehensible Comprehensibility of Quantum Mechanics 119	
<i>In which I ponder the difference between math and magic.</i>	

Chapter 7: One to Rule Them All	138
<i>In which I try to find out if anyone would care about the laws of nature if they weren't beautiful. I stop off in Arizona, where Frank Wilczek tells me his little Theory of Something, then I fly to Maui and listen to Garrett Lisi. I learn some ugly facts and count physicists.</i>	
Chapter 8: Space, the Final Frontier	171
<i>In which I try to understand a string theorist and almost succeed.</i>	
Chapter 9: The Universe, All There Is, and the Rest	195
<i>In which I admire the many ways to explain why nobody sees the particles we invent.</i>	
Chapter 10: Knowledge Is Power	222
<i>In which I conclude the world would be a better place if everyone listened to me.</i>	
Acknowledgments	237
Appendix A: The Standard Model Particles	239
Appendix B: The Trouble with Naturalness	241
Appendix C: What You Can Do to Help	245
Notes	249
Index	277