Contents

	List of Figures	xi
	List of Sidebars	xiii
	Acknowledgments	χV
	Introduction	1
1.	Power in Nature: From Mitochondria to Emotion	
	and Deception	15
	The Basis of Life's Power	19
	Power and Bodies	34
	Power and Behaviors	40
	Proto-Human Powers	49
2.	Power in the Pleistocene: On Spears, Fires, Furs, Words,	
	and Flutes—And Why Men Are Such Power-Hogs	57
	Hands and Stone	66
	The Fire Ape	69
	Skins	73
	From Grunts to Sentences	75
	Gender Power	83
	The Power of Art	91
3.	Power in the Holocene: The Rise of Social Inequality	97
	Gerdening, Big Men, and Chiefs:	
	Power from Food Production	99
	Plow and Plunder: Kings and the First States	105
	Herding Cattle, Flogging Slaves:	
	Power from Domestication	114

x Contents

Stories of Our Ancestors: Religion and Power	121
Tools for Wording: Communication Technologies	131
Numbers on Money	139
Pathologies of Power	
4. Power in the Anthropocene: The Wonderful World	
of Fossil Fuels	159
It's All Energy	162
The Coal Train	170
Oil, Cars, Airplanes, and the New Middle Class	177
Oil-Age Wars and Weapons	185
Electrifying!	193
The Human Superorganism	198
5. Overpowered: The Fine Mess	
We've Gotten Ourselves Into	203
Climate Chaos and Its Remedies	206
Disappearance of Wild Nature	216
Resource Depletion	222
Soaring Economic Inequality	228
Pollution	234
Overpopulation and Overconsumption	
Global Debt Bubble	242
Weapons of Mass Destruction	248
6. Optimum Power: Sustaining Our Power Over Time	257
Involuntary Power Limits: Death, Extinction, Collapse	260
Self-Limitation in Natural and	
Human-Engineered Systems	266
Taboos, Souls, and Enlightenment	273
Taxes, Regulations, Activism, and Rationing:	
Power Restraint in the Modern World	279
Games, Disarmament, and Degrowth	288
Denial, Optimism Bias, and Irrational Exuberance	292

About New Society Publishers

Figures

1.1	Proton pumping in a bacterium	24
1.2	Exponential growth	30
1.3	The energy pyramid in nature	33
1.4	Visualization of Kleiber's law	35
2.1	Global temperatures during the Pleistocene	
	and Holocene	63
2.2	Key language, motor, and auditory areas of the brain	76
3.1	Placement of people on a slave ship	119
5.1	Global wildlife decline	219
5.2	Global extraction/production of resources in	
	1875, 1945, and 2015 (metric tons)	227
5.3	Power Center import vulnerability ratings of	
	nonrenewable resources	227
5.4	United States top one percent income share (pre-tax)	234
5.5	Growth in total global debt by sector, 1999–2019	247
5.6	Gun ownership and violent deaths	255
6.1	Predator/prey dynamics	262
6.2	The adaptive cycle	264

Sidebars

1.	Defining Power	11
2.	Powers in Math	18
3.	Measures of Physical Power	21
4.	How Much Power?	47
5.	Ominous Power from Space: Asteroids, Comets,	
	and Climate Change	62
6.	A Watery Theory of Human Origins	64
7.	Male Violence	86
8.	Human Aesthetic Decadence	93
9.	Measures of Social Power	98
10.	Pandemics and the Evolution of States and Empires	112
11.	Slavery and Power	116
12.	DNA Evidence for Steppe Invasions	124
13.	Justifying Colonialism	130
14.	The Original Sins of Mainstream Economists	145
15.	Institutional Power	150
16.	Genocide as Ultimate Exclusionary Social Power	152
17.	Key Writers on Power	155
18.	An Arrested Industrial Revolution in China	173
19.	Geopolitics: Global Power	188
20.	Personal Carbon Output	208
21.	Rising Risk of Disease and Pandemic	217
22.	Inequality in Economic and Political Power	
	in the US, and Its Consequences	229
23.	Guns: The Power to Kill Cheaply and Easily at a Distance	253
24.	The 2,000-Watt Society	269
25.	Viktor Frankl and the Will to Meaning	317

xiv Sidebars

26.	Dethroning GDP: Key to Limiting the Power	
	of the Superorganism	320
27.	Energy and Human Values	323
28.	Advice to Young People in the 21st Century	332
29.	Power Analysis and Organizing for Activists	343