

**PHILIP N.
HOWARD
PAX TECHNICA
HOW THE
INTERNET OF
THINGS MAY
SET US FREE OR
LOCK US UP**

Yale
UNIVERSITY
PRESS
NEW HAVEN
& LONDON

CONTENTS

Preface	xi
Introduction	xix
1. Empire of Connected Things	i
Carna Surveils the Realm, 2	
What's in a Pax? 4	
The Demographics of Diffusion, 8	
Information Technology and the New World Order, 11	
Pax Romana, Britannica, Americana, 14	
The Balaceras of Monterrey, 17	
The Internet Is Also a Surveillance State, 22	
The Wars Only Bots Will Fight, 27	
The Political Empire of Connected Things, 33	
2. Internet Interregnum	37
Discovering the UglyGorilla, 38	
Devices of Hope, 42	
The Demographics of Diffusion, 44	
The Zapatistas Reboot History, 47	
From Gold to Bits, 53	
States Don't Own It, Though They Fight Hard to Control It, 56	

- A New Kind of New Order*, 59
But It's Not a Westphalian—or Feudal—World, 62
3. *New Maps for the New World* 67
Mapping Hispaniola, 68
Dictators and Dirty Networks, 71
Mubarak's Choice, 73
We Are All Laila, 75
Governments, Bad and Fake, 79
The Dictator's Digital Dilemma, 84
Finding Kibera, 88
Dirty Networks, Collapsing, 91
The Democracy of Devices, 99
4. *Five Premises for the Pax Technica* 107
Learning from the Internet Interregnum, 108
First Premise: The Internet of Things Is Being Weaponized, 112
Second Premise: People Use Devices to Govern, 119
Third Premise: Digital Networks Weaken Ideologies, 123
Fourth Premise: Social Media Solve Collective Action Problems, 136
Fifth Premise: Big Data Backs Human Security, 139
Defining the Pax Technica, 145
5. *Five Consequences of the Pax Technica* 148
Empire of Bits—A Scenario, 149
*First Consequence: Networked Devices and the Stability of
Cyberdeterrence*, 153
Second Consequence: Governance Through the Internet of Things, 157
*Third Consequence: From a Clash of Civilizations to a Competition
Between Device Networks*, 162

CONTENTS

Fourth Consequence: Connective Action and Crypto Clans, 168	
Fifth Consequence: Connective Security and Quality of Life, 175	
The Downside of Connective Security, 179	
6. Network Competition and the Challenges Ahead	183
My Girlfriend Went Shopping . . . in China, 184	
Authoritarian, but Social, 196	
Bots and Simulations, 202	
DRM for the Material World? 211	
Other Challenges (That Are Lesser Challenges), 214	
The Downside of Up, 218	
Rival Devices on Competing Networks, 220	
7. Building a Democracy of Our Own Devices	224
Your Coffee Betrays You, 225	
Internet Succession: Computers, Mobiles, Things, 229	
The World Ahead, 232	
The Hope and Instability of Hackers and Whistle Blowers, 235	
Firing the Social Scientists—and Training New Ones, 240	
Putting the Civic into the Internet of Things, Domestically, 242	
Device Networks and Foreign Affairs, 249	
How Can You Thrive in the Pax Technica? 254	
The Promise of the Pax, 255	
Notes	259
Glossary	295
Acknowledgments	299
Index	303