

THE DARWIN ECONOMY

Liberty, Competition, and the Common Good

ROBERT H. FRANK

Who was the greater economist—Adam Smith or Charles Darwin? The question seems absurd. Darwin, after all, was a naturalist, not an economist. But Robert Frank, *New York Times* economics columnist and best-selling author of *The Economic Naturalist*, predicts that within the next century Darwin will unseat Smith as the intellectual founder of economics. The reason, Frank argues, is that Darwin's understanding of competition describes economic reality far more accurately than Smith's. And the consequences of this fact are profound. Indeed, the failure to recognize that we live in Darwin's world rather than Smith's is putting us all at risk by preventing us from seeing that competition alone will not solve our problems.

Smith's theory of the invisible hand, which says that competition channels self-interest for the common good, is probably the most widely cited argument today in favor of unbridled competition—and against regulation, taxation, and even government itself. But what if Smith's idea was almost an exception to the general rule of competition? That's what Frank argues, resting his case on Darwin's insight that individual and group interests often diverge sharply. Far from creating a perfect world, economic competition often leads to "arms races," encouraging behaviors that not only cause enormous harm to the group but also provide no lasting advantages for individuals, since any gains tend to be relative and mutually offsetting.

The good news is that we have the ability to tame the Darwin economy. The best solution is not to prohibit harmful behaviors but to tax them. By doing so, we could make the economic pie larger, eliminate government debt, and provide better public services, all without requiring painful sacrifices from anyone. That's a bold claim, Frank concedes, but it follows directly from logic and evidence that most people already accept.

Robert H. Frank is an economics professor at Cornell's Johnson Graduate School of Management and a regular "Economic View" columnist for the *New York Times*. His books include *The Winner-Take-All Society* (with Philip Cook), *The Economic Naturalist*, *Luxury Fever*, *What Price the Moral High Ground?*, and *Principles of Economics* (with Ben Bernanke).

ALSO AVAILABLE FROM ROBERT H. FRANK

LUXURY FEVER
WEIGHING THE COST OF EXCESS

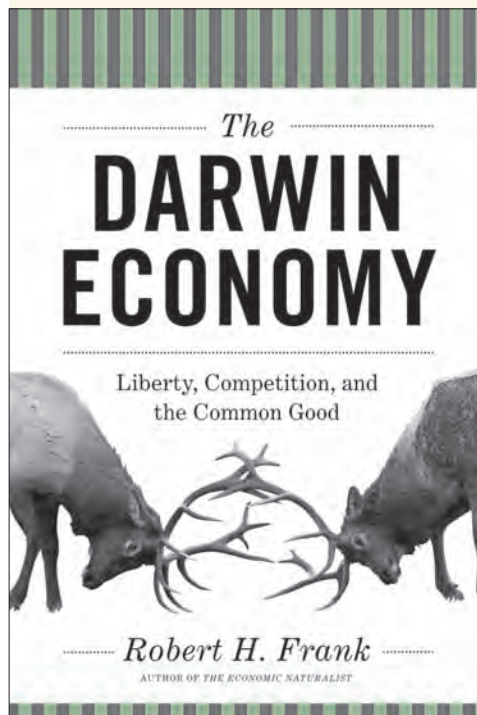
Paper \$18.95T
978-0-691-14693-5
336 pages. 5 line illus.
1 table. 5 ½ x 8 ½.

**WHAT PRICE THE MORAL
HIGH GROUND?**

HOW TO SUCCEED WITHOUT SELLING
YOUR SOUL

Paper \$16.95T
978-0-691-14694-2
224 pages. 32 line illus. 10 tables. 5 ½ x 8 ½.

WHAT CHARLES DARWIN CAN TEACH US
ABOUT BUILDING A FAIRER SOCIETY



"I've been reading Robert Frank's books for years, and he just gets better and better. I strongly recommend *The Darwin Economy*: it's clear, persuasive, and cleverly entertaining, and it provides a new and original insight about a central issue in economics. Read and enjoy."

—Thomas C. Schelling, Nobel Laureate
in Economics

OCTOBER

Cloth \$26.95T

978-0-691-15319-3

248 pages. 1 table. 6 x 9.

POPULAR ECONOMICS ■ POLITICS

PRESS.PRINCETON.EDU

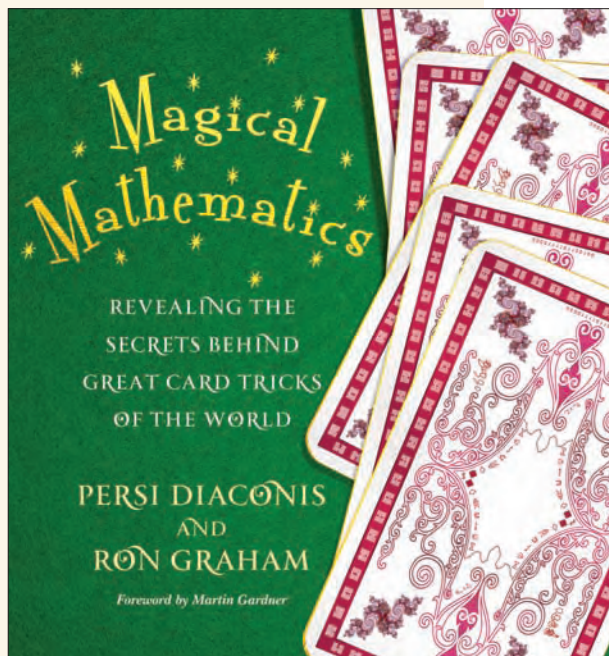
MAGIC AND MATH COMBINE TO AMAZE

MAGICAL MATHEMATICS

Revealing the Secrets behind Great Card Tricks of the World

PERSI DIACONIS &
RON GRAHAM

With a foreword by Martin Gardner



“Finally a book that celebrates the math involved in magic. This is quite simply the most brilliant book ever written on this mind-blowing, highly secretive field.”

—David Blaine, illusionist

Magical Mathematics reveals the secrets of amazing, fun-to-perform card tricks—and the profound mathematical ideas behind them—that will astound even the most accomplished magician. Persi Diaconis and Ron Graham provide easy, step-by-step instructions for each trick, explaining how to set up the effect and offering tips on what to say and do while performing it. Each card trick introduces a new mathematical idea, and varying the tricks in turn takes readers to the very threshold of today’s mathematical knowledge. For example, the Gilbreath principle—a fantastic effect where the cards remain in control despite being shuffled—is found to share an intimate connection with the Mandelbrot set. Other card tricks link to the mathematical secrets of combinatorics, graph

theory, number theory, topology, the Riemann hypothesis, and even Fermat’s last theorem.

Diaconis and Graham are mathematicians as well as skilled performers with decades of professional experience between them. In this book they share a wealth of conjuring lore, including some closely guarded secrets of legendary magicians. *Magical Mathematics* covers the mathematics of juggling and shows how the *I Ching* connects to the history of probability and magic tricks both old and new. It tells the stories—and reveals the best tricks—of the eccentric and brilliant inventors of mathematical magic. *Magical Mathematics* exposes old gambling secrets through the mathematics of shuffling cards, explains the classic street-gambling scam of three-card monte, traces the history of mathematical magic back to the thirteenth century and the oldest mathematical trick—and much more.

Persi Diaconis is professor of mathematics and statistics at Stanford University and a professional magician. **Ron Graham** is professor of mathematics and computer science at the University of California, San Diego, and a professional juggler.

NOVEMBER

Cloth \$29.95T

978-0-691-15164-9

304 pages. 133 color illus. 14 halftones.

56 line illus. 10 tables. 8 ½ x 9 ½.

POPULAR MATHEMATICS ■ MAGIC

PRESS.PRINCETON.EDU

THE FIRST POP AGE

Painting and Subjectivity in the Art of
Hamilton, Lichtenstein, Warhol, Richter, and Ruscha

HAL FOSTER

This book provides an important new interpretation of Pop art by examining five artists who, more deeply than any others, capture the new conditions of painting and subjectivity in the Pop age. In this account, illustrated in color throughout, Hal Foster explores the work of the Americans Andy Warhol, Roy Lichtenstein, and Ed Ruscha, the Englishman Richard Hamilton, and the German Gerhard Richter, revealing how these artists reflect on the profound changes in image and personhood that occur with pop culture.

Foster shows the different ways that these artists probe the possibilities of painterly tradition and mass culture alike. We see how Pop art folds painting and photography together, combining the effects of immediacy and mediation; how Pop evokes traditional forms even as it foregrounds contemporary contents; how the art strikes an ambiguous attitude toward both high and low cultures, neither critical nor complicit; and finally, how this ambiguity suggests a heightened confusion between public and private, between images and people.

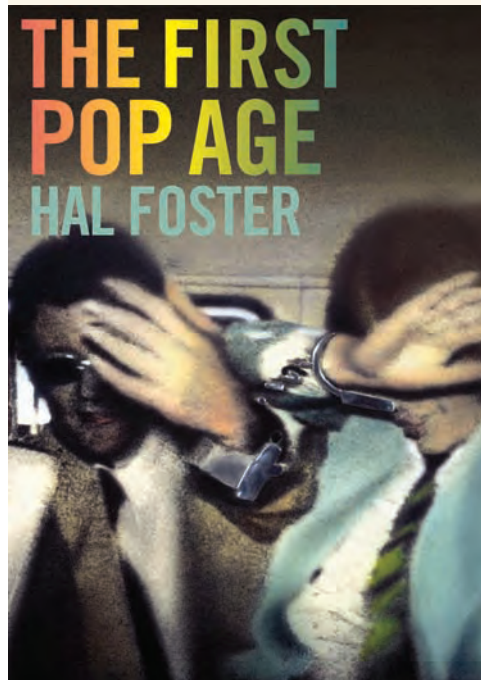
As *The First Pop Age* looks back at the early days of Pop art, it also raises many important questions about art in our own day, from the continued capacity of painting to reflect on our technological world to whether we have moved beyond the Pop age or still live in its image world.

Hal Foster is the Townsend Martin '17 Professor of Art & Archaeology at Princeton University, and the author of many books, including *The Return of the Real*, *Prosthetic Gods*, *Design and Crime*, and *The Art-Architecture Complex*. A member of the American Academy of Arts and Sciences, he was the 2010 recipient of the Clark Prize for Excellence in Arts Writing and the 2011 Siemens Fellow at the American Academy in Berlin.

Ed Ruscha, *Scream*, 1964. Oil on canvas, 71 x 67 in. Courtesy of the artist.



A MAJOR NEW TAKE ON POP ART
FROM ESTEEMED CRITIC HAL FOSTER



“This is a deeply insightful, elegantly written, original, and important book that pushes beyond accepted pieties about Pop art and provides a refreshing new take on it. Seen through Hal Foster’s lens, the paintings and writings of Hamilton, Lichtenstein, Warhol, Richter, and Ruscha constitute remarkably astute engagements with pop culture at the very moment of its full emergence.”

—Michael Leja, University of Pennsylvania

NOVEMBER

Cloth \$29.95T

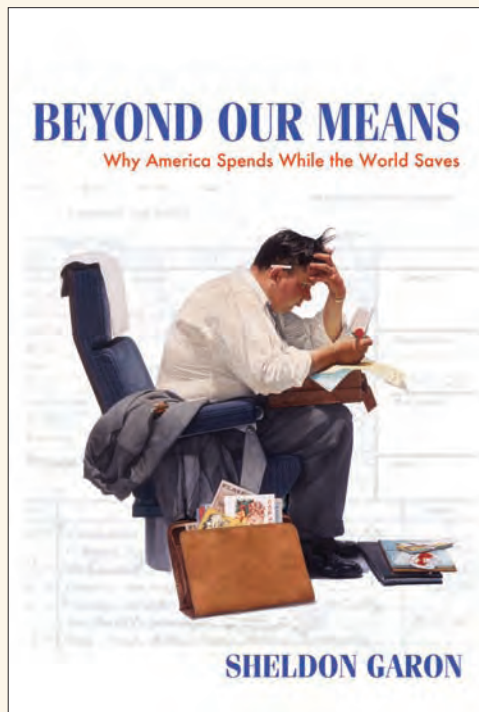
978-0-691-15138-0

352 pages. 77 color illus. 80 halftones. 6 x 8.

ART

PRESS.PRINCETON.EDU

WHY AMERICANS AREN'T THRIFTY—
AND THE REST OF THE WORLD IS



“This is an important and timely book. It effectively makes the case for viewing savings behavior neither as primarily a cultural trait nor one produced by market forces, but as something fundamentally shaped by policy, politics, and institutions. *Beyond Our Means* is an uncommon pleasure to read.”

—Andrew Gordon, author of *The Wages of Affluence*

BEYOND OUR MEANS

Why America Spends While the World Saves

SHELDON GARON

If the financial crisis has taught us anything, it is that Americans save too little, spend too much, and borrow excessively. What can we learn from East Asian and European countries that have fostered enduring cultures of thrift over the past two centuries? *Beyond Our Means* tells for the first time how other nations aggressively encouraged their citizens to save by means of special savings institutions and savings campaigns. The U.S. government, meanwhile, promoted mass consumption and reliance on credit, culminating in the global financial meltdown.

Many economists believe people save according to universally rational calculations, saving the most in their middle years as they plan for retirement, and saving the least in welfare states. In reality, Europeans save at high rates despite generous welfare programs and aging populations. Americans save little, despite weaker social safety nets and a younger population. Tracing the development of such behaviors across three continents from the nineteenth century to today, this book highlights the role of institutions and moral suasion in shaping habits of saving and spending. It shows how the encouragement of thrift was not a relic of indigenous traditions but a modern movement to confront rising consumption. Around the world, messages to save and spend wisely confronted citizens everywhere—in schools, magazines, and novels. At the same time, in America, businesses and government normalized practices of living beyond one’s means.

Transnational history at its most compelling, *Beyond Our Means* reveals why some nations save so much and others so little.

Sheldon Garon is the Dodge Professor of History and East Asian Studies at Princeton University. His books include *Molding Japanese Minds: The State in Everyday Life* (Princeton) and *The State and Labor in Modern Japan*.

JANUARY

Cloth \$29.95T

978-0-691-13599-1

448 pages. 10 color illus. 37 halftones.

1 line illus. 4 tables. 6 x 9.

HISTORY ■ BUSINESS

PRESS.PRINCETON.EDU

PHILANTHROPY IN AMERICA

A History

OLIVIER ZUNZ

American philanthropy today expands knowledge, champions social movements, defines active citizenship, influences policymaking, and addresses humanitarian crises. How did philanthropy become such a powerful and integral force in American society? *Philanthropy in America* is the first book to explore in depth the twentieth-century growth of this unique phenomenon. Ranging from the influential large-scale foundations established by tycoons such as John D. Rockefeller, Sr., and the mass mobilization of small donors by the Red Cross and March of Dimes, to the recent social advocacy of individuals like Bill Gates and George Soros, respected historian Olivier Zunz chronicles the tight connections between private giving and public affairs, and shows how this union has enlarged democracy and shaped history.

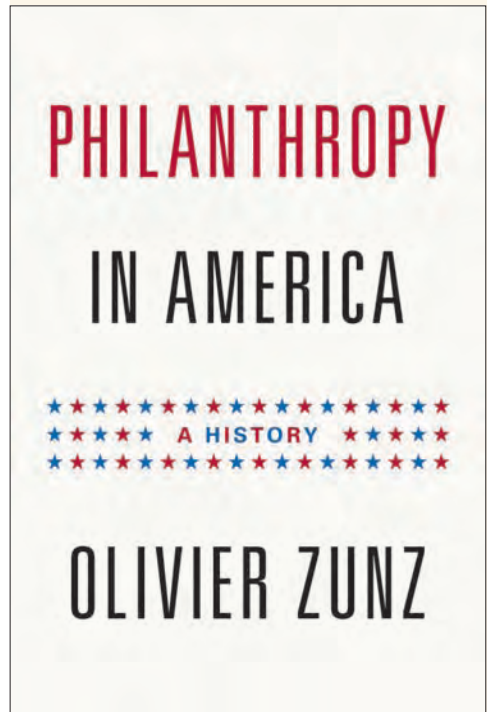
Zunz looks at the ways in which American philanthropy emerged not as charity work, but as an open and sometimes controversial means to foster independent investigation, problem solving, and the greater good. Andrew Carnegie supported science research and higher education, catapulting these fields to a prominent position on the world stage. In the 1950s, Howard Pew deliberately funded the young Billy Graham to counter liberal philanthropies, prefiguring the culture wars and increased philanthropic support for religious causes. And in the 1960s, the Ford Foundation supported civil rights through education, voter registration drives, and community action programs. Zunz argues that American giving allowed the country to export its ideals abroad after World War II, and he examines the federal tax policies that unified the diverse nonprofit sector.

Demonstrating that America has cultivated and relied on philanthropy more than any other country, *Philanthropy in America* examines how giving for the betterment of all became embedded in the fabric of the nation's civic democracy.

Olivier Zunz is the Commonwealth Professor of History at the University of Virginia. He is the author of *Why the American Century?*, *Making America Corporate*, and *The Changing Face of Inequality*.

POLITICS AND SOCIETY IN TWENTIETH-CENTURY AMERICA
William Chafe, Gary Gerstle, Linda Gordon, and Julian Zelizer, Series Editors

HOW PHILANTHROPY HAS SHAPED AMERICA
IN THE TWENTIETH CENTURY



“Given the scale of philanthropy in America today, it is surprising that the subject has not received more attention from historians. Linking profit making and social justice, freedom and community, and government and civil society, this excellent book provides a rich panorama that covers a long period of time and a wide variety of philanthropists and foundations.”

—James T. Kloppenberg, author of *Reading Obama*

DECEMBER

Cloth \$29.95T

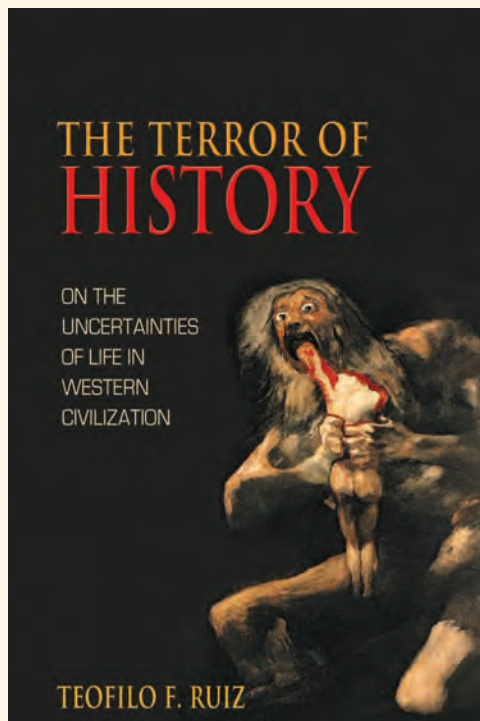
978-0-691-12836-8

360 pages. 6 x 9.

AMERICAN HISTORY ■ CURRENT AFFAIRS

PRESS.PRINCETON.EDU

A REFLECTION ON THE DIVERSE WAYS
WESTERN HUMANITY HAS ATTEMPTED
TO ESCAPE ITS FRIGHTENING HISTORY



“Very few books dig so deeply into the feelings and experiences that really drive historians. Still less do they explore how events in distant ages, in seemingly distant cultures, can touch the modern reader. *The Terror of History* does this. Ruiz’s voice is very much that of a teacher and scholar committed to the exploration of the human condition. This is a rich book.”

—Peter Brown, Princeton University

THE TERROR OF HISTORY

On the Uncertainties of Life in Western Civilization

TEOFILO F. RUIZ

This book reflects on Western humanity’s efforts to escape from history and its terrors—from the existential condition and natural disasters to the endless succession of wars and other man-made catastrophes. Drawing on historical episodes ranging from antiquity to the recent past, and combining them with literary examples and personal reflections, Teofilo Ruiz explores the embrace of religious experiences, the pursuit of worldly success and pleasures, and the quest for beauty and knowledge as three primary responses to the individual and collective nightmares of history. The result is a profound meditation on how men and women in Western society sought (and still seek) to make meaning of the world and its disturbing history.

In chapters that range widely across Western history and culture, *The Terror of History* takes up religion, the material world, and the world of art and knowledge in turn. “Religion and the World to Come” examines orthodox and heterodox forms of spirituality, apocalyptic movements, mysticism, supernatural beliefs, and many forms of esotericism, including magic, alchemy, astrology, and witchcraft. “The World of Matter and the Senses” considers material riches, festivals and carnivals, sports, sex, and utopian communities. Finally, “The Lure of Beauty and Knowledge” looks at cultural productions of all sorts, from art to scholarship.

Combining astonishing historical breadth with a personal and accessible narrative style, *The Terror of History* is a moving testimony to the incredibly diverse ways humans have sought to cope with their frightening history.

Teofilo F. Ruiz is professor of history and of Spanish and Portuguese at UCLA. His many books include *Spain’s Centuries of Crisis* and *From Heaven to Earth*. In 2007, he was awarded a Guggenheim Fellowship and selected as one of UCLA’s Distinguished Teachers.

OCTOBER

Cloth \$24.95T

978-0-691-12413-1

232 pages. 2 halftones. 5 ½ x 8 ½.

HISTORY

PRESS.PRINCETON.EDU

THE CHURCH OF SCIENTOLOGY

A History of a New Religion

HUGH B. URBAN

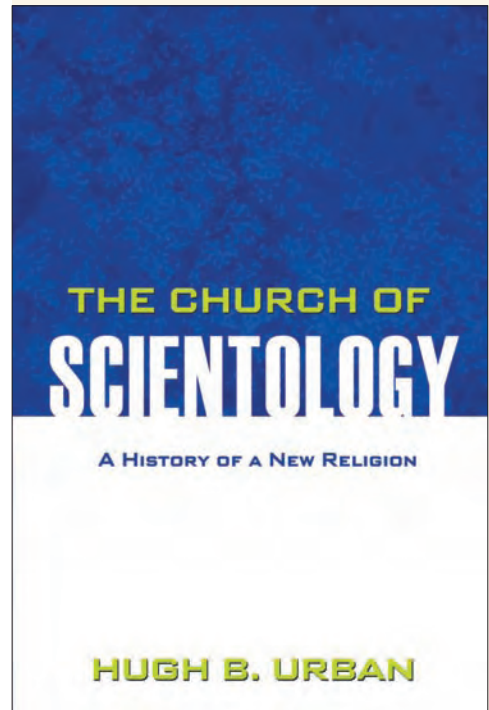
Scientology is one of the wealthiest and most powerful new religions to emerge in the past century. To its detractors, L. Ron Hubbard's space-age mysticism is a moneymaking scam and sinister brainwashing cult. But to its adherents, it is humanity's brightest hope. Few religious movements have been subject to public scrutiny like Scientology, yet much of what is written about the church is sensationalist and inaccurate. Here for the first time is the story of Scientology's protracted and turbulent journey to recognition as a religion in the postwar American landscape.

Hugh Urban tells the real story of Scientology from its cold war-era beginnings in the 1950s to its prominence today as the religion of Hollywood's celebrity elite. Urban paints a vivid portrait of Hubbard, the enigmatic founder who once commanded his own private fleet and an intelligence apparatus rivaling that of the U.S. government. One FBI agent described him as "a mental case," but to his followers he is the man who "solved the riddle of the human mind." Urban details Scientology's decades-long war with the IRS, which ended with the church winning tax-exempt status as a religion; the rancorous cult wars of the 1970s and 1980s; as well as the latest challenges confronting Scientology, from attacks by the Internet group Anonymous to the church's efforts to suppress the online dissemination of its esoteric teachings.

This book demonstrates how Scientology has reflected the broader anxieties and obsessions of postwar America, and raises profound questions about how religion is defined and who gets to define it.

Hugh B. Urban is professor of religious studies at Ohio State University. His books include *Magia Sexualis: Sex, Magic, and Liberation in Modern Western Esotericism* and *Tantra: Sex, Secrecy, Politics, and Power in the Study of Religion*.

SCIENTOLOGY'S LONG AND COMPLEX JOURNEY
TO RECOGNITION AS A RELIGION



"Urban's compelling book provides a critical but balanced assessment of this very controversial new religion, highlighting the ways Hubbard and his church reflect the fear and suspicion, yet also the boundless national optimism, so characteristic of cold war America. This book will become *the* source for reliable information on Scientology."

—Lorne L. Dawson, author of *Comprehending Cults*

SEPTEMBER

Cloth \$27.95T

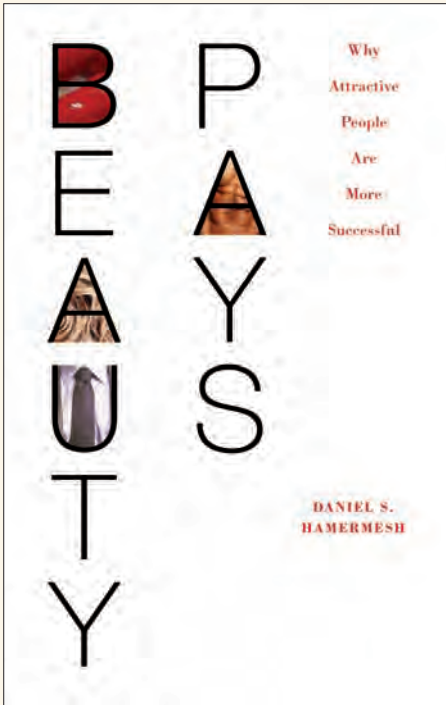
978-0-691-14608-9

296 pages. 14 halftones. 6 x 9.

RELIGION

PRESS.PRINCETON.EDU

HOW BEAUTY LEADS TO BETTER JOBS,
BETTERS WAGES, AND BETTER SPOUSES



“*Beauty Pays* is provocative and informative.”

—Joel Waldfogel, author of *Scroogenomics*

BEAUTY PAYS

Why Attractive People Are More Successful

DANIEL S. HAMERMESH

Most of us know there is a payoff to looking good, and in the quest for beauty we spend countless hours and billions of dollars on personal grooming, cosmetics, and plastic surgery. But how much better off are the better looking? Based on the evidence, quite a lot. The first book to seriously measure the advantages of beauty, *Beauty Pays* demonstrates how society favors the beautiful and how better-looking people experience startling but undeniable benefits in all aspects of life. Noted economist Daniel Hamermesh shows that the attractive are more likely to be employed, work more productively and profitably, receive more substantial pay, obtain loan approvals, negotiate loans with better terms, and have more handsome and highly educated spouses. Hamermesh explains why this happens and what it means for the beautiful—and the not-so-beautiful—among us.

Exploring whether a universal beauty standard exists, Hamermesh illustrates how attractive workers make more money, how these amounts differ by gender, and how looks are valued differently based on profession. The author wonders whether extra pay for good-looking people represents discrimination, and, if so, who is discriminating. He investigates the commodification of beauty in dating and how this influences the search for intelligent or high-earning mates, and even considers whether government programs should aid the ugly. Hamermesh also discusses whether the economic benefits of beauty will persist into the foreseeable future and what the “looks-challenged” can do to overcome their disadvantage.

Reflecting on a sensitive issue that touches everyone, *Beauty Pays* proves that beauty’s rewards are anything but superficial.

Daniel S. Hamermesh is the Sue Killam Professor in the Foundations of Economics at the University of Texas, Austin, and professor of labor economics at Maastricht University in the Netherlands. He is the author of *Labor Demand* (Princeton) and *Economics Is Everywhere*.

SEPTEMBER

Cloth \$24.95T

978-0-691-14046-9

224 pages. 6 halftones. 3 tables. 5 ½ x 7.

POPULAR ECONOMICS

PRESS.PRINCETON.EDU

REINVENTING DISCOVERY

The New Era of Networked Science

MICHAEL NIELSEN

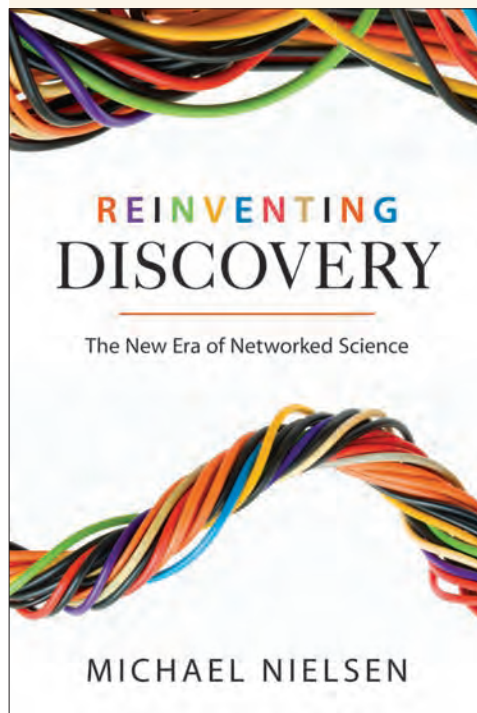
In *Reinventing Discovery*, Michael Nielsen argues that we are living at the dawn of the most dramatic change in science in more than 300 years. This change is being driven by powerful new cognitive tools, enabled by the internet, which are greatly accelerating scientific discovery. There are many books about how the internet is changing business or the workplace or government. But this is the first book about something much more fundamental: how the internet is transforming the nature of our collective intelligence and how we understand the world.

Reinventing Discovery tells the exciting story of an unprecedented new era of networked science. We learn, for example, how mathematicians in the Polymath Project are spontaneously coming together to collaborate online, tackling and rapidly demolishing previously unsolved problems. We learn how 250,000 amateur astronomers are working together in a project called Galaxy Zoo to understand the large-scale structure of the Universe, and how they are making astonishing discoveries, including an entirely new kind of galaxy. These efforts are just a small part of the larger story told in this book—the story of how scientists are using the internet to dramatically expand our problem-solving ability and increase our combined brainpower.

This is a book for anyone who wants to understand how the online world is revolutionizing scientific discovery today—and why the revolution is just beginning.

Michael Nielsen is one of the pioneers of quantum computing. He is an essayist, speaker, and advocate of open science.

HOW THE INTERNET AND POWERFUL
NEW ONLINE TOOLS ARE DEMOCRATIZING
AND ACCELERATING SCIENTIFIC DISCOVERY



“Science has always been a contact sport; the interaction of many minds is the engine of the discipline. Michael Nielsen has given us an unparalleled account of how new tools for collaboration are transforming scientific practice. *Reinventing Discovery* doesn’t just help us understand how the sciences are changing, it shows us how we can participate in the change.”

—Clay Shirky, author of *Here Comes Everybody* and *Cognitive Surplus*

NOVEMBER

Cloth \$24.95T

978-0-691-14890-8

280 pages. 6 halftones. 8 line illus. 6 x 9.

POPULAR SCIENCE

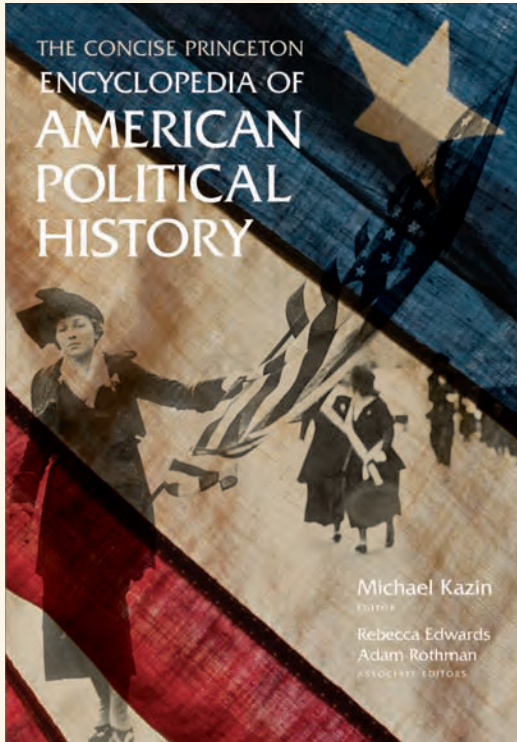
PRESS.PRINCETON.EDU

AN ESSENTIAL GUIDE TO U.S. POLITICS,
FROM THE FOUNDING TO TODAY

THE CONCISE PRINCETON ENCYCLOPEDIA OF AMERICAN POLITICAL HISTORY

EDITED BY MICHAEL KAZIN

Rebecca Edwards & Adam Rothman, associate editors



With 150 accessible articles written by more than 130 leading experts, this essential reference provides authoritative introductions to some of the most important and talked-about topics in American history and politics, from the founding to today. Abridged from the acclaimed *Princeton Encyclopedia of American Political History*, this is the only single-volume encyclopedia that provides comprehensive coverage of both the traditional topics of U.S. political history and the broader forces that shape American politics—including economics, religion, social movements, race, class, and gender. Fully indexed and cross-referenced, each entry provides crucial context, expert analysis, informed perspectives, and suggestions for further reading.

Contributors include Dean Baker, Lewis Gould, Alex Keyssar, James Kloppenberg, Patricia Nelson Limerick, Lisa McGirr, Jack Rakove, Nick Salvatore, Stephen Skowronek, Jeremi Suri, Julian Zelizer, and many more.

Praise for The Princeton Encyclopedia of American Political History—One of *Choice's* Outstanding Academic Titles for 2010:

“Offers accessible, thorough, and enlightening coverage of political history in the U.S. from colonial times through the ‘conservative ascendancy’.... Highly recommended.”

—*Booklist*

Entries cover:

- ◆ Key political periods, from the founding to today
- ◆ Political institutions, major parties, and founding documents
- ◆ The broader forces that shape U.S. politics, from economics, religion, and social movements to race, class, and gender
- ◆ Ideas, philosophies, and movements
- ◆ The political history and influence of geographic regions

Michael Kazin is professor of history at Georgetown University. **Rebecca Edwards** is the Eloise Ellery Professor of History at Vassar College. **Adam Rothman** is associate professor of history at Georgetown University.

SEPTEMBER

Paper \$35.00†

978-0-691-15207-3

672 pages. 3 line illus. 2 tables. 7 x 10.

AMERICAN HISTORY ■ REFERENCE

PRESS.PRINCETON.EDU

THE NEW ATLAS OF WORLD HISTORY

Global Events at a Glance

JOHN HAYWOOD

When did humans first inhabit different parts of the world? What was happening in China when Alexander the Great conquered the Persian Empire? What was the global reach of the great religions at the time of the Reformation in Europe? *The New Atlas of World History* is the first historical atlas to present global history in a series of uniform world maps, allowing at-a-glance comparison between different periods and regions.

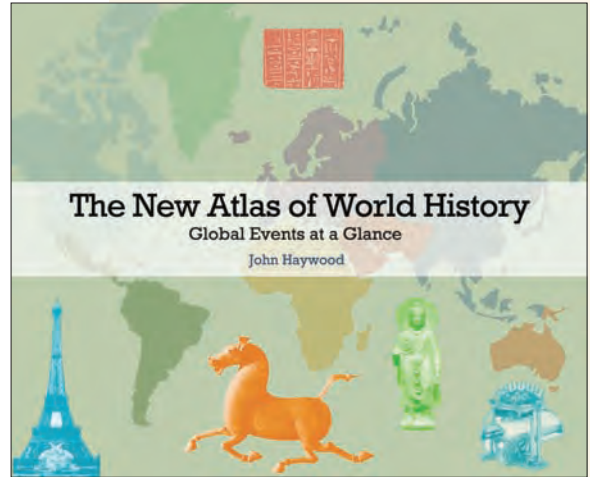
This stunningly illustrated atlas features 55 specially commissioned full-color maps that cover the whole of human history, from 6 million years ago to today. Accompanying 48 of the maps are detailed illustrated timelines that list important cultures, events, and developments. Maps and timelines also come with concise introductions that summarize notable historical and cultural changes, as well as striking graphic displays that present key data such as the world's five largest cities and total world population for the relevant year. An extensive glossary of peoples, cultures, and nations gives added depth to the maps and timelines.

Ideal for quick reference or for an authoritative overview of the human story, *The New Atlas of World History* provides an unrivaled global perspective on pivotal moments throughout history, from the origins and distribution of early humans to the shifting balance of world power today.

- ◆ Enables at-a-glance comparison between different periods and regions
- ◆ Features 55 stunning full-color maps
- ◆ Includes 48 illustrated timelines, concise text, and an extensive glossary
- ◆ Traces the origins and spread of writing, trade, religion, and much more

John Haywood is an honorary research fellow in the Department of History at Lancaster University. His books include *The Great Migrations: From the Earliest Humans to the Age of Globalization*, *The Penguin Historical Atlas of Ancient Civilizations*, *The Penguin Historical Atlas of the Vikings*, and *The Historical Atlas of the Celtic World*.

THE WORLD AT A GLANCE AT
PIVOTAL MOMENTS IN HISTORY



“Haywood presents a unique, global portrait of human history over six million years. A combination of brilliant design, clear narrative, and fascinating insights creates a compelling and even-handed tapestry of the human experience. Everyone interested in our past will find this a compelling atlas for their bookshelves.”

—**Brian Fagan**, professor emeritus,
University of California, Santa Barbara

NOVEMBER

Cloth \$49.50T

978-0-691-15269-1

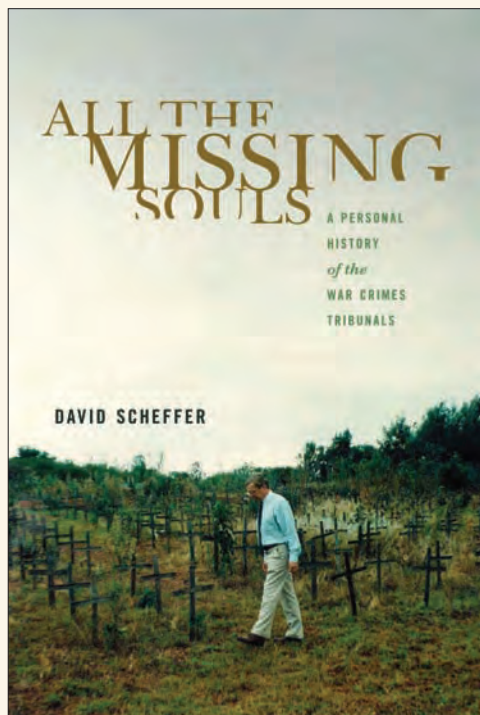
256 pages. 350 color illus.
10 line illus. 55 maps. 12 ½ x 11.

HISTORY ■ REFERENCE

For sale only in the United States and Canada

PRESS.PRINCETON.EDU

THE BEHIND-THE-SCENES STORY OF HOW
TODAY'S WAR CRIMES TRIBUNALS CAME TO BE



“Few persons have been so intimately involved as David Scheffer in the contemporary emergence of international criminal justice. His insightful book shows not only his important role in bringing about the tribunals and the International Criminal Court, but also reveals the inner workings of the international legislative processes.”
—M. Cherif Bassiouni, DePaul University

ALL THE MISSING SOULS

A Personal History of the War Crimes Tribunals

DAVID SCHEFFER

Within days of Madeleine Albright’s confirmation as U.S. ambassador to the United Nations in 1993, she instructed David Scheffer to spearhead the historic mission to create a war crimes tribunal for the former Yugoslavia. As senior adviser to Albright and then as President Clinton’s ambassador-at-large for war crimes issues, Scheffer was at the forefront of the efforts that led to criminal tribunals for the Balkans, Rwanda, Sierra Leone, and Cambodia, and that resulted in the creation of the permanent International Criminal Court. *All the Missing Souls* is Scheffer’s gripping insider’s account of the international gamble to prosecute those responsible for genocide, war crimes, and crimes against humanity, and to redress some of the bloodiest human rights atrocities in our time.

Scheffer reveals the truth behind Washington’s failures during the 1994 Rwandan genocide and the 1995 Srebrenica massacre, the anemic hunt for notorious war criminals, how American exceptionalism undercut his diplomacy, and the perilous quests for accountability in Kosovo and Cambodia. He takes readers from the killing fields of Sierra Leone to the political back rooms of the U.N. Security Council, providing candid portraits of major figures such as Madeleine Albright, Anthony Lake, Richard Goldstone, Louise Arbour, Samuel “Sandy” Berger, Richard Holbrooke, and Wesley Clark, among others.

A stirring personal account of an important historical chapter, *All the Missing Souls* provides new insights into the continuing struggle for international justice.

David Scheffer is the Mayer Brown/Robert A. Helman Professor of Law and director of the Center for International Human Rights at Northwestern University School of Law. He served as the first U.S. ambassador-at-large for war crimes issues (1997–2001) and led American initiatives on war crimes tribunals during the 1990s. He has published widely on international law and politics.

HUMAN RIGHTS AND CRIMES AGAINST HUMANITY
Eric D. Weitz, Series Editor

JANUARY

Cloth \$35.00T

978-0-691-14015-5

592 pages. 36 halftones. 2 tables. 6 x 9.

POLITICS ■ MEMOIR

PRESS.PRINCETON.EDU

ON CONAN DOYLE

Or, The Whole Art of Storytelling

MICHAEL DIRDA

A passionate lifelong fan of the Sherlock Holmes adventures, Pulitzer Prize–winning critic Michael Dirda is a member of the Baker Street Irregulars—the most famous and romantic of all Sherlockian groups. Combining memoir and appreciation, *On Conan Doyle* is a highly engaging personal introduction to Holmes’s creator, as well as a rare insider’s account of the curiously delightful activities and playful scholarship of the Baker Street Irregulars.

Because Arthur Conan Doyle wrote far more than the mysteries involving Holmes, this book also introduces readers to the author’s lesser-known but fascinating writings in an astounding range of other genres. A prolific professional writer, Conan Doyle was among the most important Victorian masters of the supernatural short story, an early practitioner of science fiction, a major exponent of historical fiction, a charming essayist and memoirist, and an outspoken public figure who attacked racial injustice in the Congo, campaigned for more liberal divorce laws, and defended wrongly convicted prisoners. He also wrote novels about both domestic life and contemporary events (including one set in the Middle East during an Islamic uprising), as well as a history of World War I, and, in his final years, controversial tracts in defense of spiritualism.

On Conan Doyle describes all of these achievements and activities, uniquely combining skillful criticism with the story of Dirda’s deep and enduring affection for Conan Doyle and his work. This is a book for everyone who already loves Sherlock Holmes, Dr. Watson, and the world of 221B Baker Street, or for anyone who would like to know more about them, but it is also a much-needed celebration of Arthur Conan Doyle’s genius for every kind of storytelling.

Michael Dirda is a Pulitzer Prize–winning critic and longtime book columnist for the *Washington Post*. He is the author of four collections of essays, *Readings*, *Bound to Please*, *Book by Book*, and *Classics for Pleasure*, as well as the memoir *An Open Book*. A lifelong Sherlock Holmes and Conan Doyle fan, he was inducted into the Baker Street Irregulars in 2002.

WRITERS ON WRITERS

FROM PULITZER PRIZE–WINNING CRITIC
MICHAEL DIRDA, A DELIGHTFUL INTRODUCTION
TO THE CREATOR OF SHERLOCK HOLMES



Praise for Michael Dirda:

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—Michael Kinsley

“Michael Dirda may be as close to the ideal critic as we are likely to get.”
—Annie Proulx

“A superb literary essayist.”
—Harold Bloom

NOVEMBER

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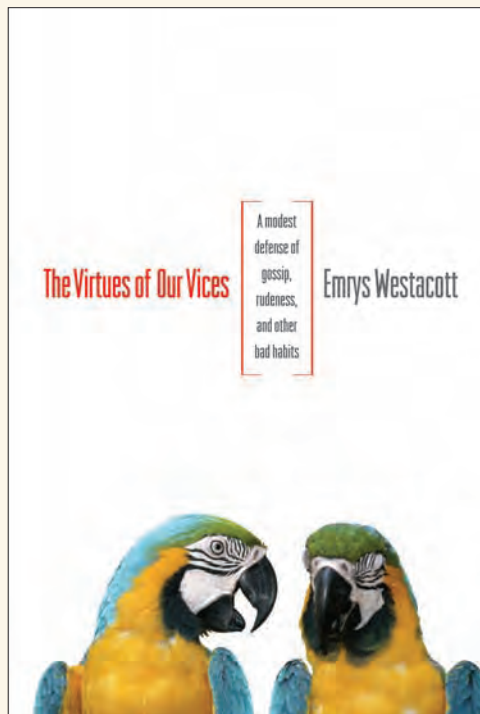
978-0-691-15135-9

208 pages. 4 ½ x 7.

LITERATURE

PRESS.PRINCETON.EDU

THE HIDDEN VALUE OF
SOME OF OUR EVERYDAY VICES



“Emrys Westacott writes in an accessible way, and often with humor, about topics that are of wide interest. He is right that the ethical questions that confront ordinary people in everyday life are important, even if philosophy has tended to ignore them.”

—David Benatar, editor of *Ethics for Everyday*

THE VIRTUES OF OUR VICES

A Modest Defense of Gossip,
Rudeness, and Other Bad Habits

EMRYS WESTACOTT

Are there times when it’s right to be rude? Can we distinguish between good and bad gossip? Am I a snob if I think that NPR listeners are likely to be better informed than devotees of Fox News? Does sick humor do anyone any good? Can I think your beliefs are absurd but still respect you?

In *The Virtues of Our Vices*, philosopher Emrys Westacott takes a fresh look at important everyday ethical questions—and comes up with surprising answers. He makes a compelling argument that some of our most common vices—rudeness, gossip, snobbery, tasteless humor, and disrespect for others’ beliefs—often have hidden virtues or serve unappreciated but valuable purposes. For instance, there are times when rudeness may be necessary to help someone with a problem or to convey an important message. Gossip can foster intimacy between friends and curb abuses of power. And dubious humor can alleviate existential anxieties.

Engaging, funny, and philosophically sophisticated, *The Virtues of Our Vices* challenges us to rethink conventional wisdom when it comes to everyday moral behavior.

Emrys Westacott is professor of philosophy at Alfred University in Alfred, New York. His work has been featured in the *New York Times* and has appeared in the *Philosopher’s Magazine*, *Philosophy Now*, the *Humanist*, the *Philosophical Forum*, and many other publications. He is also the coauthor of *Thinking through Philosophy: An Introduction*.

NOVEMBER

Cloth \$26.95T

978-0-691-14199-2

344 pages. 6 line illus. 5 ½ x 8 ½.

PHILOSOPHY

PRESS.PRINCETON.EDU

A BOOK FORGED IN HELL

Spinoza's Scandalous Treatise
and the Birth of the Secular Age

STEVEN NADLER

When it appeared in 1670, Baruch Spinoza's *Theological-Political Treatise* was denounced as the most dangerous book ever published—"godless," "full of abominations," "a book forged in hell . . . by the devil himself." Religious and secular authorities saw it as a threat to faith, social and political harmony, and everyday morality, and its author was almost universally regarded as a religious subversive and political radical who sought to spread atheism throughout Europe. Yet Spinoza's book has contributed as much as the Declaration of Independence or Thomas Paine's *Common Sense* to modern liberal, secular, and democratic thinking. In *A Book Forged in Hell*, Steven Nadler tells the fascinating story of this extraordinary book: its radical claims and their background in the philosophical, religious, and political tensions of the Dutch Golden Age, as well as the vitriolic reaction these ideas inspired.

It is not hard to see why Spinoza's *Treatise* was so important or so controversial, or why the uproar it caused is one of the most significant events in European intellectual history. In the book, Spinoza became the first to argue that the Bible is not literally the word of God but rather a work of human literature; that true religion has nothing to do with theology, liturgical ceremonies, or sectarian dogma; and that religious authorities should have no role in governing a modern state. He also denied the reality of miracles and divine providence, reinterpreted the nature of prophecy, and made an eloquent plea for toleration and democracy.

A vivid story of incendiary ideas and vicious backlash, *A Book Forged in Hell* will interest anyone who is curious about the origin of some of our most cherished modern beliefs.

Steven Nadler is the William H. Hay II Professor of Philosophy at the University of Wisconsin–Madison. His books include *Rembrandt's Jews*, which was a finalist for the Pulitzer Prize; *Spinoza: A Life*, which won the Koret Jewish Book Award; and *The Best of All Possible Worlds: A Story of Philosophers, God, and Evil in the Age of Reason* (Princeton).

THE VIVID STORY OF ONE OF THE MOST
IMPORTANT—AND INCENDIARY—BOOKS
IN WESTERN HISTORY



"*A Book Forged in Hell* is more than just an excellent and highly readable introduction to one of the most important texts of philosophy and political thought. Steven Nadler provides an eloquent portrait of Spinoza's treatise, placing it firmly in its historical, religious, political, and philosophical setting."

—Jonathan Israel, author of *A Revolution of the Mind: Radical Enlightenment and the Intellectual Origins of Modern Democracy*

NOVEMBER

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978-0-691-13989-0

304 pages. 1 halftone. 6 x 9.

PHILOSOPHY ■ HISTORY

PRESS.PRINCETON.EDU

HOW THE GRAND ALLIANCE OF WORLD WAR II
SUCCEEDED—AND THEN COLLAPSED—
BECAUSE OF PERSONAL POLITICS



“This is a terrific book. Fluidly written, cogently argued, and supported by superb research, it addresses a fundamental yet underexamined dimension of both the World War II Grand Alliance and the origins of the Cold War: the personalities as well as the personal relations of Churchill, Stalin, and Roosevelt.”

—Richard H. Immerman, Temple University

ROOSEVELT’S LOST ALLIANCES

How Personal Politics Helped Start the Cold War

FRANK COSTIGLIOLA

In the spring of 1945, as the Allied victory in Europe was approaching, the shape of the postwar world hinged on the personal politics and flawed personalities of Roosevelt, Churchill, and Stalin. *Roosevelt’s Lost Alliances* captures this moment and shows how FDR crafted a winning coalition by overcoming the different habits, upbringings, sympathies, and past experiences of the three leaders. In particular, Roosevelt trained his famous charm on Stalin, lavishing respect on him, salving his insecurities, and rendering him more amenable to compromise on some matters.

Yet, even as he pursued a lasting peace, FDR was alienating his own intimate circle of advisers and becoming dangerously isolated. After his death, postwar cooperation depended on Harry Truman, who, with very different sensibilities, heeded the embittered “Soviet experts” his predecessor had kept distant. A Grand Alliance was painstakingly built and carelessly lost. The Cold War was by no means inevitable.

This landmark study brings to light key overlooked documents, such as the Yalta diary of Roosevelt’s daughter Anna; the intimate letters of Roosevelt’s de facto chief of staff, Missy LeHand; and the wiretap transcripts of estranged adviser Harry Hopkins. With a gripping narrative and subtle analysis, *Roosevelt’s Lost Alliances* lays out a new approach to foreign relations history. Frank Costigliola highlights the interplay between national political interests and more contingent factors, such as the personalities of leaders and the culturally conditioned emotions forming their perceptions and driving their actions. Foreign relations flowed from personal politics—a lesson pertinent to historians, diplomats, and citizens alike.

Frank Costigliola is professor of history at the University of Connecticut and former president of the Society for Historians of American Foreign Relations. He is the author of *France and the United States* and *Awkward Dominion*.

JANUARY

Cloth \$35.00T

978-0-691-12129-1

440 pages. 24 halftones. 6 x 9.

HISTORY ■ INTERNATIONAL RELATIONS

PRESS.PRINCETON.EDU

LOST COLONY

The Untold Story of China's
First Great Victory over the West

TONIO ANDRADE

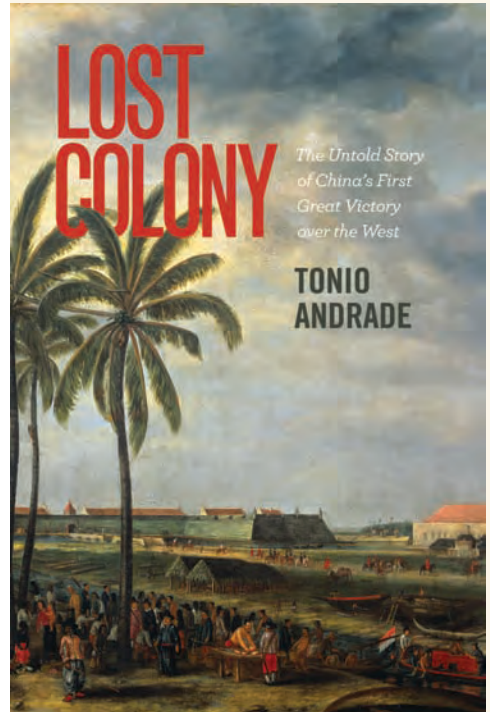
During the seventeenth century, Holland created the world's most dynamic colonial empire, outcompeting the British and capturing Spanish and Portuguese colonies. Yet, in the Sino-Dutch War—Europe's first war with China—the Dutch met their match in a colorful Chinese warlord named Koxinga. Part samurai, part pirate, he led his generals to victory over the Dutch and captured one of their largest and richest colonies—Taiwan. How did he do it? Examining the strengths and weaknesses of European and Chinese military techniques during the period, *Lost Colony* provides a balanced new perspective on long-held assumptions about Western power, Chinese might, and the nature of war.

It has traditionally been asserted that Europeans of the era possessed more advanced science, technology, and political structures than their Eastern counterparts, but historians have recently contested this view, arguing that many parts of Asia developed on pace with Europe until 1800. While *Lost Colony* shows that the Dutch did indeed possess a technological edge thanks to the Renaissance fort and the broadside sailing ship, that edge was neutralized by the formidable Chinese military leadership. Thanks to a rich heritage of ancient war wisdom, Koxinga and his generals outfoxed the Dutch at every turn.

Exploring a period when the military balance between Europe and China was closer than at any other point in modern history, *Lost Colony* reassesses an important chapter in world history and offers valuable and surprising lessons for contemporary times.

Tonio Andrade is associate professor of history at Emory University. He is the author of *How Taiwan Became Chinese: Dutch, Spanish, and Han Colonization in the Seventeenth Century*.

HOW A CHINESE PIRATE DEFEATED
EUROPEAN COLONIALISTS AND WON TAIWAN
DURING THE SEVENTEENTH CENTURY



“Based on impressive readings in Chinese and Dutch sources, *Lost Colony* examines fascinating interpretive issues on the changing nature of military power in various parts of the early modern world. Strong and important, this book tells a good story.”

—John E. Wills, Jr., author of *1688: A Global History*

NOVEMBER

Cloth \$35.00T

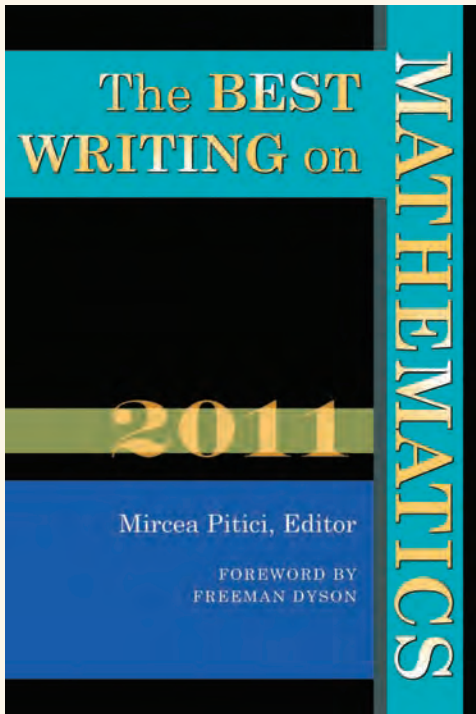
978-0-691-14455-9

456 pages. 9 halftones. 6 line illus.
10 maps. 6 x 9.

HISTORY ■ ASIAN STUDIES

PRESS.PRINCETON.EDU

THE YEAR'S FINEST WRITING ON MATH
FROM AROUND THE WORLD



Praise for *The Best Writing on Mathematics 2010*:

“A delight to read. This is a fine volume with lots of terrific articles that are as enticing as they are varied. The sum total is simply great.”

—Barry Mazur, Harvard University

THE BEST WRITING ON MATHEMATICS 2011

EDITED BY MIRCEA PITICI

Foreword by Freeman Dyson

This anthology brings together the year’s finest mathematics writing from around the world. Featuring promising new voices alongside some of the foremost names in the field, *The Best Writing on Mathematics 2011* makes available to a wide audience many articles not easily found anywhere else—and you don’t need to be a mathematician to enjoy them. These writings offer surprising insights into the nature, meaning, and practice of mathematics today. They delve into the history, philosophy, teaching, and everyday occurrences of math, and take readers behind the scenes of today’s hottest mathematical debates. Here Ian Hacking discusses the salient features that distinguish mathematics from other disciplines of the mind; Doris Schattschneider identifies some of the mathematical inspirations of M. C. Escher’s art; Jordan Ellenberg describes compressed sensing, a mathematical field that is reshaping the way people use large sets of data; Erica Klarreich reports on the use of algorithms in the job market for doctors; and much, much more.

In addition to presenting the year’s most memorable writings on mathematics, this must-have anthology includes a foreword by esteemed physicist and mathematician Freeman Dyson. This book belongs on the shelf of anyone interested in where math has taken us—and where it is headed.

Mircea Pitici is a PhD candidate in mathematics education at Cornell University. He teaches mathematics courses and writing seminars at Cornell and Ithaca College.

ALSO AVAILABLE

THE BEST WRITING ON MATHEMATICS 2010

EDITED BY MIRCEA PITICI

WITH A FOREWORD BY WILLIAM P. THURSTON

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440 pages. 24 halftones. 10 line illus. 5 ½ x 8 ½.

NOVEMBER

Paper \$19.95T

978-0-691-15315-5

350 pages. 68 halftones.

12 line illus. 5 ½ x 8 ½.

POPULAR MATHEMATICS

PRESS.PRINCETON.EDU

FASCINATING MATHEMATICAL PEOPLE

Interviews and Memoirs

EDITED BY DONALD J. ALBERS
& GERALD L. ALEXANDERSON

With an introduction by Philip J. Davis

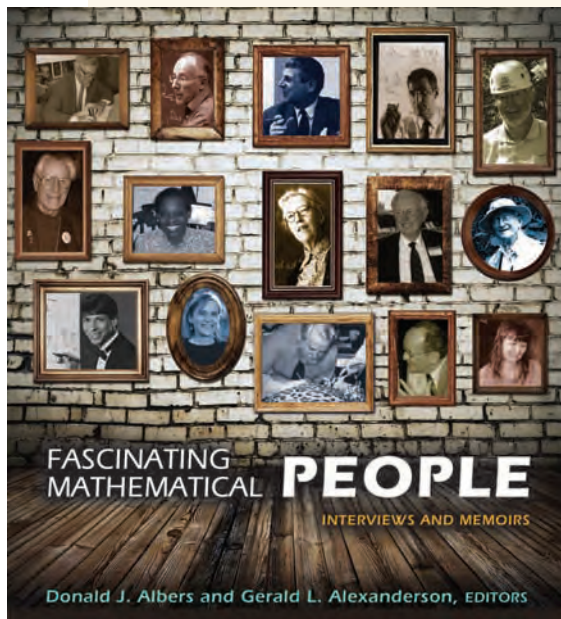
Fascinating Mathematical People is a collection of informal interviews and memoirs of sixteen prominent members of the mathematical community of the twentieth century, many still active. The candid portraits collected here demonstrate that while these men and women vary widely in terms of their backgrounds, life stories, and worldviews, they all share a deep and abiding sense of wonder about mathematics.

Featured here—in their own words—are major research mathematicians whose cutting-edge discoveries have advanced the frontiers of the field, such as Lars Ahlfors, Mary Cartwright, Dusa McDuff, and Atle Selberg. Others are leading mathematicians who have also been highly influential as teachers and mentors, like Tom Apostol and Jean Taylor. Fern Hunt describes what it was like to be among the first black women to earn a PhD in mathematics. Harold Bacon made trips to Alcatraz to help a prisoner learn calculus. Thomas Banchoff, who first became interested in the fourth dimension while reading a Captain Marvel comic, relates his fascinating friendship with Salvador Dalí and their shared passion for art, mathematics, and the profound connection between the two. Other mathematical people found here are Leon Bankoff, who was also a Beverly Hills dentist; Arthur Benjamin, a part-time professional magician; and Joseph Gallian, a legendary mentor of future mathematicians, but also a world-renowned expert on the Beatles.

This beautifully illustrated collection includes many photographs never before published, concise introductions by the editors to each subject, and an informative general introduction by Philip J. Davis.

Donald J. Albers is editorial director of the books program at the Mathematical Association of America. **Gerald L. Alexanderson** is the Michael and Elizabeth Valeriotte Professor of Science at Santa Clara University. They are the editors of *Mathematical People: Profiles and Interviews* and *More Mathematical People: Contemporary Conversations*.

TOP MATHEMATICIANS TALK ABOUT
THEIR WORK AND LIVES



“Fascinating Mathematical People is a wonderfully varied collection. We meet brilliantly successful teachers, authors, a dentist, and two Fields Medal-winning Scandinavians. Some came from academic or intellectual families, another from a blazing-hot glass factory in Pennsylvania, and still another from an ancient and storied English aristocratic background. All of them had surprising side paths and detours on their way to mathematical success.”

—Reuben Hersh, coauthor of *Loving and Hating Mathematics*

OCTOBER

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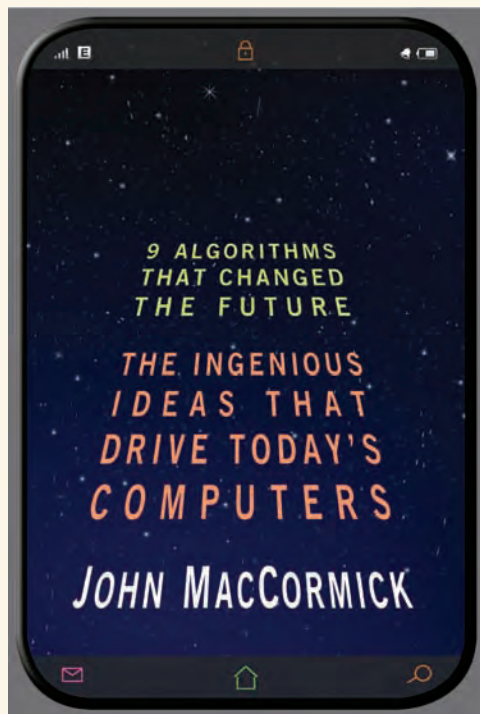
978-0-691-14829-8

264 pages. 188 halftones. 8 1/2 x 9 1/2.

POPULAR MATHEMATICS

PRESS.PRINCETON.EDU

FINALLY, A SIMPLE EXPLANATION OF
THE IDEAS BEHIND OUR COMPUTERS—
FROM GOOGLE TO CRYPTOGRAPHY



“This book is for those who have wondered, ‘What actually goes on in my computer?’ MacCormick clearly explains some of the algorithms used by hundreds of millions of people daily. . . . I recommend it highly.”

—Chuck Thacker, winner of the 2010 Turing Award

NINE ALGORITHMS THAT CHANGED THE FUTURE

The Ingenious Ideas That Drive Today's Computers

JOHN MACCORMICK

With a foreword by Chris Bishop

Every day, we use our computers to perform remarkable feats. A simple web search picks out a handful of relevant needles from the world's biggest haystack: the billions of pages on the World Wide Web. Uploading a photo to Facebook transmits millions of pieces of information over numerous error-prone network links, yet somehow a perfect copy of the photo arrives intact. Without even knowing it, we use public-key cryptography to transmit secret information like credit card numbers; and we use digital signatures to verify the identity of the websites we visit. How do our computers perform these tasks with such ease?

This is the first book to answer that question in language anyone can understand, revealing the extraordinary ideas that power our PCs, laptops, and smartphones. Using vivid examples, John MacCormick explains the fundamental “tricks” behind nine types of computer algorithms, including artificial intelligence (where we learn about the “nearest neighbor trick” and “twenty questions trick”), Google's famous PageRank algorithm (which uses the “random surfer trick”), data compression, error correction, and much more.

These revolutionary algorithms have changed our world: this book unlocks their secrets, and lays bare the incredible ideas that our computers use every day.

John MacCormick is a leading researcher and teacher of computer science. He has a PhD in computer vision from the University of Oxford, has worked in the research labs of Hewlett-Packard and Microsoft, and is currently a professor of computer science at Dickinson College.

FEBRUARY

Cloth \$27.95T

978-0-691-14714-7

248 pages. 5 halftones.

98 line illus. 1 table. 6 x 9.

POPULAR MATHEMATICS ■
COMPUTER SCIENCE

PRESS.PRINCETON.EDU

UNEDUCATED GUESSES

Using Evidence to Uncover Misguided Education Policies

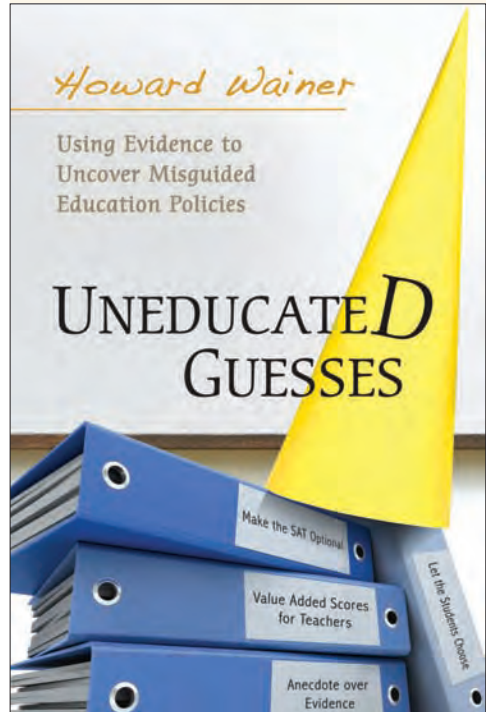
HOWARD WAINER

Uneducated Guesses challenges everything our policymakers thought they knew about education and education reform, from how to close the achievement gap in public schools to admission standards for top universities. In this explosive book, Howard Wainer uses statistical evidence to show why some of the most widely held beliefs in education today—and the policies that have resulted—are wrong. He shows why colleges that make the SAT optional for applicants end up with underperforming students and inflated national rankings, and why the push to substitute achievement tests for aptitude tests makes no sense. Wainer challenges the thinking behind the enormous rise of advanced placement courses in high schools, and demonstrates why assessing teachers based on how well their students perform on tests—a central pillar of recent education reforms—is woefully misguided. He explains why college rankings are often lacking in hard evidence, why essay questions on tests disadvantage women, why the most grievous errors in education testing are not made by testing organizations—and much more.

No one concerned about seeing our children achieve their full potential can afford to ignore this book. With forceful storytelling, wry insight, and a wealth of real-world examples, *Uneducated Guesses* exposes today's educational policies to the light of empirical evidence, and offers solutions for fairer and more viable future policies.

Howard Wainer is distinguished research scientist at the National Board of Medical Examiners and adjunct professor of statistics at the Wharton School of the University of Pennsylvania. For twenty-one years, he was principal research scientist at Educational Testing Service. His many books include *Picturing the Uncertain World: How to Understand, Communicate, and Control Uncertainty through Graphical Display* (see page 56) and *Graphic Discovery: A Trout in the Milk and Other Visual Adventures* (Princeton).

WHAT STATISTICAL EVIDENCE SHOWS US ABOUT OUR MISGUIDED EDUCATIONAL POLICIES



“Uneducated Guesses is a must-read for enthusiasts of evidence-based decision making and for those who make public policy decisions without consulting the evidence. The former will be sobered by a real and random world that may not match their theoretical models. The latter will be surprised to learn from past research the power and limits of public policy decisions. Wainer lays it all out in engaging and accessible prose and numbers.”

—Arthur E. Wise, president emeritus,
National Council for Accreditation of
Teacher Education

SEPTEMBER

Cloth \$24.95T

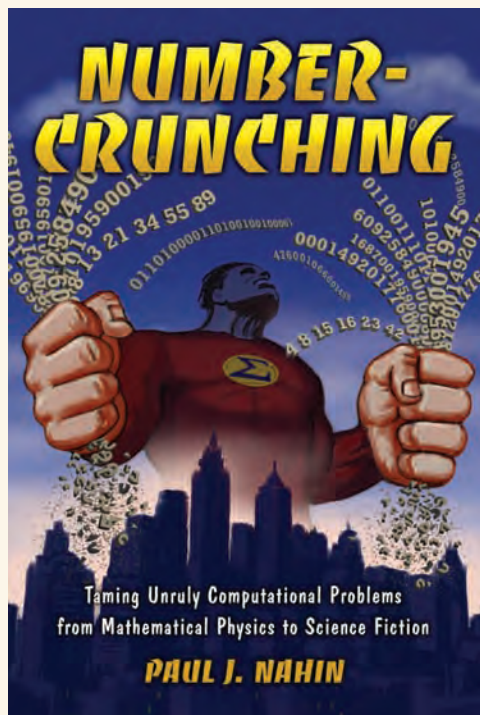
978-0-691-14928-8

200 pages. 23 line illus. 17 tables. 6 x 9.

EDUCATION

PRESS.PRINCETON.EDU

MORE STIMULATING MATH PUZZLES
FROM BEST-SELLING AUTHOR PAUL NAHIN



“While there is a plethora of computational physics books, only this one brings the sheer joy and fascination of the subject to the general reader. The problems in *Number-Crunching* are nicely selected, the prose is clear and humorous, and the solutions range from the interesting to the gloriously counterintuitive. With the ubiquity of powerful personal computers and the easy availability of scientific software, this is a very timely book.”

—Lawrence Weinstein, coauthor of *Guesstimation*

SEPTEMBER

Cloth \$29.95T

978-0-691-14425-2

400 pages. 4 halftones.

98 line illus. 6 tables. 6 x 9.

POPULAR MATHEMATICS ■

POPULAR SCIENCE

PRESS.PRINCETON.EDU

NUMBER-CRUNCHING

Taming Unruly Computational Problems
from Mathematical Physics to Science Fiction

PAUL J. NAHIN

How do technicians repair broken communications cables at the bottom of the ocean without actually seeing them? What's the likelihood of plucking a needle out of a haystack the size of the Earth? And is it possible to use computers to create a universal library of everything ever written or every photo ever taken? These are just some of the intriguing questions that best-selling popular math writer Paul Nahin tackles in *Number-Crunching*. Through brilliant math ideas and entertaining stories, Nahin demonstrates how odd and unusual math problems can be solved by bringing together basic physics ideas and today's powerful computers. Some of the outcomes discussed are so counterintuitive they will leave readers astonished.

Nahin looks at how the art of number-crunching has changed since the advent of computers, and how high-speed technology helps to solve fascinating conundrums such as the three-body, Monte Carlo, leapfrog, and gambler's ruin problems. Along the way, Nahin traverses topics that include algebra, trigonometry, geometry, calculus, number theory, differential equations, Fourier series, electronics, and computers in science fiction. He gives historical background for the problems presented, offers many examples and numerous challenges, supplies MATLAB codes for all the theories discussed, and includes detailed and complete solutions.

Exploring the intimate relationship between mathematics, physics, and the tremendous power of modern computers, *Number-Crunching* will appeal to anyone interested in understanding how these three important fields join forces to solve today's thorniest puzzles.

Paul J. Nahin is the author of many best-selling popular math books, including *Mrs. Perkins's Electric Quilt*, *Digital Dice*, *Chases and Escapes*, *Dr. Euler's Fabulous Formula*, *When Least Is Best*, and *An Imaginary Tale* (all Princeton). He is professor emeritus of electrical engineering at the University of New Hampshire.

IN PURSUIT OF THE TRAVELING SALESMAN

Mathematics at the Limits of Computation

WILLIAM J. COOK

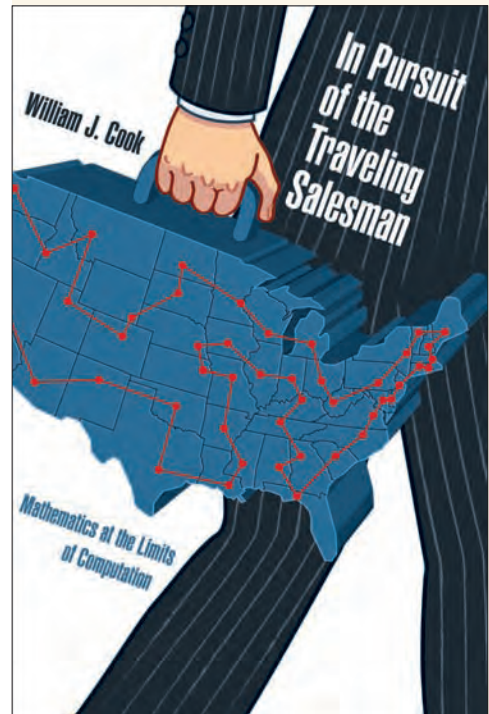
What is the shortest possible route for a traveling salesman seeking to visit each city on a list exactly once and return to his city of origin? It sounds simple enough, yet the traveling salesman problem is one of the most intensely studied puzzles in applied mathematics—and it has defied solution to this day. In this book, William Cook takes readers on a mathematical excursion, picking up the salesman's trail in the 1800s when Irish mathematician W. R. Hamilton first defined the problem, and venturing to the furthest limits of today's state-of-the-art attempts to solve it.

Cook examines the origins and history of the salesman problem and explores its many important applications, from genome sequencing and designing computer processors to arranging music and hunting for planets. He looks at how computers stack up against the traveling salesman problem on a grand scale, and discusses how humans, unaided by computers, go about trying to solve the puzzle. Cook traces the salesman problem to the realms of neuroscience, psychology, and art, and he also challenges readers to tackle the problem themselves. The traveling salesman problem is—literally—a \$1 million question. That's the prize the Clay Mathematics Institute is offering to anyone who can solve the problem or prove that it can't be done.

In Pursuit of the Traveling Salesman travels to the very threshold of our understanding about the nature of complexity, and challenges you yourself to discover the solution to this captivating mathematical problem.

William J. Cook is the Chandler Family Chair and Professor in Industrial and Systems Engineering at Georgia Institute of Technology. He is the coauthor of *The Traveling Salesman Problem: A Computational Study* (Princeton).

THE STORY OF ONE OF THE GREATEST
UNSOLVED PROBLEMS IN MATHEMATICS



“A gripping insider’s account of one of the great mathematical problems. This book shows how deep mathematical insights can arise from apparently simple questions, and how the results can be applied to that most human of objectives: to achieve a desired outcome in the best possible way. *In Pursuit of the Traveling Salesman* deserves to become an instant classic.”

—Ian Stewart, author of *Professor Stewart’s Hoard of Mathematical Treasures*

JANUARY

Cloth \$27.95T

978-0-691-15270-7

272 pages. 113 color illus. 19 halftones.
19 line illus. 2 tables. 6 x 9.

POPULAR MATHEMATICS

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