

HOW TO CLONE A MAMMOTH

The Science of De-Extinction

BETH SHAPIRO

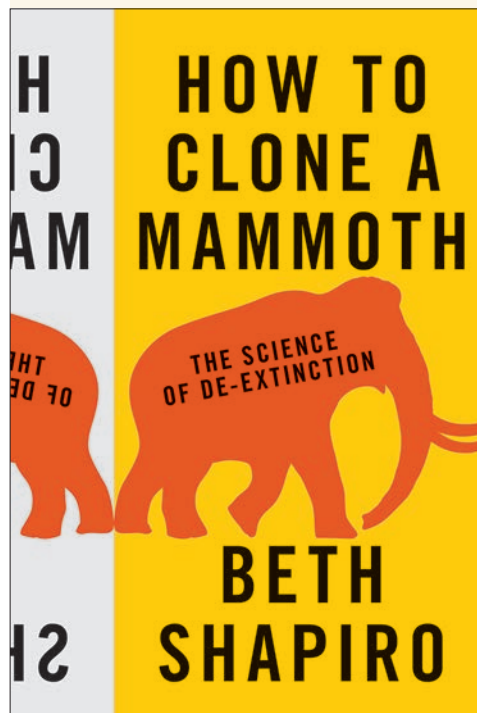
Could extinct species, like mammoths and passenger pigeons, be brought back to life? The science says yes. In *How to Clone a Mammoth*, Beth Shapiro, evolutionary biologist and pioneer in “ancient DNA” research, walks readers through the astonishing process of de-extinction. From deciding which species should be restored, to sequencing their genomes, to anticipating how revived populations might be overseen in the wild, Shapiro vividly explores the extraordinary cutting-edge science that is being used—today—to resurrect the past. Journeying to far-flung Siberian locales in search of Ice Age bones and delving into her own research—as well as that of fellow experts such as Svante Paabo, George Church, and Craig Venter—Shapiro considers de-extinction’s practical benefits and ethical challenges. Would de-extinction change the way we live? Is this really cloning? What are the costs and risks? And what is the ultimate goal?

Using DNA collected from remains as a genetic blueprint, scientists aim to engineer extinct traits—traits that evolved by natural selection over thousands of years—into living organisms. But rather than viewing de-extinction as a way to restore one particular species, Shapiro argues that the overarching goal should be the revitalization and stabilization of contemporary ecosystems. For example, elephants with genes modified to express mammoth traits could expand into the Arctic, restoring lost productivity to the tundra ecosystem.

Looking at the very real and compelling science behind an idea once seen as science fiction, *How to Clone a Mammoth* demonstrates how de-extinction will redefine conservation’s future.

Beth Shapiro is associate professor of ecology and evolutionary biology at the University of California, Santa Cruz. Her work has appeared in numerous publications, including *Nature* and *Science*, and she was a 2009 recipient of a MacArthur Award. She lives in Santa Cruz.

AN INSIDER'S VIEW ON BRINGING
EXTINCT SPECIES BACK TO LIFE



“Bringing a lost species back to life is an exciting prospect and also a scary one. No one is better able to explain the challenges and the potential of the enterprise than Beth Shapiro. *How to Clone a Mammoth* is an engaging, rigorous, and deeply thoughtful book.”

—Elizabeth Kolbert, author of *The Sixth Extinction: An Unnatural History*

MAY

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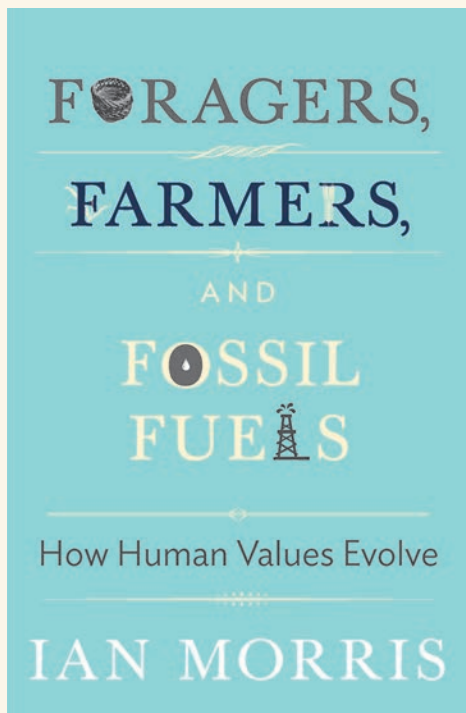
978-0-691-15705-4

240 pages. 16 color illus. 2 halftones.
9 line illus. 6 x 9.

POPULAR SCIENCE

PRESS.PRINCETON.EDU

THE BEST-SELLING AUTHOR OF *WHY THE WEST RULES—FOR NOW* EXAMINES THE EVOLUTION AND FUTURE OF HUMAN VALUES



“Ian Morris has thrown another curve-ball for social science. In this disarmingly readable book, which takes us from prehistory to the present, he offers a new theory of human culture, linking it firmly to economic fundamentals and how humans obtained their energy and resources from nature. This is bold, erudite, and provocative.”

—Daron Acemoglu, coauthor of *How Nations Fail: The Origins of Power, Prosperity, and Poverty*

APRIL

Cloth \$29.95T

978-0-691-16039-9

360 pages. 2 halftones.

26 line illus. 4 maps. 5 1/2 x 8 1/2.

HISTORY

PRESS.PRINCETON.EDU

FORAGERS, FARMERS, AND FOSSIL FUELS

How Human Values Evolve

IAN MORRIS

Edited and with an introduction by Stephen Macedo

With commentary by Margaret Atwood, Christine M. Korsgaard, Richard Seaford & Jonathan D. Spence

Most people in the world today think democracy and gender equality are good, and that violence and wealth inequality are bad. But most people who lived during the 10,000 years before the nineteenth century thought just the opposite. Drawing on archaeology, anthropology, biology, and history, Ian Morris, author of the best-selling *Why the West Rules—for Now*, explains why. The result is a compelling new argument about the evolution of human values, one that has far-reaching implications for how we understand the past—and for what might happen next.

Fundamental long-term changes in values, Morris argues, are driven by the most basic force of all: energy. Humans have found three main ways to get the energy they need—from foraging, farming, and fossil fuels. Each energy source sets strict limits on what kinds of societies can succeed, and each kind of society rewards specific values. In tiny forager bands, people who value equality but are ready to settle problems violently do better than those who aren't; in large farming societies, people who value hierarchy and are less willing to use violence do best; and in huge fossil-fuel societies, the pendulum has swung back toward equality but even further away from violence.

But if our fossil-fuel world favors democratic, open societies, the ongoing revolution in energy capture means that our most cherished values are very likely to turn out—at some point fairly soon—not to be useful any more.

Originating as the Tanner Lectures delivered at Princeton University, the book includes challenging responses by novelist Margaret Atwood, philosopher Christine Korsgaard, classicist Richard Seaford, and historian of China Jonathan Spence.

Ian Morris is the Willard Professor of Classics and a fellow of the Stanford Archaeology Center at Stanford University. He has directed excavations in Italy and Greece and has published thirteen previous books, including *Why the West Rules—for Now* (Farrar, Straus and Giroux), *The Measure of Civilization* (Princeton), and *War! What Is It Good For?* (FSG). He lives in Boulder Creek, California.

THE UNIVERSITY CENTER FOR HUMAN VALUES SERIES
Charles R. Beitz, Series Editor

An interview with Ian Morris

Your book looks at how human values have changed over tens of thousands of years, but isn't morality universal and unchanging?

Yes and no. Yes, in the sense that human values are the outcome of millions of years of evolution, but also no, because the ways people have interpreted fairness, etc., have varied wildly through time. What causes values to change is not the deep thoughts of philosophers but the most basic force of all—energy. As humanity has moved from foraging through farming to fossil-fuel use, the different ways humans obtain energy from their environment call for different kinds of social organization, and these different kinds of organization favor very different interpretations of human values.

You argue that violence, poverty, and inequality have diminished greatly from past periods. That seems surprising.

It is indeed surprising! Foraging societies were quite equal in wealth, if only because almost everyone was desperately poor (average income was the equivalent of about \$1 per day). They were also very violent (more than 10 percent of foragers died violently). Fossil-fuel societies, by contrast, are the safest and richest the world has ever seen, and are also more equal than all but the simplest foraging groups. Globally, the average person earns \$25 per day and stands less than a one percent chance of dying violently. And in some countries progressive taxation has pushed income inequality down close to levels not seen since the simplest foraging societies. Despite all the things we might not like about our own age, it would have seemed like a magical kingdom to people in the past.

How might values change as we move away from a reliance on fossil fuels?

No one knows what the future will bring, but there are signs that in the short term—roughly the next generation—we will see increasing inequality and increasing acceptance that such inequality is right, along with increasing instability and violence. In the medium term—the next two or three generations—we may see the values of the fossil-fuel age go into overdrive; but in the longer term—say the next century or so—the transformations may become so massive that it no longer makes much sense to speak of human values at all, because what it means to be human might change more in the next 100 years than it has done in the previous 100,000.

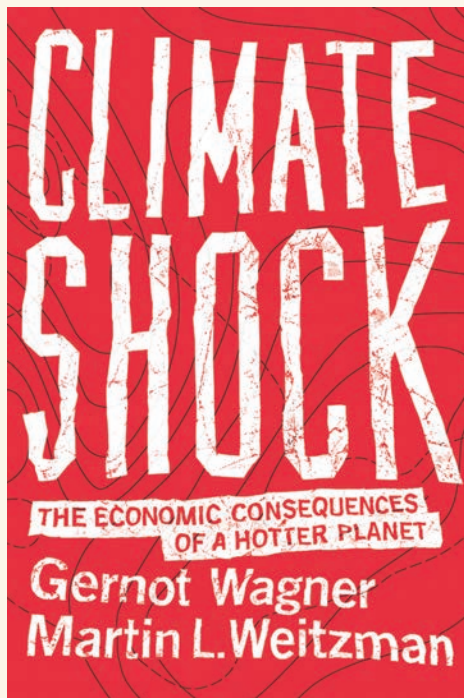


Photo by Linda Cicero

“Ian Morris has emerged in recent years as one of the great big thinkers in history, archaeology, and anthropology, writing books that set people talking and thinking. I found delightful things in every chapter of *Foragers, Farmers, and Fossil Fuels*, interesting enough that I found myself sharing them with family over dinner. The breadth of reading and the command of the subject are just dazzling. His major argument—that value systems adapt themselves to ambient energy structures, in the same way that an organism adapts to its niche—is fascinating.”

—Daniel Lord Smail, author of *On Deep History and the Brain*

HOW KNOWING THE EXTREME RISKS OF
CLIMATE CHANGE CAN HELP US PREPARE
FOR AN UNCERTAIN FUTURE



"A remarkable book on climate change, *Climate Shock* is deeply insightful, challenging, eye-opening, thought-provoking, and sheer fun to read. It will help you to think clearly and incisively about one of the most important issues of our generation."

—Jeffrey Sachs, author of *The Price of Civilization*

CLIMATE SHOCK

The Economic Consequences of a Hotter Planet

GERNOT WAGNER &
MARTIN L. WEITZMAN

If you had a 10 percent chance of having a fatal car accident, you'd take necessary precautions. If your finances had a 10 percent chance of suffering a severe loss, you'd reevaluate your assets. So if we know the world is warming and there's a 10 percent chance this might eventually lead to a catastrophe beyond anything we could imagine, why aren't we doing more about climate change right now? We insure our lives against an uncertain future—why not our planet?

In *Climate Shock*, Gernot Wagner and Martin Weitzman explore in lively, clear terms the likely repercussions of a hotter planet, drawing on and expanding from work previously unavailable to general readers. They show that the longer we wait to act, the more likely it is that an extreme event will happen. A city might go underwater. A rogue nation might shoot particles into the Earth's atmosphere, geoengineering cooler temperatures. Zeroing in on the unknown extreme risks that may yet dwarf all else, the authors look at how the same economic forces that make sensible climate policies difficult to enact also make radical would-be fixes like geoengineering all the more probable. What we know about climate change is alarming enough. What we don't know about the extreme risks could be far more dangerous. Wagner and Weitzman help readers understand that we need to think about climate change in the same way that we think about insurance—as a risk management problem, only here on a global scale.

Demonstrating that climate change can and should be dealt with—and what could happen if we don't do so—*Climate Shock* tackles the defining environmental and public policy issue of our time.

Gernot Wagner is lead senior economist at the Environmental Defense Fund. He is the author of *But Will the Planet Notice?* (Hill & Wang). **Martin L. Weitzman** is professor of economics at Harvard University. His books include *Income, Wealth, and the Maximum Principle*. For more, see www.gwagner.com and scholar.harvard.edu/weitzman.

MARCH

Cloth \$27.95T

978-0-691-15947-8

288 pages. 3 line illus. 5 tables. 5 1/2 x 8 1/2.

CURRENT AFFAIRS ■

POPULAR ECONOMICS ■ NATURE

PRESS.PRINCETON.EDU

An interview with Gernot Wagner & Martin Weitzman

There are plenty of books about climate change. How is this one different?

Gernot Wagner: Most books are about what we know. Ours zeroes in on what we don't. The most interesting—and potentially frightening—aspects of climate change are in the “unknown unknowns,” so to speak. It's common to think a lot about this sort of uncertainty when it comes to financial markets, but less so when dealing with global warming.

Martin L. Weitzman: There's this long-standing belief in economics—and in the public characterization of the economic debate—that a balanced approach requires us to go slow: for example, start with a low carbon price that ratchets up over time. That's fine as far as it goes, but it's based on what we know. What we don't know—the all-important tail risks—means that what's now perceived as the middle-of-the-road approach may well be on the conservative end of the spectrum.

So, what do we know?

MLW: We know that climate change is about risk management—on a planetary scale, with possibly catastrophic consequences. It's among the most difficult public policy problems the world has ever had to deal with. Doing something about it means tackling issues that go to the core of what drives—powers—the modern economy.

GW: We also know enough to act now. Whether the correct price of a ton of carbon dioxide is \$40 or ten times as much is largely beside the point. The world subsidizes fossil fuels to the tune of \$500 billion per year. That makes for an average carbon dioxide price of negative \$15 per ton. So, step one: let's get the sign right.

I'm sold. What can I do?

GW: Scream. Cope. And, as you may expect to hear from two economists: Profit. Let's make sure our politicians hear us loud and clear to put the right policies in place. Meanwhile, let's also prepare for what's in store ...

MLW: ... and let's guide investment decisions in a way to steer clear from the current high-carbon, low-efficiency trajectory and instead make the low-carbon, high-efficiency path the profitable one. Economics—misguided economics—is the big problem. It's also the solution. Avoiding an eventual climate shock is all about correcting misguided market forces.

GW: This isn't about drawing up a battle between capitalism and the climate. It's about using the tools we have to get a handle on our uncertain future. We know what to do. Let's get to work.



Photo by Jennifer Weitzman

“Wagner and Weitzman's *Climate Shock* explores two of the most alarming risks from climate change: unpredictable catastrophes and the all-too-foreseeable human tampering with the environment. They explain how the same political barriers to addressing the problem will leave nations racing to deflect the damage through geoengineering. For anyone interested in the new risk landscape of our changing climate, *Climate Shock* is a compelling and highly recommended read.”

—**Ian Bremmer**, president of the Eurasia Group

“*Climate Shock* gives broad perspectives and logical tools that will let you think through the threat of climate change on the level of the best minds on this planet.”

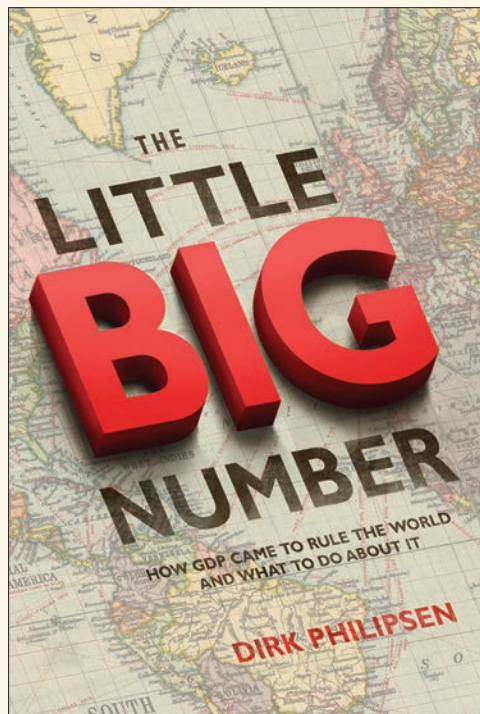
—**Peter C. Goldmark Jr.**, former president of the Rockefeller Foundation

THE STORY OF GDP AND WHY WE NEED
A BETTER MEASUREMENT OF GROWTH

THE LITTLE BIG NUMBER

How GDP Came to Rule the World
and What to Do about It

DIRK PHILIPSEN



In one lifetime, GDP, or Gross Domestic Product, has ballooned from a narrow economic tool into a global article of faith. It is our universal yardstick of progress. As *The Little Big Number* demonstrates, this spells trouble. While economies and cultures measure their performance by it, GDP ignores central facts such as quality, costs, or purpose. It only measures output: more cars, more accidents; more lawyers, more trials; more extraction, more pollution—all count as success. Sustainability and quality of life are overlooked. Losses don't count. GDP promotes a form of stupid growth and ignores real development.

How and why did we get to this point? Dirk Philipsen uncovers a submerged history dating back to the 1600s, climaxing with the Great Depression and World War II, when the first version of GDP arrived at the forefront of politics. Transcending ideologies and national differences, GDP was subsequently transformed from a narrow metric to the purpose of economic activity. Today, increasing GDP is the highest goal of politics. In accessible and compelling prose, Philipsen shows how it affects all of us.

But the world can no longer afford GDP rule. A finite planet cannot sustain blind and indefinite expansion. If we consider future generations equal to our own, replacing the GDP regime is the ethical imperative of our times. More is not better. As Philipsen demonstrates, the history of GDP reveals unique opportunities to fashion smarter goals and measures. *The Little Big Number* explores a possible roadmap for a future that advances quality of life rather than indiscriminate growth.

Dirk Philipsen is a German- and American-trained professor of economic history, senior fellow at the Kenan Institute for Ethics, and a Duke Arts and Sciences Senior Research Scholar at Duke University. He is the author of *We Were the People: Voices from East Germany's Revolutionary Autumn of 1989*. He lives in Durham, North Carolina.

“Philipsen brilliantly exposes the skeleton hiding in the economist’s closet—the dangerously misleading talisman of GDP. He uncovers the extraordinary story of how good intentions morphed into the monstrous misconception of public progress and economic value that reigns over politics and public opinion. If society fails to heed Philipsen’s message about developing new ways to measure economic gain and loss, the sustainable future is not going to be possible.”

—William Greider, author of *The Soul of Capitalism*

JUNE

Cloth \$29.95T

978-0-691-16652-0

336 pages. 10 halftones. 5 tables. 6 x 9.

POPULAR ECONOMICS ■ PUBLIC POLICY

IRRATIONAL EXUBERANCE

Revised and Expanded Third Edition

ROBERT J. SHILLER

In this revised, updated, and expanded edition of his *New York Times* bestseller, Nobel Prize-winning economist Robert Shiller, who warned of both the tech and housing bubbles, now cautions that signs of irrational exuberance among investors have only increased since the 2008–9 financial crisis. With high stock and bond prices in the United States, and rising housing prices in many countries, the post-subprime boom may well turn out to be another illustration of Shiller's influential argument that psychologically driven volatility is an inherent characteristic of all asset markets. In other words, *Irrational Exuberance* is as relevant as ever.

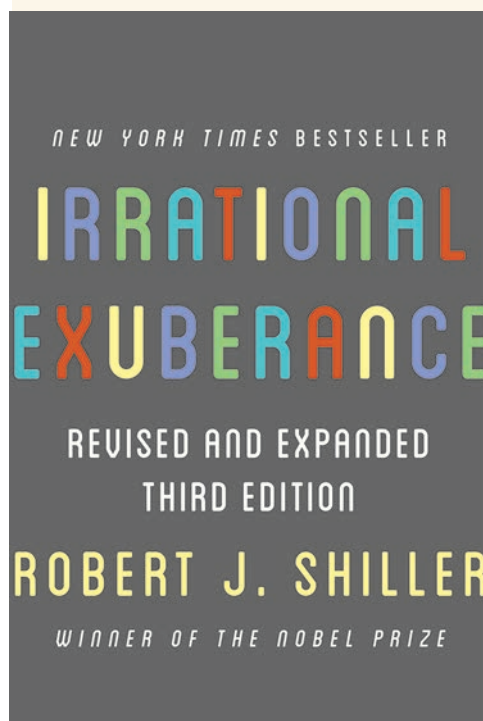
But *Irrational Exuberance* is about something far more important than the current situation in any given market, because the book explains the forces that move all markets up and down. It shows how investor euphoria can drive asset prices up to dizzying and unsustainable heights, and how, at other times, investor discouragement can push prices down to very low levels.

Previous editions covered the stock and housing markets—and famously predicted their crashes. This new edition expands its coverage to include the bond market, so that the book now addresses all of the major investment markets. This edition also includes updated data throughout, as well as Shiller's 2013 Nobel Prize lecture, which puts the book in broader context.

In addition to diagnosing the causes of asset bubbles, *Irrational Exuberance* recommends urgent policy changes to lessen their likelihood and severity—and suggests ways that individuals can decrease their risk before the next bubble bursts. No one whose future depends on a retirement account, a house, or other investments can afford not to read it.

Robert J. Shiller, the recipient of the 2013 Nobel Prize in economics, is a best-selling author, a regular contributor to the Economic View column of the *New York Times*, and a professor of economics at Yale University. He lives in New Haven, Connecticut.

WHY THE IRRATIONAL EXUBERANCE
OF INVESTORS HASN'T DISAPPEARED
SINCE THE FINANCIAL CRISIS



Praise for the original edition:

“Robert Shiller ... has done more than any other economist of his generation to document the less rational aspects of financial markets.”

—Paul Krugman, *New York Times*

“*Irrational Exuberance* should be compulsory reading for anybody interested in Wall Street or financially exposed to it; at the moment, that would be roughly everybody in the United States.”

—*Economist*

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FEBRUARY

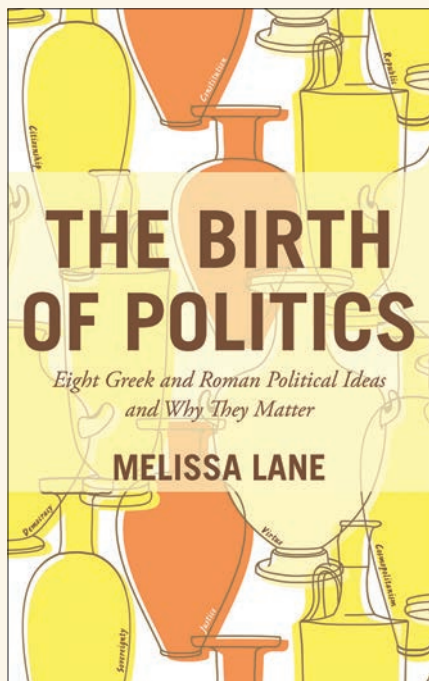
Cloth \$29.95T

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376 pages. 13 line illus. 6 x 9.

POPULAR ECONOMICS ■ FINANCE

A LIVELY AND ACCESSIBLE INTRODUCTION
TO THE GREEK AND ROMAN ORIGINS
OF OUR POLITICAL IDEAS



"This is the best introduction to ancient political thought—accessible, stimulating, thoughtful, and accurate. Melissa Lane, a scholar of the first rank, is a trustworthy guide who brings recent thinking to bear on the central topics and does an excellent job of writing with an eye to contemporary relevance, without removing ancient thinkers from their very different historical and political contexts."

—Kinch Hoekstra, University of California, Berkeley

MARCH

Cloth \$26.95T

978-0-691-16647-6

400 pages. 4 tables. 3 maps. 5 x 8.

POLITICS ■ CLASSICS

Not for sale in the Commonwealth and European Union

PRESS.PRINCETON.EDU

THE BIRTH OF POLITICS

Eight Greek and Roman Political Ideas
and Why They Matter

MELISSA LANE

In *The Birth of Politics*, Melissa Lane introduces the reader to the foundations of Western political thought, from the Greeks, who invented democracy, to the Romans, who created a republic and then transformed it into an empire. Tracing the origins of our political concepts from Socrates to Plutarch to Cicero, Lane reminds us that the birth of politics was a story as much of individuals as ideas. Scouring the speeches of lawyers alongside the speculations of philosophers, and the reflections of ex-slaves next to the popular comedies and tragedies of the Greek and Roman stages, this book brings ancient ideas to life in unexpected ways.

Lane shows how the Greeks and Romans defined politics with distinctive concepts, vocabulary, and practices—all of which continue to influence politics and political aspirations around the world today. She focuses on eight political ideas from the Greco-Roman world that are especially influential today: justice, virtue, constitution, democracy, citizenship, cosmopolitanism, republic, and sovereignty. Lane also describes how the ancient formulations of these ideas often challenge widely held modern assumptions—for example, that it is possible to have political equality despite great economic inequality, or that political regimes can be indifferent to the moral character of their citizens.

A stimulating introduction to the origins of our political ideas and ideals, *The Birth of Politics* demonstrates how much we still have to learn from the political genius of the Greeks and Romans.

Melissa Lane is the Class of 1943 Professor of Politics at Princeton University. Her books include *Eco-Republic: What the Ancients Can Teach Us about Ethics, Virtue, and Sustainable Living* (Princeton) and *Plato's Progeny: How Plato and Socrates Still Captivate the Modern Mind*.

THE RISE AND FALL OF CLASSICAL GREECE

JOSIAH OBER

Lord Byron described Greece as great, fallen, and immortal, a characterization more apt than he knew. Through most of its long history, Greece was poor. But in the classical era, Greece was densely populated and highly urbanized. Many surprisingly healthy Greeks lived in remarkably big houses and worked for high wages at specialized occupations. Middle-class spending drove sustained economic growth. Classical wealth produced a stunning cultural efflorescence lasting hundreds of years.

Why did Greece reach such heights in the classical period—and why only then? And how, after “the Greek miracle” had endured for centuries, did the Macedonians defeat the Greeks, seemingly bringing an end to their glory? Drawing on a massive body of newly available data and employing novel approaches to evidence, Josiah Ober offers a major new history of classical Greece and an unprecedented account of its rise and fall.

Ober argues that Greece’s rise was no miracle but rather the result of political breakthroughs and economic development. The extraordinary emergence of citizen-centered city-states transformed Greece into a society that defeated the mighty Persian Empire. Yet Philip and Alexander of Macedon were able to beat the Greeks in the Battle of Chaeronea in 338 BCE, a victory enabled by the Macedonians’ appropriation of Greek innovations. After Alexander’s death, battle-hardened warlords fought ruthlessly over the remnants of his empire. But Greek cities remained populous and wealthy, their economy and culture surviving to be passed on to the Romans—and to us.

A compelling narrative filled with uncanny modern parallels, this is a book for anyone interested in how great civilizations are born and die.

- ◆ This book is based on evidence available on a new interactive website. To learn more, please visit <http://polis.stanford.edu/>.

Josiah Ober is the Mitsotakis Professor of Political Science and Classics at Stanford University. His books include *Democracy and Knowledge*, *Political Dissent in Democratic Athens*, *The Athenian Revolution*, and *Mass and Elite in Democratic Athens* (all Princeton). He lives in Palo Alto, California.

THE PRINCETON HISTORY OF THE ANCIENT WORLD

A MAJOR NEW HISTORY OF CLASSICAL GREECE—
HOW IT ROSE, HOW IT FELL,
AND WHAT WE CAN LEARN FROM IT



“An astonishing work. If you want to know what the fuss is about the ancient Greeks, this is the book to start with.”

—John Ma, University of Oxford

“This is a groundbreaking book on the ancient world. Displaying the narrative skill of a master historian, *The Rise and Fall of Classical Greece* is must reading.”

—Barry Strauss, author of *The Death of Caesar: The Story of History’s Greatest Assassination*

MAY

Cloth \$35.00T

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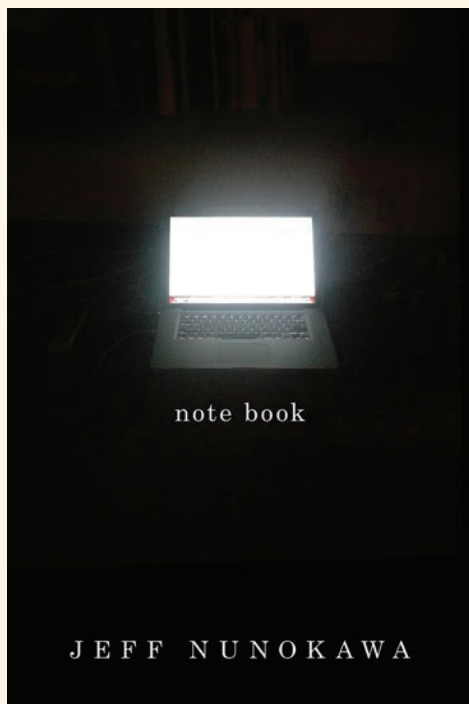
464 pages. 1 halftone.

14 line illus. 18 tables. 9 maps. 6 x 9.

ANCIENT HISTORY

PRESS.PRINCETON.EDU

A MOVING AND ORIGINAL LITERARY APPROACH
TO SELF-UNDERSTANDING THROUGH FACEBOOK—
AS FEATURED IN THE NEW YORKER



“Jeff Nunokawa has gathered a dedicated following on Facebook, where these notes have been a work-in-progress for some years. To see the selection collected here, it is clear why. Possessed of a singular, sympathetic intelligence, he has, in these crystalline meditations—these daily devotions—produced a work of strange and enduring wonder. Nunokawa is a teacher in the best sense: he shows how literature can weave itself into a life, and how a life might better be lived when enhanced by the supple, tensile strength that literature alone can offer.”

—Rebecca Mead, author of *My Life in Middlemarch*

MAY

Cloth \$29.95T

978-0-691-16649-0

336 pages. 95 color illus. 6 x 8.

LITERATURE ■ ESSAYS

PRESS.PRINCETON.EDU

NOTE BOOK

JEFF NUNOKAWA

*The hunger for a feeling of connection that
informs most everything I've written flows
from a common break in a common heart,
one I share with everyone I've ever really known.*

—Note Book

Every single morning since early 2007, Princeton English professor Jeff Nunokawa has posted a brief essay in the Notes section of his Facebook page. Often just a few sentences but never more than a few paragraphs, these compelling literary and personal meditations have raised the Facebook post to an art form, gained thousands of loyal readers, and been featured in the *New Yorker*. In *Note Book*, Nunokawa has selected some 250 of the most powerful and memorable of these essays, many accompanied by the snapshots originally posted alongside them. The result is a new kind of literary work for the age of digital and social media, one that reimagines the essay's efforts, at least since Montaigne, to understand our common condition by trying to understand ourselves.

Ranging widely, the essays often begin with a quotation from one of Nunokawa's favorite writers—George Eliot, Henry James, Gerard Manley Hopkins, W. H. Auden, Robert Frost, or James Merrill, to name a few. At other times, Nunokawa is just as likely to be discussing Joni Mitchell or Spanish soccer striker Fernando Torres.

Confessional and moving, enlightening and entertaining, *Note Book* is ultimately a profound reflection on loss and loneliness—and on the compensations to them that might be found through writing, literature, and connecting to others through social media.

Jeff Nunokawa teaches English literature at Princeton University and lives in Princeton and New York.

ON ELIZABETH BISHOP

COLM TÓIBÍN

In this book, novelist Colm Tóibín offers a deeply personal introduction to the work and life of one of his most important literary influences—the American poet Elizabeth Bishop. Ranging across her poetry, prose, letters, and biography, Tóibín creates a vivid picture of Bishop while also revealing how her work has helped shape his sensibility as a novelist and how her experiences of loss and exile resonate with his own. What emerges is a compelling double portrait that will intrigue readers interested in both Bishop and Tóibín.

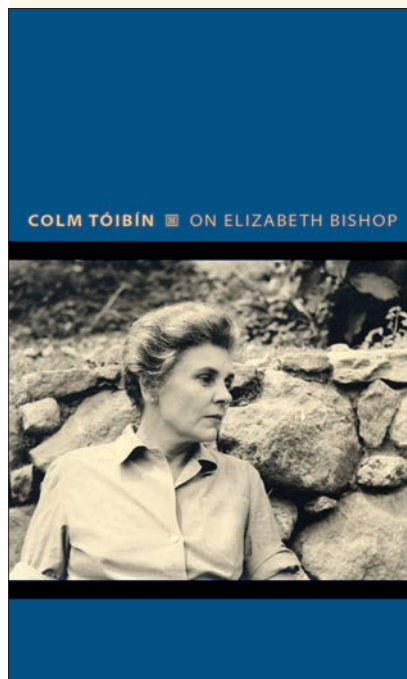
For Tóibín, the secret of Bishop's emotional power is in what she leaves unsaid. Exploring Bishop's famous attention to detail, Tóibín describes how Bishop is able to convey great emotion indirectly, through precise descriptions of particular settings, objects, and events. He examines how Bishop's attachment to the Nova Scotia of her childhood, despite her later life in Key West and Brazil, is related to her early loss of her parents—and how this connection finds echoes in Tóibín's life as an Irish writer who has lived in Barcelona, New York, and elsewhere.

Beautifully written and skillfully blending biography, literary appreciation, and descriptions of Tóibín's travels to Bishop's Nova Scotia, Key West, and Brazil, *On Elizabeth Bishop* provides a fresh and memorable look at a beloved poet even as it gives us a window into the mind of one of today's most acclaimed novelists.

Colm Tóibín is the author of eight novels, three of which have been shortlisted for the Man Booker Prize: *The Blackwater Lightship*, *The Master* (the *Los Angeles Times* Novel of the Year), and *The Testament of Mary*. His other novels include *Nora Webster* and *Brooklyn*. He is the Irene and Sidney B. Silverman Professor of the Humanities at Columbia University, a regular contributor to the *New York Review of Books*, and a contributing editor at the *London Review of Books*.

WRITERS ON WRITERS

A COMPELLING PORTRAIT OF A BELOVED POET
FROM ONE OF TODAY'S
MOST ACCLAIMED NOVELISTS



"Colm Tóibín—a sensitive critic as well as a novelist—has written an almost ideal introduction to the poetry of Elizabeth Bishop. This could become *the* introduction to Bishop for people who intend to read her for pleasure."

—Stephen Burt, author of *Close Calls with Nonsense: Reading New Poetry*

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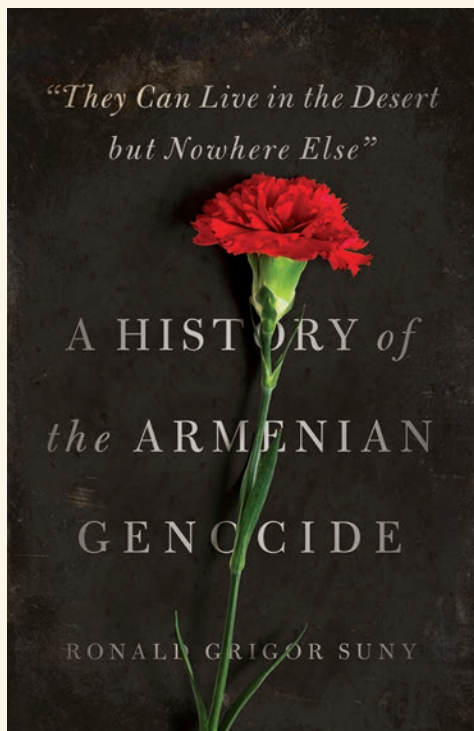
978-0-691-15411-4

216 pages. 4 1/2 x 7.

LITERATURE ■ MEMOIR

PRESS.PRINCETON.EDU

A DEFINITIVE HISTORY OF THE
20TH CENTURY'S FIRST MAJOR GENOCIDE
ON ITS 100TH ANNIVERSARY



"I don't think it's an exaggeration to say that there is no one else in the world who is better able than Ronald Suny to provide a one-volume history of the Armenian Genocide. This is the best book we have on the subject. The narrative is fluid, the writing is crystal clear and engaging, and the scholarship is impeccable. Scrupulously fair-minded, Suny deepens our understanding of the causes of the genocide without, however, rationalizing it."

—Norman Naimark, author of *Stalin's Genocides*

APRIL

Cloth \$35.00T

978-0-691-14730-7

408 pages. 25 halftones. 6 x 9.

HISTORY

PRESS.PRINCETON.EDU

"THEY CAN LIVE IN THE DESERT BUT NOWHERE ELSE"

A History of the Armenian Genocide

RONALD GRIGOR SUNY

Starting in early 1915, the Ottoman Turks began deporting and killing hundreds of thousands of Armenians in the first major genocide of the twentieth century. By the end of the First World War, the number of Armenians in what would become Turkey had been reduced by ninety percent—more than a million people. A century later, the Armenian Genocide remains controversial but relatively unknown, overshadowed by later slaughters and the chasm separating Turkish and Armenian versions of events. In this definitive narrative history, Ronald Suny cuts through nationalist myths, propaganda, and denial to provide an unmatched account of when, how, and why the atrocities of 1915–16 were committed.

As it lost territory during the war, the Ottoman Empire was becoming a more homogenous Turkic-Muslim state, but it still contained large non-Muslim communities, including the Christian Armenians. The Young Turk leaders of the empire believed that the Armenians were internal enemies secretly allied to Russia and plotting to win an independent state. Suny shows that the great majority of Armenians were in truth loyal subjects who wanted to remain in the empire. But the Young Turks, steeped in imperial anxiety and anti-Armenian bias, became convinced that the survival of the state depended on the elimination of the Armenians. Suny is the first to explore the psychological factors as well as the international and domestic events that helped lead to genocide.

Drawing on archival documents and eyewitness accounts, this is an unforgettable chronicle of a cataclysm that set a tragic pattern for a century of genocide and crimes against humanity.

Ronald Grigor Suny is the Charles Tilly Collegiate Professor of History at the University of Michigan, emeritus professor of political science at the University of Chicago, and a senior researcher at the National Research University–Higher School of Economics in St. Petersburg. He is the author of many books, including *The Soviet Experiment* and *Looking toward Ararat: Armenia in Modern History*, and the coeditor of *A Question of Genocide: Armenians and Turks at the End of the Ottoman Empire*. He lives in Ann Arbor, Michigan.

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

OUT OF ASHES

A New History of Europe in the Twentieth Century

KONRAD H. JARAUSCH

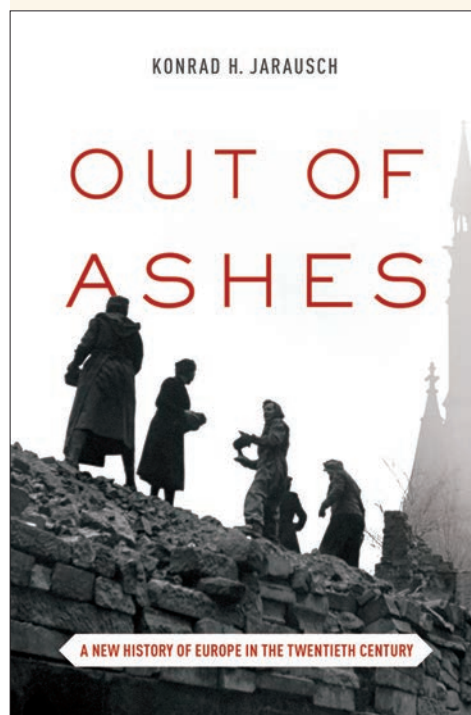
A sweeping history of twentieth-century Europe, *Out of Ashes* tells the story of an era of unparalleled violence and barbarity yet also of humanity, prosperity, and promise.

Konrad Jarausch describes how the European nations emerged from the nineteenth century with high hopes for continued material progress and proud of their imperial command over the globe, only to become embroiled in the bloodshed of World War I, which brought an end to their optimism and gave rise to competing democratic, communist, and fascist ideologies. He shows how the 1920s witnessed renewed hope and a flourishing of modernist art and literature, but how the decade ended in economic collapse and gave rise to a second, more devastating world war and genocide on an unprecedented scale. Jarausch further explores how Western Europe surprisingly recovered due to American help and political integration. Finally, he examines how the Cold War pushed the divided continent to the brink of nuclear annihilation, and how the unforeseen triumph of liberal capitalism came to be threatened by Islamic fundamentalism, global economic crisis, and an uncertain future.

A stunning achievement, *Out of Ashes* explores the paradox of the European encounter with modernity in the twentieth century, shedding new light on why it led to cataclysm, inhumanity, and self-destruction, but also social justice, democracy, and peace.

Konrad H. Jarausch is the Lurcy Professor of European Civilization at the University of North Carolina, Chapel Hill. His many books include *Reluctant Accomplice: A Wehrmacht Soldier's Letters from the Eastern Front* (Princeton) and *After Hitler: Recivilizing Germans, 1945–1995*. He lives in Chapel Hill.

A SWEEPING HISTORY OF 20TH-CENTURY EUROPE
THAT EXAMINES ITS UNPRECEDENTED
DESTRUCTION—AND ABIDING PROMISE



"*Out of Ashes* is an extremely well-conceived and highly ambitious book. What Jarausch has pulled off is a fully balanced, elegantly integrated history of a long twentieth century in which the pre-1914 era and the post-1989 years are vital parts of the interpretation."

—Peter Fritzsche, author of *Life and Death in the Third Reich*

JUNE

Cloth \$39.50T

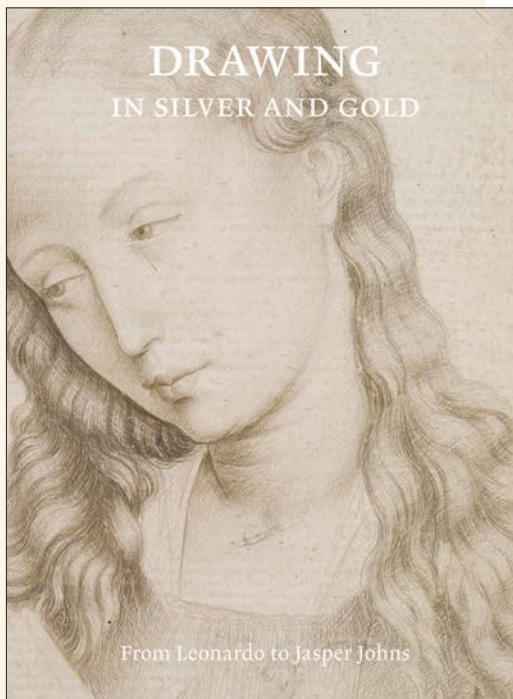
978-0-691-15279-0

744 pages. 31 halftones. 12 maps. 6 x 9.

HISTORY

PRESS.PRINCETON.EDU

A BEAUTIFUL NEW HISTORY OF AN EVOCATIVE
AND ENDURING DRAWING TECHNIQUE



Exhibition schedule:

National Gallery of Art
May 3–July 26, 2015

The British Museum
September 10–December 6, 2015

MAY

Cloth \$49.50T
978-0-691-16612-4
272 pages. 175 color illus.
7 3/4 x 11.

ART

Published in association with the
National Gallery of Art, Washington

PRESS.PRINCETON.EDU

DRAWING IN SILVER AND GOLD

From Leonardo to Jasper Johns

HUGO CHAPMAN & STACEY SELL

With contributions by Giulia Bartrum,
Kimberly Schenck, An Van Camp, Bruce Weber
& John Oliver Hand

From the Middle Ages to the present, master draftsmen have used the technique of metalpoint to create some of the most beautiful and technically accomplished drawings in the history of art. *Drawing in Silver and Gold* examines the history of this evocative medium, in which a metal stylus is used on a specially prepared surface to create lines of astonishing delicacy.

This beautifully illustrated book examines the practice of metalpoint over six centuries, in the work of artists ranging from Leonardo, Dürer, and Rembrandt to Otto Dix and Jasper Johns. A team of authors—curators, conservators, scientists, and a scholar of American art—address variations in technique across time and between different schools, incorporating new scientific analysis, revealing patterns of use, and providing a rare demonstration of the medium's range and versatility. They reappraise famous metalpoints of the Renaissance and shed new light on infrequently studied periods, such as the seventeenth century and the Victorian silverpoint revival.

A new examination of an exquisite but not thoroughly understood medium, *Drawing in Silver and Gold* offers fresh interpretations of a practice central to the history of drawing and will serve as the most authoritative reference on metalpoints for years to come.

At the British Museum, **Hugo Chapman** is keeper and curator of Italian and French drawings, **Giulia Bartrum** is assistant keeper of German and Swiss prints and drawings, and **An Van Camp** is assistant keeper of Dutch and Flemish prints and drawings. At the National Gallery of Art, **Stacey Sell** is associate curator of old master prints and drawings, **Kimberly Schenck** is head of paper conservation, and **John Oliver Hand** is curator of northern Renaissance paintings. **Bruce Weber** is former senior curator of nineteenth- and early twentieth-century art at the National Academy Museum in New York.

PLEASURE AND PIETY

The Art of Joachim Wtewael

THE FIRST MAJOR ENGLISH-LANGUAGE SURVEY
OF THE ARTIST'S LIFE AND WORK

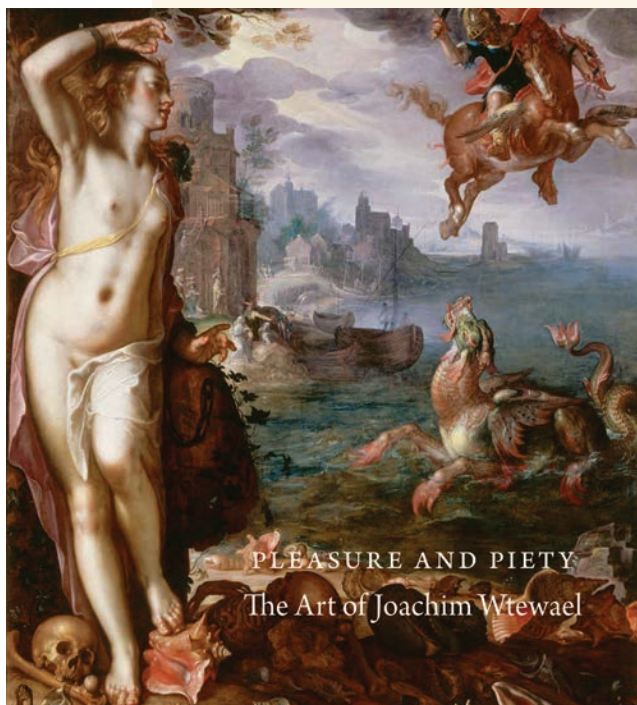
ARTHUR K. WHELOCK JR.,
LIESBETH M. HELMUS &
JAMES CLIFTON

With contributions by
Anne W. Lowenthal & Stijn Alsteens

A brilliant colorist and masterful storyteller, Dutch mannerist Joachim Wtewael (1566–1638) wielded a remarkably skilled brush and the technical ability to show it off in intricate compositions. He took inspiration from a wide range of biblical and mythological sources to create imaginative, often quite erotic scenes. While such pictures were prized in Wtewael's time, more recently they were hidden away—behind other paintings, in leather folders on bookshelves, and in the reserves of great museums. This richly illustrated volume brings together more than fifty of Wtewael's finest paintings and drawings, from a small jewel-like picture on copper depicting Mars and Venus to large-scale mannerist showpieces such as *The Martyrdom of Saint Sebastian* and *Perseus and Andromeda*.

A pillar of the Utrecht community, Wtewael was engaged in business, religion, and politics as well as art. He adopted the exotic mannerist style, full of artifice and inventive manipulation, and continued to be fascinated by the challenge of creating sophisticated variations well into his maturity, when other Dutch artists had turned to naturalism. This book explores Wtewael's amazingly refined and detailed paintings and drawings, shedding light on his reputation, his life, and the conflicted times—marked by iconoclasm and strife—in which he thrived.

Arthur K. Wheelock Jr. is curator of northern baroque paintings at the National Gallery of Art, Washington. **Liesbeth M. Helmus** is curator of old master paintings, drawings, and sculpture at the Centraal Museum Utrecht. **James Clifton** is director of the Sarah Campbell Blaffer Foundation and curator of Renaissance and baroque painting at the Museum of Fine Arts, Houston. **Anne W. Lowenthal** is an independent scholar and authority on Joachim Wtewael. **Stijn Alsteens** is curator of drawings and prints at the Metropolitan Museum of Art, New York.



PLEASURE AND PIETY
The Art of Joachim Wtewael

Exhibition schedule:

Centraal Museum Utrecht

February 21–May 25, 2015

National Gallery of Art, Washington

June 28–October 4, 2015

Sarah Campbell Blaffer Foundation at the Museum of Fine Arts, Houston

November 1, 2015–January 31, 2016

MARCH

Cloth \$65.00T

978-0-691-16606-3

236 pages. 170 color illus.

9 5/8 x 11.

ART

Published in association with the
National Gallery of Art, Washington

PRESS.PRINCETON.EDU

A SUPERBLY ILLUSTRATED HISTORY OF
FIVE CENTURIES OF JEWISH MANUSCRIPTS

SKIES OF PARCHMENT | SEAS OF INK
JEWISH ILLUMINATED MANUSCRIPTS



"There is simply no other book like this. Enlightening, accessible, and superbly written in a clear and jargon-free style, it makes a much-needed contribution to our knowledge of Jewish visual and literary cultures. It will no doubt be a coveted volume."

—Maya Balakirsky Katz, Touro College

MAY

Cloth \$60.00T

978-0-691-16524-0

288 pages. 278 color illus.

11 halftones. 8 1/2 x 11.

ART ■ JEWISH STUDIES

PRESS.PRINCETON.EDU

SKIES OF PARCHMENT, SEAS OF INK

Jewish Illuminated Manuscripts

EDITED BY
MARC MICHAEL EPSTEIN

With contributions by Eva Frojmovic,
Jenna Siman Jacobs, Hartley Lachter, Shalom Sabar,
Raymond P. Scheindlin, Ágnes Vető, Susan Vick,
Barbara Wolff & Diane Wolfthal

The love of books in the Jewish tradition extends back over many centuries, and the ways of interpreting those books are as myriad as the traditions themselves. *Skies of Parchment, Seas of Ink* offers the first full survey of Jewish illuminated manuscripts, ranging from their origins in the Middle Ages to the present day. Featuring some of the most beautiful examples of Jewish art of all time—including hand-illustrated versions of the Bible, the Haggadah, the prayer book, marriage documents, and other beloved Jewish texts—the book introduces readers to the history of these manuscripts and their interpretation.

Edited by Marc Michael Epstein with contributions from leading experts, this sumptuous volume shows how Jewish aesthetic tastes and iconography overlapped and diverged with those of Christianity, Islam, and other traditions. Featured manuscripts were commissioned by Jews and produced by Jews and non-Jews, and represent Eastern and Western perspectives and the views of pietistic and liberal communities across the Diaspora.

Magnificently illustrated by pages from hundreds of manuscripts, many previously unpublished or rarely seen, *Skies of Parchment, Seas of Ink* presents the books of the People of the Book as never before.

Marc Michael Epstein is professor of religion at Vassar College.

Eva Frojmovic is lecturer in the history of art at the University of Leeds.

Jenna Siman Jacobs is curatorial manager at the Museum of Contemporary Art San Diego.

Hartley Lachter is the Berman Chair in Jewish Studies at Lehigh University.

Shalom Sabar is professor of folklore and the arts at the Hebrew University of Jerusalem.

Raymond P. Scheindlin is professor of medieval Hebrew literature at the Jewish Theological Seminary.

Ágnes Vető teaches religion at Vassar College.

Susan Vick is associate professor of art history at the University of Maryland.

Barbara Wolff is a New York-based illuminator of manuscripts.

Diane Wolfthal is the David and Caroline Minter Chair in the Humanities at Rice University.

LOCUS OF AUTHORITY

The Evolution of Faculty Roles in
the Governance of Higher Education

WILLIAM G. BOWEN &
EUGENE M. TOBIN

Locus of Authority argues that every issue facing today's colleges and universities, from stagnant degree completion rates to worrisome cost increases, is exacerbated by a century-old system of governance that desperately requires change. While prior studies have focused on boards of trustees and presidents, few have looked at the place of faculty within the governance system. Specifically addressing faculty roles in this structure, William G. Bowen and Eugene M. Tobin ask: do higher education institutions have what it takes to reform effectively from within?

Bowen and Tobin use case studies of four very different institutions—the University of California, Princeton University, Macalester College, and the City University of New York—to demonstrate that college and university governance has capably adjusted to the necessities of the moment and that governance norms and policies should be assessed in the context of historical events. The authors examine how faculty roles have evolved since colonial days to drive change but also to stand in the way of it. Bowen and Tobin make the case that successful reform depends on the artful consideration of technological, financial, and cultural developments, such as the explosion in online learning. Stressing that they do not want to diminish faculty roles but to facilitate their most useful contributions, Bowen and Tobin explore whether departments remain the best ways through which to organize decision making and if the concepts of academic freedom and shared governance need to be sharpened and redefined.

Locus of Authority shows that the consequences of not addressing college and university governance are more than the nation can afford.

William G. Bowen is president emeritus of the Andrew W. Mellon Foundation and Princeton University. He is also founding chairman of Ithaka Harbors, Inc. **Eugene M. Tobin** is senior program officer for higher education and scholarship in the humanities at the Andrew W. Mellon Foundation and a former president of Hamilton College. (See page 70 for more by William G. Bowen.)

Copublished with

I T H A K A

WHY COLLEGES AND UNIVERSITIES SHOULD
CHANGE THEIR GOVERNANCE SYSTEMS—
AND WHAT COULD HAPPEN IF THEY DON'T

William G. Bowen
Eugene M. Tobin

LOCUS of AUTHORITY

*The Evolution of Faculty
Roles in the Governance
of Higher Education*

"Withering critiques of the academy appear daily, predicting the end of higher education as we know it. Bowen and Tobin step into this fray with insight, deep knowledge of the field, data, and a good eye for history. Their eminently sensible book convincingly argues that higher education institutions have evolved over time in response to pressures and challenges, and that they are capable of continuing this evolution."
—Lawrence S. Bacow, president emeritus, Tufts University

FEBRUARY

Cloth \$29.95T

978-0-691-16642-1

448 pages. 2 line illus. 5 1/2 x 8 1/2.

EDUCATION ■ PUBLIC POLICY

PRESS.PRINCETON.EDU

HOW THE RIGHT BUSINESS PRACTICES
LEAD TO THE BEST RESULTS



"This book makes an important contribution on the role of process. Managers should read this valuable work."

—Max H. Bazerman, author of *The Power of Noticing*

"*The Process Matters* articulates the importance of process in managers' effective implementation of organizational decisions and policies, including successful organizational change. Engaging and authoritative, as well as rich in illustrative examples, this book will become the leading reference for years to come."

—Roderick Kramer, Stanford University

MAY

Cloth \$27.95T

978-0-691-16505-9

248 pages. 10 tables. 5 1/2 x 8 1/2.

BUSINESS ■ PSYCHOLOGY

PRESS.PRINCETON.EDU

THE PROCESS MATTERS

JOEL BROCKNER

In business we live in a results-oriented world. Our focus on growth is laudable for its clarity, but one of its downsides is that firms can lose sight of the process: how business gets done and the individuals or employees through whom results are achieved. This leads to compromised decisions and unethical behavior. It is not just what we accomplish that matters but also how we accomplish it.

In *The Process Matters*, Joel Brockner shows that managers have to do more than just meet targets and goals. They have to reach those ends in the right ways—with input, consistency, and accountability—if they want to effectively lead and manage in their organizations. Brockner discusses what goes into the right process, how it leads to better outcomes, why it is easier said than done, and how to overcome obstacles along the way.

Brockner demonstrates that a high-quality process often costs little, and may not even require a great deal of time. In light of these facts, he considers the puzzling question of why good business practice doesn't happen more often. Brockner draws from various real-life workplace examples—from Jay Leno's departure (twice) from his TV show, to the improvement of shooting accuracy in the US Navy, to the surprising results of layoffs in Canada. He also factors in a wide swath of studies to examine such issues as the importance of perceived fairness in the process, the management of organizational change, and the encouragement of a strong sense of self in those involved in decisions—in short, the ways that managers can bring out the best in their people.

Relevant to anyone who is in a managerial position—from the CEO on down—*The Process Matters* proves that seemingly simple differences in process can go a long way.

Joel Brockner is the Phillip Hettleman Professor of Business at the Columbia Business School. He is the author of *A Contemporary Look at Organizational Justice: Multiplying Insult Times Injury* and *Self-Esteem at Work*, and the coauthor of *Entrapment in Escalating Conflicts*.

THE GLOBALIZATION OF INEQUALITY

FRANÇOIS BOURGUIGNON

Translated by Thomas Scott-Railton

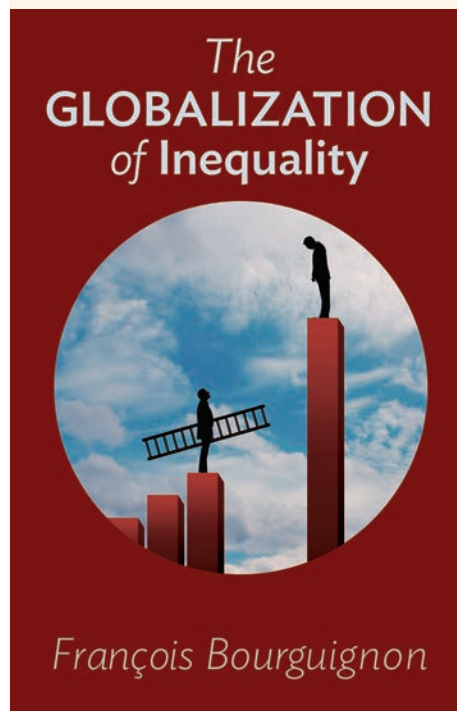
In *The Globalization of Inequality*, distinguished economist and policymaker François Bourguignon examines the complex and paradoxical links between a vibrant world economy that has raised the living standard of over half a billion people in emerging nations such as China, India, and Brazil, and the exponentially increasing inequality within countries. Exploring globalization's role in the evolution of inequality, Bourguignon takes an original and truly international approach to the decrease in inequality *between* nations, the increase in inequality *within* nations, and the policies that might moderate inequality's negative effects.

Demonstrating that in a globalized world it becomes harder to separate out the factors leading to domestic or international inequality, Bourguignon examines each trend through a variety of sources, and looks at how these inequalities sometimes balance each other out or reinforce one another. Factoring in the most recent economic crisis, Bourguignon investigates why inequality in some countries has dropped back to levels that have not existed for several decades, and he asks if these should be considered in the context of globalization or if they are in fact specific to individual nations. Ultimately, Bourguignon argues that it will be up to countries in the developed and developing world to implement better policies, even though globalization limits the scope for some potential redistributive instruments.

An informed and original contribution to the current debates about inequality, this book will be essential reading for anyone who is interested in the future of the world economy.

François Bourguignon is a professor at the Collège de France, Paris, and former director at the Paris School of Economics. From 2003 to 2007 he was chief economist and senior vice president of the World Bank. Bourguignon was made a Chevalier of the National Order of the Legion of Honor in 2010.

WHY NATIONAL AND INTERNATIONAL
EQUALITY MATTER AND WHAT WE
CAN DO TO ENSURE A FAIRER WORLD



“This book deals with extremely topical issues related to inequality. Bourguignon is exceptionally well-qualified to provide an overview of recent trends, tease out the implications of the global-versus-national perspective on inequality, and seriously examine the factors at work as well as promising policy responses.”

—Brian Nolan, University of Oxford

“An excellent treatment of a very important subject from a leading researcher in the field.”

—Stephan Klasen, University of Göttingen

MAY

Cloth \$27.95T

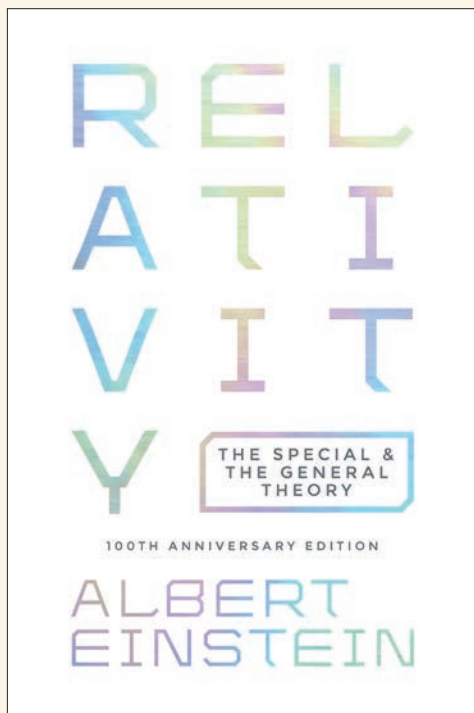
978-0-691-16052-8

216 pages. 5 1/2 x 8 1/2.

POPULAR ECONOMICS ■ PUBLIC POLICY

PRESS.PRINCETON.EDU

A HANDSOME ANNIVERSARY EDITION OF
EINSTEIN'S CELEBRATED BOOK ON RELATIVITY



"This book will play a vital role in introducing new readers to Einstein and the many fascinating questions surrounding his work."

—Richard Staley, author of *Einstein's Generation: The Origins of the Relativity Revolution*

RELATIVITY

The Special and the General Theory
100th Anniversary Edition

ALBERT EINSTEIN

Edited by Hanoch Gutfreund & Jürgen Renn

After completing the final version of his general theory of relativity in November 1915, Albert Einstein wrote a book about relativity for a popular audience. His intention was "to give an exact insight into the theory of relativity to those readers who, from a general scientific and philosophical point of view, are interested in the theory, but who are not conversant with the mathematical apparatus of theoretical physics." The book remains one of the most lucid explanations of the special and general theories ever written. In the early 1920s alone, it was translated into ten languages, and fifteen editions in the original German appeared over the course of Einstein's lifetime.

This new edition of Einstein's celebrated book features an authoritative English translation of the text along with an introduction and a reading companion by Hanoch Gutfreund and Jürgen Renn that examines the evolution of Einstein's thinking and casts his ideas in a broader present-day context. A special chapter explores the history of and the stories behind the early foreign-language editions in light of the reception of relativity in different countries. This edition also includes a survey of the introductions from those editions, covers from selected early editions, a letter from Walther Rathenau to Einstein discussing the book, and a revealing sample from Einstein's handwritten manuscript.

Published on the hundredth anniversary of general relativity, this handsome edition of Einstein's famous book places the work in historical and intellectual context while providing invaluable insight into one of the greatest scientific minds of all time.

Hanoch Gutfreund is professor emeritus of theoretical physics at the Hebrew University of Jerusalem, where he is also the academic director of the Albert Einstein Archives. He lives in Jerusalem. **Jürgen Renn** is a director at the Max Planck Institute for the History of Science in Berlin. His books include *The Genesis of General Relativity*. He lives in Berlin. (See page 30 for more by Hanoch Gutfreund and Jürgen Renn.)

MAY

Cloth \$26.95T

978-0-691-16633-9

312 pages. 14 halftones. 5 1/2 x 8 1/2.

POPULAR SCIENCE ■ PHYSICS

PRESS.PRINCETON.EDU

CREATING SYMMETRY

The Artful Mathematics of Wallpaper Patterns

FRANK A. FARRIS

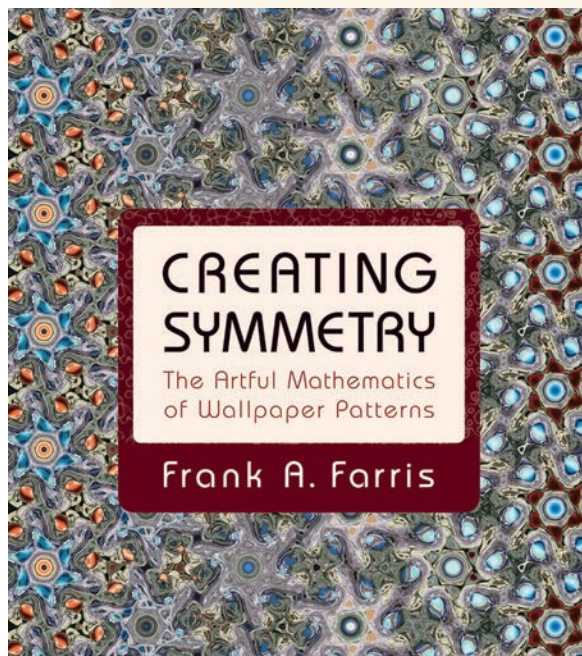
This lavishly illustrated book provides a hands-on, step-by-step introduction to the intriguing mathematics of symmetry. Instead of breaking up patterns into blocks—a sort of potato-stamp method—Frank Farris offers a completely new waveform approach that enables you to create an endless variety of rosettes, friezes, and wallpaper patterns: dazzling art images where the beauty of nature meets the precision of mathematics.

Featuring more than 100 stunning color illustrations and requiring only a modest background in math, *Creating Symmetry* begins by addressing the enigma of a simple curve, whose curious symmetry seems unexplained by its formula. Farris describes how complex numbers unlock the mystery, and how they lead to the next steps on an engaging path to constructing waveforms. He explains how to devise waveforms for each of the 17 possible wallpaper types, and then guides you through a host of other fascinating topics in symmetry, such as color-reversing patterns, three-color patterns, polyhedral symmetry, and hyperbolic symmetry. Along the way, Farris demonstrates how to marry waveforms with photographic images to construct beautiful symmetry patterns as he gradually familiarizes you with more advanced mathematics, including group theory, functional analysis, and partial differential equations. As you progress through the book, you'll learn how to create breathtaking art images of your own.

Fun, accessible, and challenging, *Creating Symmetry* features numerous examples and exercises throughout, as well as engaging discussions of the history behind the mathematics presented in the book.

Frank A. Farris teaches mathematics at Santa Clara University. He is a former editor of *Mathematics Magazine*, a publication of the Mathematical Association of America. He lives in San Jose, California.

A STEP-BY-STEP ILLUSTRATED INTRODUCTION TO
THE ASTOUNDING MATHEMATICS OF SYMMETRY



“Creating Symmetry is a stunning fusion of mathematics and art, applying the mathematics of symmetry to create beautiful patterns. But the beauty runs far deeper: the mathematical insights involved are supremely beautiful in their own right. If you want to know why there are exactly 17 basic types of wallpaper, what their structure is, and which other mathematical ideas are related, or if you just want to see some amazing pictures, look no further.”

—Ian Stewart, author of *Professor Stewart’s Casebook of Mathematical Mysteries*

JULY

Cloth \$35.00T

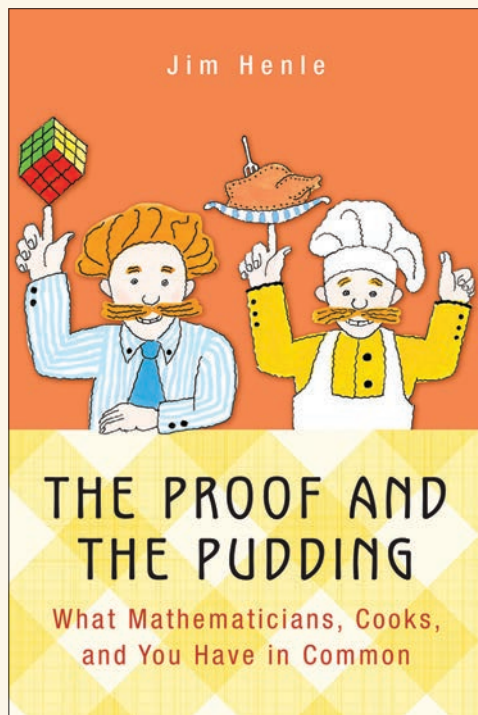
978-0-691-16173-0

256 pages. 103 color illus. 9 x 10.

POPULAR MATHEMATICS

PRESS.PRINCETON.EDU

TANTALIZING MATH PUZZLES AND COOKING
RECIPES THAT SHOW HOW MATHEMATICAL
THINKING IS LIKE THE CULINARY ARTS



"The Proof and the Pudding challenges mathematicians to be chefs and chefs to be mathematicians. Using a pencil in his mathematical kitchen, Henle explores the natural connections between mathematics and cooking and reveals how both can be creative, fun, and memorable. So pull up a plate and enjoy helping after helping of insight into gastronomy, math, and problem solving."

—Tim Chartier, author of *Math Bytes*

THE PROOF AND THE PUDDING

What Mathematicians, Cooks,
and You Have in Common

JIM HENLE

Tie on your apron and step into Jim Henle's kitchen as he demonstrates how two equally savory pursuits—cooking and mathematics—have more in common than you realize. A tasty dish for gourmets of popular math, *The Proof and the Pudding* offers a witty and flavorful blend of mathematical treats and gastronomic delights that reveal how life in the mathematical world is tantalizingly similar to life in the kitchen.

Take a tricky Sudoku puzzle and a cake that fell. Henle shows you that the best way to deal with cooking disasters is also the best way to solve math problems. Or take an L-shaped billiard table and a sudden desire for Italian potstickers. He explains how preferring geometry over algebra (or algebra over geometry) is just like preferring a California roll to chicken tikka masala. Do you want to know why playfulness is rampant in math and cooking? Or how to turn stinky cheese into an awesome ice cream treat? It's all here: original math and original recipes plus the mathematical equivalents of vegetarianism, Asian fusion, and celebrity chefs.

Pleasurable and lighthearted, *The Proof and the Pudding* is a feast for the intellect as well as the palate.

Jim Henle is the Myra M. Sampson Professor of Mathematics and Statistics at Smith College. His books include *Sweet Reason: A Field Guide to Modern Logic* and *Calculus: The Language of Change*. He lives in Northampton, Massachusetts.

MAY

Cloth \$26.95T

978-0-691-16486-1

184 pages. 229 duotones. 6 x 9.

POPULAR MATHEMATICS ■ COOKING

PRESS.PRINCETON.EDU

SINGLE DIGITS

In Praise of Small Numbers

MARC CHAMBERLAND

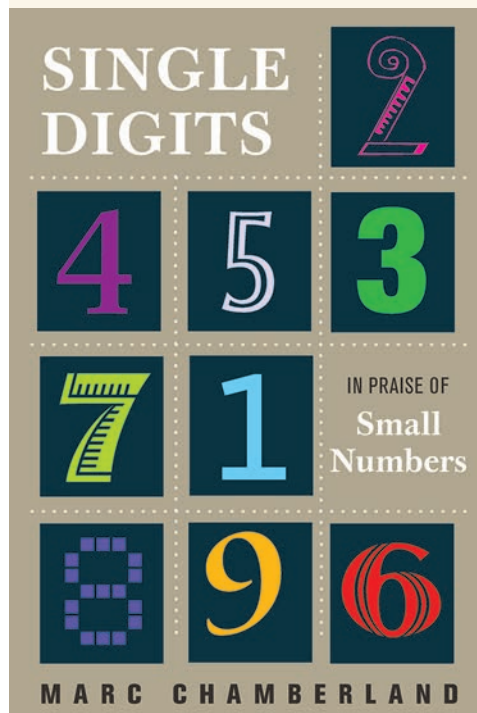
The numbers one through nine have remarkable mathematical properties and characteristics. For instance, why do eight perfect card shuffles leave a standard deck of cards unchanged? Are there really “six degrees of separation” between all pairs of people? And how can any map need only four colors to ensure that no regions of the same color touch? In *Single Digits*, Marc Chamberland takes readers on a fascinating exploration of small numbers, from one to nine, looking at their history, applications, and connections to various areas of mathematics, including number theory, geometry, chaos theory, numerical analysis, and mathematical physics.

Each chapter focuses on a single digit, beginning with easy concepts that become more advanced as the chapter progresses. Chamberland covers vast numerical territory, such as illustrating the ways that the number three connects to chaos theory, an unsolved problem involving Egyptian fractions, the number of guards needed to protect an art gallery, and problematic election results. He considers the role of the number seven in matrix multiplication, the Transylvania lottery, synchronizing signals, and hearing the shape of a drum. Throughout, he introduces readers to an array of puzzles, such as perfect squares, the four hats problem, Strassen multiplication, Catalan’s conjecture, and so much more. The book’s short sections can be read independently and digested in bite-sized chunks—especially good for learning about the Ham Sandwich Theorem and the Pizza Theorem.

Appealing to high school and college students, professional mathematicians, and those mesmerized by patterns, this book shows that single digits offer a plethora of possibilities that readers can count on.

Marc Chamberland is the Myra Steele Professor of Natural Science and Mathematics at Grinnell College. He is the creator of the YouTube channel *Tipping Point Math*, which strives to make mathematics accessible to everyone.

THE REMARKABLE PROPERTIES OF
THE NUMBERS ONE THROUGH NINE



“A veritable potpourri of mathematical factoids, *Single Digits* will provide you with conversational ammunition for all manner of nerdy gatherings.”

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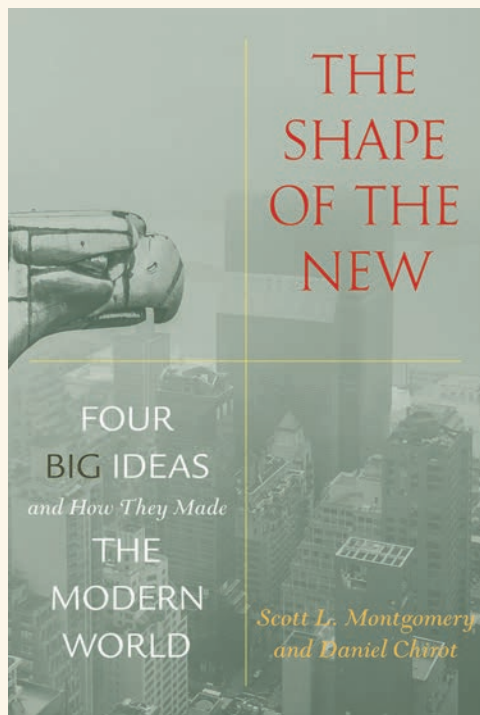
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THE SHAPE OF THE NEW

Four Big Ideas and How They Made the Modern World

SCOTT L. MONTGOMERY &
DANIEL CHIROT

This panoramic book tells the story of how revolutionary ideas from the Enlightenment about freedom, equality, evolution, and democracy have reverberated through modern history and shaped the world as we know it today.

A testament to the enduring power of ideas, *The Shape of the New* offers unforgettable portraits of Adam Smith, Thomas Jefferson, Alexander Hamilton, Charles Darwin, and Karl Marx—heirs of the Enlightenment who embodied its highest ideals about progress—and shows how their thoughts, over time and in the hands of their followers and opponents, transformed the very nature of our beliefs, institutions, economies, and politics. Yet these ideas also hold contradictions. They have been used in the service of brutal systems such as slavery and colonialism, been appropriated and twisted by monsters like Stalin and Hitler, and provoked reactions against the Enlightenment's legacy by Islamic Salafists and the Christian Religious Right.

The Shape of the New argues that it is impossible to understand the ideological and political conflicts of our own time without familiarizing ourselves with the history and internal tensions of these world-changing ideas. With passion and conviction, it exhorts us to recognize the central importance of these ideas as historical forces and pillars of the Western humanistic tradition. It makes the case that to read the works of the great thinkers is to gain invaluable insights into the ideas that have shaped how we think and what we believe.

Scott L. Montgomery is an affiliate faculty member in the Henry M. Jackson School of International Studies at the University of Washington. His books include *Does Science Need a Global Language?: English and the Future of Research*. **Daniel Chirot** is the Herbert J. Ellison Professor of Russian and Eurasian Studies at the University of Washington. His books include *Why Not Kill Them All?: The Logic and Prevention of Mass Political Murder* (Princeton). They both live in Seattle.

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INTELLECTUAL HISTORY

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MADNESS IN CIVILIZATION

A Cultural History of Insanity, from the Bible to Freud,
from the Madhouse to Modern Medicine

ANDREW SCULL

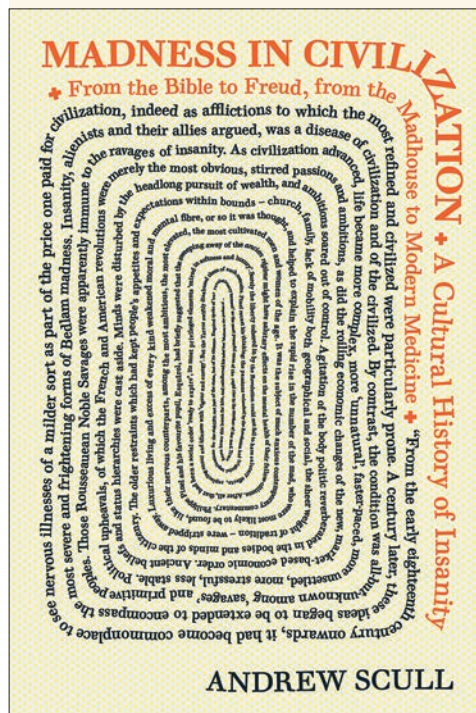
The loss of reason, a sense of alienation from the common-sense world we all like to imagine we inhabit, the shattering emotional turmoil that seizes hold and won't let go—these are some of the traits we associate with madness. Today, mental disturbance is most commonly viewed through a medical lens, but societies have also sought to make sense of it through religion or the supernatural, or by constructing psychological or social explanations in an effort to tame the demons of unreason. *Madness in Civilization* traces the long and complex history of this affliction and our attempts to treat it.

Beautifully illustrated throughout, *Madness in Civilization* takes readers from antiquity to today, painting a vivid and often harrowing portrait of the different ways that cultures around the world have interpreted and responded to the seemingly irrational, psychotic, and insane. From the Bible to Sigmund Freud, from exorcism to mesmerism, from Bedlam to Victorian asylums, from the theory of humors to modern pharmacology, the book explores the manifestations and meanings of madness, its challenges and consequences, and our varied responses to it. It also looks at how insanity has haunted the imaginations of artists and writers and describes the profound influence it has had on the arts, from drama, opera, and the novel to drawing, painting, and sculpture.

Written by one of the world's preeminent historians of psychiatry, *Madness in Civilization* is a panoramic history of the human encounter with unreason.

Andrew Scull is Distinguished Professor of Sociology and Science Studies at the University of California, San Diego. His books include *Hysteria: The Disturbing History*, *Madhouse: A Tragic Tale of Megalomania and Modern Medicine*, and *Masters of Bedlam: The Transformation of the Mad-Doctoring Trade* (Princeton). He lives in La Jolla, California.

A BEAUTIFULLY ILLUSTRATED HISTORY OF
THE HUMAN ENCOUNTER WITH UNREASON



"A wonderful book, fascinating and beautifully written, with Scull's usual verve and erudition. *Madness in Civilization* explores how ancient and medieval societies coped with psychosis and shows that, brain imaging and psychotropic drugs notwithstanding, modern psychiatry has much to learn from these societies."

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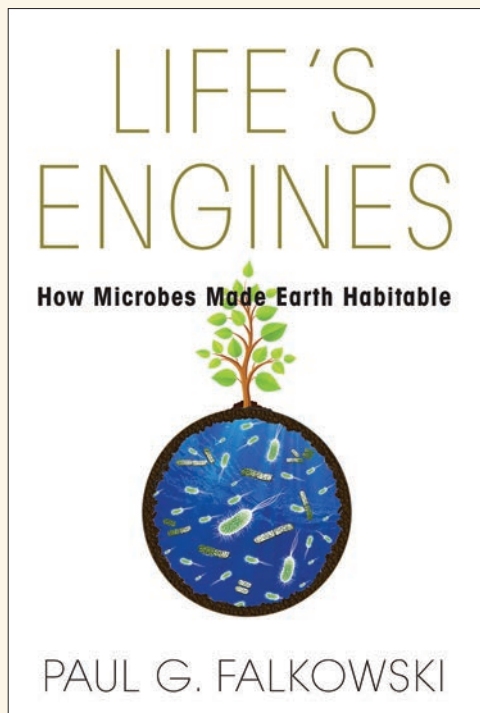
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THE MARVELOUS MICROBES
THAT MADE LIFE ON EARTH POSSIBLE
AND SUPPORT OUR VERY EXISTENCE



"In this brilliant book, Falkowski explores the hidden world of microbes from the intertwined perspectives of a researcher deeply versed in both Earth and life sciences, taking us on an epic journey from the origins of life to the birth of our own species. *Life's Engines* is an engaging, revelatory read."

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PAUL G. FALKOWSKI

For almost four billion years, microbes had the primordial oceans all to themselves. The stewards of Earth, these organisms transformed the chemistry of our planet to make it habitable for plants, animals, and us. *Life's Engines* takes readers deep into the microscopic world to explore how these marvelous creatures made life on Earth possible—and how human life today would cease to exist without them.

Paul Falkowski looks "under the hood" of microbes to find the engines of life, the actual working parts that do the biochemical heavy lifting for every living organism on Earth. With insight and humor, he explains how these miniature engines are built—and how they have been appropriated by and assembled like Lego sets within every creature that walks, swims, or flies. Falkowski shows how evolution works to maintain this core machinery of life, and how we and other animals are veritable conglomerations of microbes.

A vibrantly entertaining book about the microbes that support our very existence, *Life's Engines* will inspire wonder about these elegantly complex nanomachines that have driven life since its origin. It also issues a timely warning about the dangers of tinkering with that machinery to make it more "efficient" at meeting the ever-growing demands of humans in the coming century.

Paul G. Falkowski holds the Bennett L. Smith Chair in Business and Natural Resources at Rutgers University, where he studies how microbes have shaped the history of Earth. He lives in Princeton, New Jersey.

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