

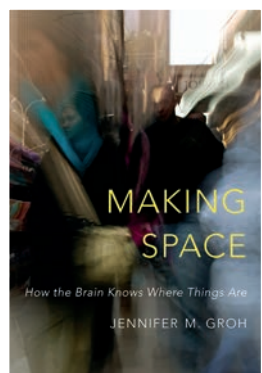


Harvard



Harvard University Press

Science  
2015



## *Making Space*

*How the Brain Knows Where Things Are*

**Jennifer M. Groh**

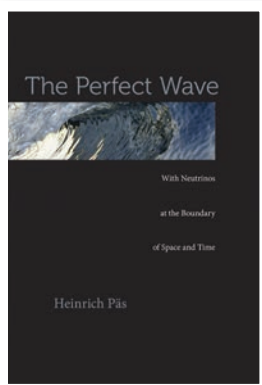
“Groh deftly elucidates the mental computations that allow understanding of location and boundaries, interweaving well-judged snippets of history. The mechanisms, such as the brain’s updates on eye movements, are fascinating—as is Groh’s revelation that neurons can ‘do double duty’ in tasks such as spatial navigation and memory.”

—**Barbara Kiser, *Nature***

“*Making Space* purports to explain how . . . spatial orientation works. But Jennifer Groh’s wonderful book offers a much broader insight into how the senses we think of as separate gather information on our environment, and how nerves and the brain process the information . . . It’s a fascinating subject.”

—**Jeff Hecht, *New Scientist***

Belknap Press 2014 12 color illus., 13 halftones, 71 line illus.  
240 pp. cloth \$27.95 • £20.95 9780674863217



## *The Perfect Wave*

*With Neutrinos at the Boundary of Space and Time*

**Heinrich Päs**

★ **A *Guardian* Top Science Book**

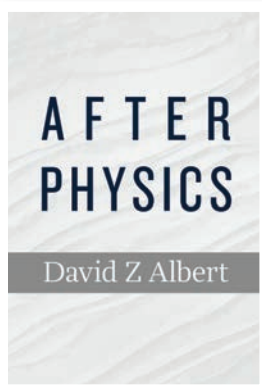
“The ghostly neutrino—a mutable, almost massless particle that can pass through dense substances—stars in this scientific history. Theoretical physicist Heinrich Päs surfs the decades of dazzling research since Wolfgang Pauli first posited the particle in 1930. Päs revisits key theorists such as Ettore Majorana, and lays out the work of groundbreaking labs from Los Alamos in New Mexico, where Fred Reines and Clyde Cowan first detected neutrinos in the early 1950s, to today’s vast IceCube neutrino observatory in Antarctica.”

—***Nature***

“*The Perfect Wave* [is] a pleasant and provocative way to gain insight into the way physicists think, and into the way the universe (probably) works.”

—**John Gribbin, *Wall Street Journal***

2014 62 halftones, 2 tables 312 pp. cloth \$26.95 • £19.95  
9780674725010



## *After Physics*

**David Z. Albert**

“*After Physics* consists of eight brilliant essays in Albert’s inimitable style exploring connections between fundamental physical theories (in particular quantum mechanics and statistical mechanics) and central issues in metaphysics and epistemology. It will stimulate a great deal of discussion among those interested in matters on the border between physics and philosophy.”

—**Barry Loewer, *Rutgers University***

2014 10 halftones 200 pp. cloth \$35.00 • £25.95  
9780674731264

## Bee Time

*Lessons from the Hive*

**Mark L. Winston**

"In this personal and scientific journey into the history we share with bees, [Winston] ranges over neonicotinoid pesticides and colony collapse, the control of African 'killer' bees and more. The charismatic social insects emerge as both icons of societal cohesion and symbols of nature's paradoxically mingled power and fragility."

—**Barbara Kiser, *Nature***

"In a highly personal style, Winston steps between reportage, scientific exactitude and a deep, poetically expressed love of bees, beekeeping and the cultural forms that bees inspire. . . His take on the situation makes *Bee Time* an insightful delight."

—**Adrian Barnett, *New Scientist***

2014 296 pp. cloth \$24.95 • £18.95 9780674368392

## God's Planet

**Owen Gingerich**

Foreword by Randy Isaac

Owen Gingerich frames his argument around three questions: Was Copernicus right, in dethroning Earth from its place at the center of the universe? Was Darwin right, in placing humans securely in an evolving animal kingdom? And was Hoyle right, in identifying physical constants in nature that seem singularly tuned to allow the existence of intelligent life on planet Earth?

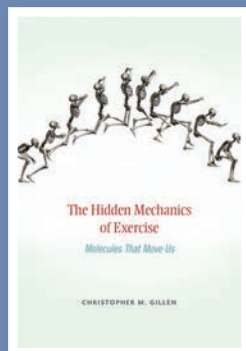
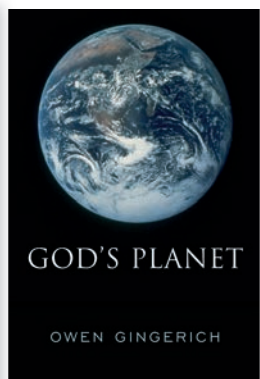
"I thought I knew all I needed to know about these characters—Copernicus, Darwin, Hoyle—who shaped our modern view of the cosmos. Now Owen Gingerich provides new facts and deeper understanding of all three of them."

—**Freeman Dyson**

"A rich volume you'll want to keep in your library."

—**John Farrell, *Forbes***

2014 19 halftones, 4 line illus. 192 pp. cloth  
\$19.95 • £14.95 9780674417106



## The Hidden Mechanics of Exercise

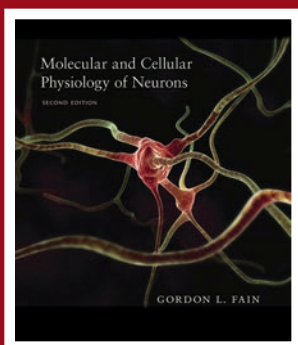
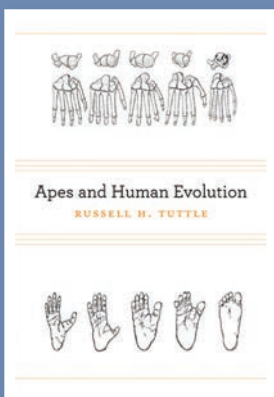
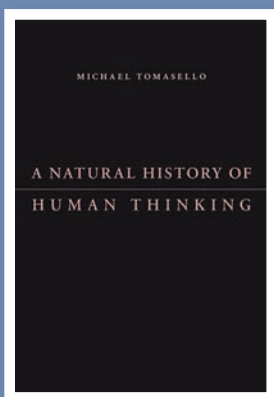
*Molecules That Move Us*

**Christopher M. Gillen**

"Gillen's enjoyable account emphasizes the molecules and protein structures that allow us to move, run, jump, control fuel use, and regulate adaptations to exercise training. . . Gillen offers exercise enthusiasts wishing to understand the science behind their training an interesting read. The book also serves as an engaging primer for exercise-science students who want to begin to understand some of the underlying molecular mechanisms. . . Researchers studying the behavior of the individual molecules may find Gillen's account enlightening in regard to the functional implications of their work at the whole-body level."

—**Stephen D. R. Harridge, *Science***

Belknap Press 2014  
9 halftones, 24 line illus.  
352 pp. cloth \$28.95 • £21.95  
9780674724945



## *A Natural History of Human Thinking*

**Michael Tomasello**

“Compelling reading ... In a reassessment of his earlier work, Tomasello argues that apes are cognitively much closer to humans than had been thought only a decade ago ... The book’s great virtue is its conceptual analysis of the cumulative steps in cognition required to get us from ape to human.”

—**Stephen Levinson, *Science***

2014 6 line illus. 192 pp. cloth \$35.00 • £25.95  
9780674724778

## *Apes and Human Evolution*

**Russell H. Tuttle**

“His approach is scholarly, informative, witty, and deeply humane. It should find a place on university library shelves and even, given its very reasonable price, on the shelves of graduate students. Even if you don’t read it from end to end, you will want to dip into it to read snippets and extract the important references. A remarkable achievement.”

—**Colin Groves, *International Journal of Primatology***

“This is a truly monumental treatise, not only in scope but particularly because of the depth of scholarship that has been brought to bear. Drawing on a lifetime of study focusing on anatomy but also including behavior and ecology, this is destined to become a classic reference work.”

—**Robert D. Martin, A. Watson Armour III Curator of Biological Anthropology, The Field Museum, Chicago**

2014 63 color illus., 72 halftones, 54 line illus., 6 maps, 22 tables 1072 pp. cloth \$59.95 • £44.95 9780674073166

### **FOR COURSE USE**

## *Molecular and Cellular Physiology of Neurons* • *Second Edition*

**Gordon L. Fain** | Illustrated by Margery J. Fain

“I have used Fain’s book for over a decade at Harvard University for my cellular neuroscience class. It offers the perfect mix of rigorous exposition and distilled insights on what makes neurons tick. With clear illustrations (often adapted from original figures from seminal papers in the field), a fluid narrative and careful choice of topics, the book is exceptionally well-suited for a serious introduction to the physiology of neurons. The new edition is a welcome update to an already wonderful original.”

—**Venkatesh N. Murthy, Harvard University**

2014 16 color illus., 229 line illus., 2 tables  
740 pp. cloth \$79.95 • £59.95 9780674599215

## *More than Nature Needs*

*Language, Mind, and Evolution*

**Derek Bickerton**

“Wide-ranging . . . A novel inquiry into the evolution of language . . . Deeply thought-provoking . . . Highly stimulating.”

—**Stephen Levinson, *Science***

“Bickerton is the grand seigneur of the topic of language evolution among the linguists. He writes so bloody well that one turns yellow with envy. He is a mastermind of the field.”

—**Eörs Szathmáry, Professor of Biology, Eötvös Loránd University, Budapest**

2014 1 line illus., 3 tables 336 pp. cloth \$35.00 • £25.95  
9780674724907

## *Wallace, Darwin, and the Origin of Species*

**James T. Costa**

“Alfred Russel Wallace (1823–1913) and Charles Darwin (1809–82) arrived at many of the same ideas about natural selection at almost precisely the same time while in correspondence with each other. Darwin’s publication of his theories made him a legend, but Wallace has been mostly relegated to a footnote in the history books. Here Costa hopes to remedy that imbalance, recounting and analyzing Wallace’s life and work with the ease and familiarity befitting one who edited and prepared the naturalist’s previously unpublished *Species Notebook*.”

—**Kate Horowitz, *Library Journal***

2014 7 halftones, 35 line illus., 1 map, 7 tables  
352 pp. cloth \$39.95 • £29.95 9780674729698

## *Walden’s Shore*

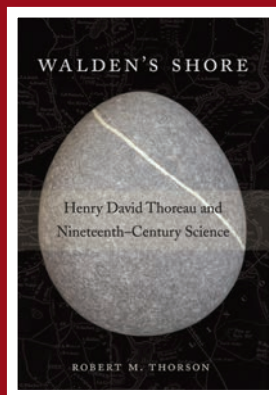
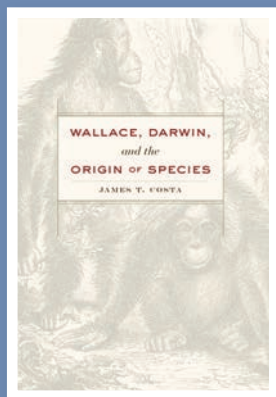
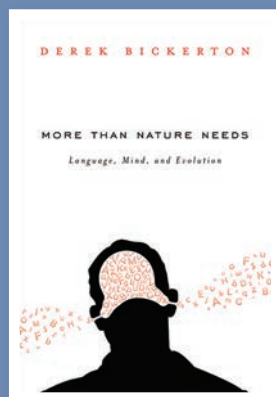
*Henry David Thoreau and Nineteenth-Century Science*

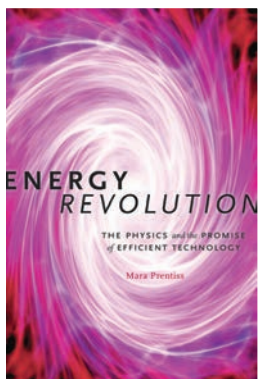
**Robert M. Thorson**

“In his 1854 masterpiece *Walden*, the U.S. writer and naturalist Henry David Thoreau invites us to ‘wedge our feet downward . . . till we come to a hard bottom and rocks in place, which we can call reality.’ Geologist Robert Thorson obliges, focusing on Thoreau as a flinty amateur geologist to reinject science into his literary legacy. Thoreau, Thorson persuasively argues, was as grounded in rock as he was in the elemental understanding of the cosmos sought by the Transcendentalist movement.”

—**Nature**

2014 19 halftones, 17 line illus. 440 pp. cloth  
\$29.95 • £22.95 9780674724785





## *Energy Revolution*

*The Physics and the Promise of Efficient Technology*

**Mara Prentiss**

“With all the justified excitement around the fracking revolution it’s crucial not to lose sight of the ultimate importance of renewables and energy efficiency. Mara Prentiss has written a highly valuable, scientifically grounded guide to the great things that are possible.”

—**Lawrence H. Summers, Harvard University**

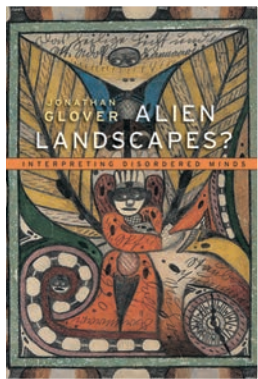
“Prentiss brings basic physics to bear on the critical issue of how we produce and consume energy. Using extensive and illuminating graphics to augment her clear writing, she provides a reason for optimism about the role of renewables in our energy future.”

—**Kenneth W. Ford, author of 101 Quantum Questions**

“A surprisingly optimistic analysis of the world’s unsustainable, wasteful energy consumption.”

—**Kirkus Reviews**

Belknap Press 2014 73 color illus., 18 tables 310 pp.  
cloth \$29.95 • £22.95 9780674725027



## *Alien Landscapes?*

*Interpreting Disordered Minds*

**Jonathan Glover**

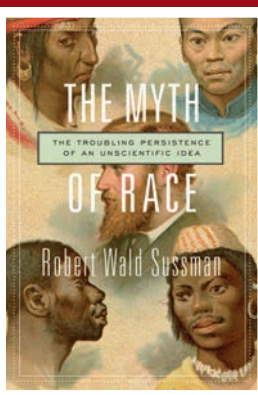
“A wide-ranging philosophical investigation of psychology and a psychological examination of philosophy.”

—**Jonathon Keats, New Scientist**

“The lucidity of the writing makes it, at once, profound and accessible. While acknowledging the substantial contribution of the biological sciences to our understanding of unusual mental states, Glover explores in depth how far an observer can make sense of—or ‘interpret’—them.”

—**George Szmukler, King’s College London**

2014 27 color illus. 448 pp. cloth \$35.00 • £25.00  
9780674368361



## *The Myth of Race*

*The Troubling Persistence of an Unscientific Idea*

**Robert Wald Sussman**

“Most scientists agree that race is not a biological concept. [Robert Sussman] explores how race emerged as a modern social construct, tracing its origins to the Spanish Inquisition and its legacy as a justification for Western imperialism and slavery. He goes on to discuss how this tradition co-opted the evolutionary theories of Darwinism to produce the eugenics movement—the foundation of the Nazis’ theory of Aryan supremacy and, eventually, genocide. It’s a broad, thoughtful, 310-page argument against racism.”

—**Nancy Szokan, Washington Post**

2014 4 halftones, 2 line illus. 384 pp. cloth \$35.00 • £25.95  
9780674417311

## Global Health Law

Lawrence O. Gostin

"Brings attention to critical aspects of law that anyone interested in global health needs to be concerned about: the major sources of law, and the institutions relevant to implementing them ... Gostin posits that the solution to major global health challenges lies in transforming global health law and global governance because of their potential to dramatically improve health and reduce inequalities."

—Sofia Gruskin, *The Lancet*

2014 14 line illus., 14 tables 560 pp. cloth \$55.00 • £40.95  
9780674728844

## Embryos under the Microscope

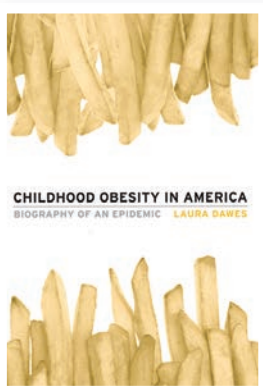
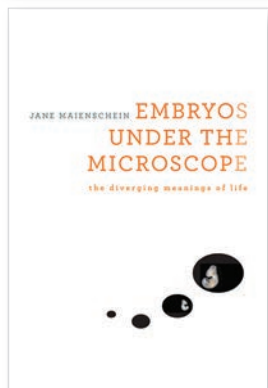
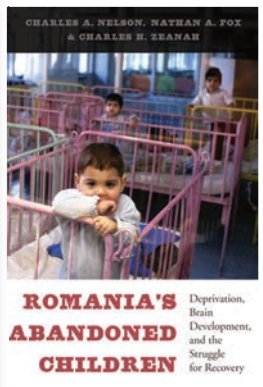
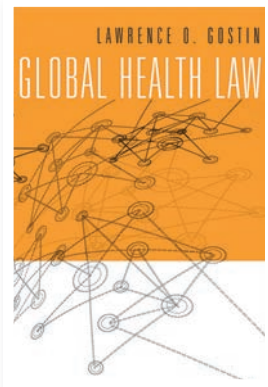
*The Diverging Meanings of Life*

Jane Maienschein

"A balanced combination of history and science. We track the thoughts of philosophers Aristotle and Descartes; follow the development of modern experimental embryology by scientists such as Frank Lillie; and examine the twentieth- and twenty-first-century focus on understanding the molecular and genetic contribution of the sperm, egg and embryo to the offspring ... It seems unlikely that a more readable text will soon emerge."

—Renee Reijo Pera, *Nature*

2014 23 halftones, 1 table 352 pp. cloth \$28.95 • £21.95  
9780674725553



## Romania's Abandoned Children

*Deprivation, Brain Development, and the Struggle for Recovery*

Charles A. Nelson •  
Nathan A. Fox • Charles  
H. Zeanah

"This book tackles one of the most fundamental questions about human development: how do our early experiences shape our brain, body, and character? This is a landmark study of child development."

—Avshalom Caspi,  
Duke University

2014 25 halftones, 10 tables  
416 pp. \$29.95 • £22.95  
9780674724709

## Childhood Obesity in America

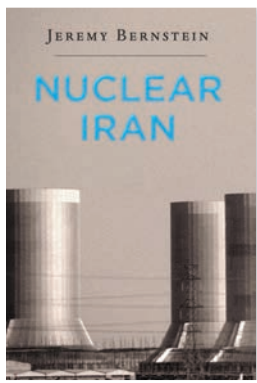
*Biography of an Epidemic*

Laura Dawes

"With vivid prose, memorable examples, and an impressive depth of research, Laura Dawes demonstrates how and why our current preoccupation with childhood obesity emerged. This book is a genuine contribution not only to historical understanding, but to the field of medical ethics and to contemporary policy debates."

—Steven Mintz, University  
of Texas at Austin

2014 6 halftones,  
5 line illus., 3 graphs  
320 pp. cloth  
\$45.00 • £33.95  
9780674281448



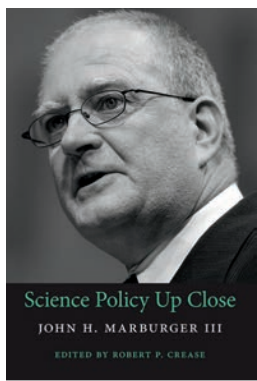
## *Nuclear Iran*

**Jeremy Bernstein**

“Part scientific primer, part history with a dash of policy analysis . . . [Bernstein] offers a brief but illuminating portrait of Gernot Zippe, the eccentric Austrian-German engineer, captured by the Soviets during World War II, who pioneered the centrifuge model later sold by the Pakistani proliferator A. Q. Khan to North Korea and Iran. Bernstein also details the history of the Iranian nuclear program, beginning with its origins under the Shah . . . [I] loved the book.”

—**Sohrab Ahmari, *Wall Street Journal***

2014 14 halftones, 5 line illus. 224 pp. cloth  
\$18.95 • £14.95 9780674417083



## *Science Policy Up Close*

**John H. Marburger III • Edited by Robert P. Crease**

“Jack Marburger [had] an uncommon capacity to navigate politically difficult issues, from controversies over nuclear energy to the divisive politics of the George W. Bush administration. Marburger’s writings thus provide not just a valuable insider’s view of the art of science policy making, but a civics lesson on what it takes to be an effective public servant.”

—**Daniel Sarewitz, *Arizona State University***

2014 4 line illus. 208 pp. cloth \$29.95 • £22.95  
9780674417090



## *Banking on the Body*

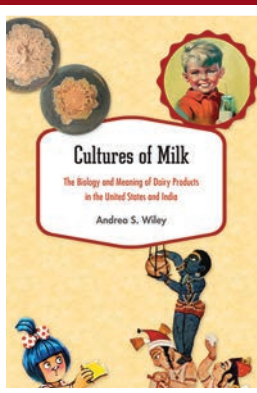
*The Market in Blood, Milk, and Sperm in Modern America*

**Kara W. Swanson**

“Since the 1940s, Swanson argues, body banks for breast milk and blood have been ‘omnipresent,’ while attitudes toward them reflect ‘a medical profession unable to resolve its own conflicting commitments to health care access . . . Swanson leads a fascinating journey to the origins of this muddle.”

—***Publishers Weekly***

2014 10 halftones 352 pp. cloth \$35.00 • £25.95  
9780674281431



## *Cultures of Milk*

*The Biology and Meaning of Dairy Products in the United States and India*

**Andrea S. Wiley**

“What a readable, informative, and fascinating book! Andrea Wiley deftly compares the culture, history, and biology of milk drinking in the U.S. and India to create a truly biocultural analysis of how these very different cultures utilize and think about milk drinking. This volume is essential reading for anyone curious about how culture affects biology.”

—**Janet Chrzan, *University of Pennsylvania***

2014 34 halftones 208 pp. cloth \$39.95 • £29.95  
9780674729056



## Curious Behavior

*Yawning, Laughing, Hiccupping, and Beyond*

**Robert R. Provine**

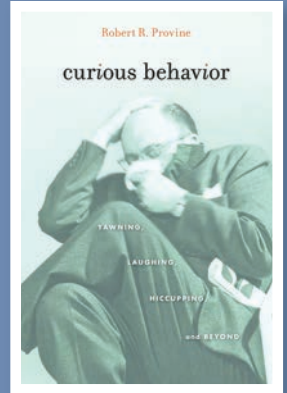
★ **PROSE Award, Biomedicine & Neuroscience, Association of American Publishers**

★ **A Library Journal Best Book of the Year**

"In this charmingly written and profoundly informative book, Provine gives us what he calls 'sidewalk' neuroscience, a 'scientific approach to everyday behavior based on simple observations and demonstrations that readers can use to confirm, challenge, or extend the reported findings' . . . [A] marvelous book . . . 'Small science' at its best."

—**Carol Tavris, *Wall Street Journal***

Belknap Press 2014 27 line illus. 288 pp. paper  
\$18.95 • £14.95 9780674284135



## To Forgive Design

*Understanding Failure*

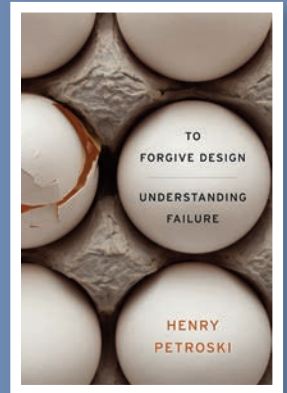
**Henry Petroski**

★ **A Choice Outstanding Academic Title of the Year**

"[An] engaging book . . . Reading these pages reminds us of how many spectacular failures have occupied the news pages for a week or two in our lifetimes . . . If Petroski's account proves anything, it's that the forces of the real world may eventually prevail on even the mightiest structures."

—**Bill McKibben, *New York Review of Books***

Belknap Press 2014 432 pp. paper \$18.95 • £14.95  
9780674416826



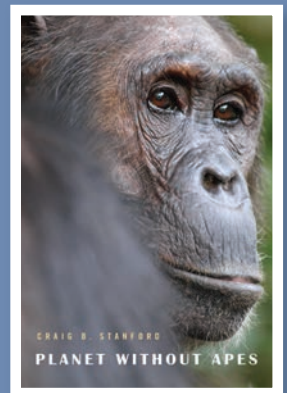
## Planet Without Apes

**Craig B. Stanford**

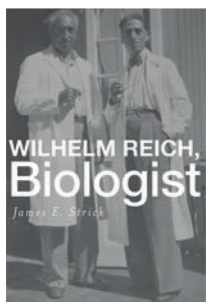
"Will electronic gadgetry bring down the great apes? The link may seem surreal, but in this study of the plight of gorillas, chimpanzees, orangutans and bonobos, primatologist Craig Stanford reveals how mining coltan, a mineral used in electronics, destroys primate habitats and fuels the illegal bush meat trade. In his wide-ranging call for action, Stanford—co-director of the Jane Goodall Research Center in Los Angeles, California—lays out the critical threats, arguing that humanity's closest cousins are viewed as savage 'others' and subjected to a genocidal urge last seen in the colonial era."

—**Nature**

Belknap Press 2014 272 pp. paper \$16.95 • £12.95  
9780674416840



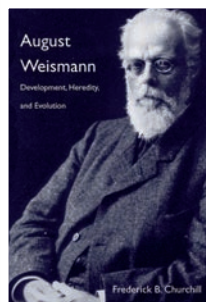
## Forthcoming in Spring 2015



Wilhelm Reich,  
Biologist  
James E. Strick  
\$39.95 | £29.95 cloth  
9780674736092



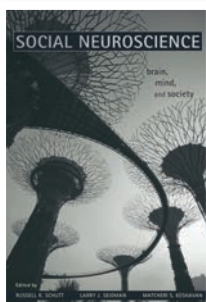
The Invaders  
Pat Shipman  
Belknap Press  
\$29.95 | £22.95 cloth  
9780674736764



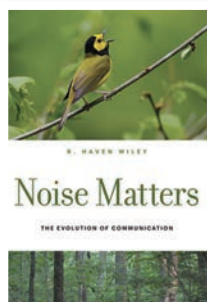
August Weismann:  
Development,  
Heredity, and  
Evolution  
Frederick B. Churchill  
\$49.95 | £36.95 cloth  
9780674736894



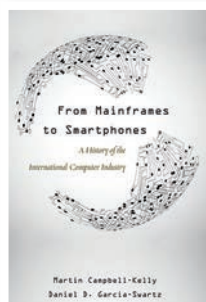
Galileo's Telescope: A  
European Story  
Massimo Bucciantini  
Michele Camerota  
Franco Giudice  
\$35.00 | £24.95 cloth  
9780674736917



Social Neuroscience:  
Brain, Mind, and  
Society | Edited by  
Russell K. Schutt •  
Larry J. Seidman •  
Matcheri S. Keshavan  
\$49.95 | £36.95 cloth  
9780674728974



Noise Matters:  
The Evolution of  
Communication  
R. Haven Wiley  
\$45.00 | £29.95 cloth  
9780674744127



From Mainframes to  
Smartphones  
Martin Campbell-  
Kelly • Daniel D.  
Garcia-Swartz  
\$45.00 | £33.95 cloth  
9780674729063



Triumphs of  
Experience:  
The Men of the  
Harvard Grant Study  
George E. Vaillant  
\$17.95 | £13.95 paper  
9780674503816

## Index

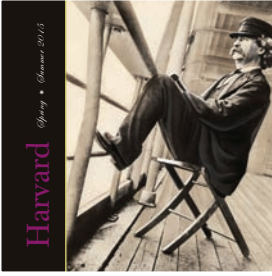
Albert, After Physics .....	2	Päs, The Perfect Wave .....	2
Bernstein, Nuclear Iran .....	8	Petroski, To Forgive Design .....	9
Bickerton, More than Nature Needs .....	5	Prentiss, Energy Revolution .....	6
Bucciantini, Galileo's Telescope .....	10	Provine, Curious Behavior .....	9
Churchill, August Weismann .....	10	Schutt, Social Neuroscience .....	10
Campbell-Kelly, Mainframes .....	10	Shipman, The Invaders .....	10
Costa, Wallace, Darwin, and Origin .....	5	Stanford, Planet Without Apes .....	9
Dawes, Childhood Obesity in America .....	7	Strick, Wilhelm Reich, Biologist .....	10
Fain, Molecular and Cellular Physiology ..	4	Sussman, The Myth of Race .....	6
Fogarty, The Sea, Volume 16 .....	12	Swanson, Banking on the Body .....	8
Gillen, Hidden Mechanics of Exercise .....	3	Thorson, Walden's Shore .....	5
Gingerich, God's Planet .....	3	Tomasello, A Natural History of Human ..	4
Glover, Alien Landscapes? .....	6	Tuttle, Apes and Human Evolution .....	4
Gostin, Global Health Law .....	7	Vaillant, Triumphs of Experience .....	10
Groh, Making Space .....	2	Wiley, Noise Matters .....	10
Maienschein, Embryos under .....	7	Wiley, Cultures of Milk .....	8
Marburger, Science Policy Up Close .....	8	Winston, Bee Time .....	3
Nelson, Romania's Abandoned Children ..	7		



## DIGITAL LOEB CLASSICAL LIBRARY

"The Anglophone world's most readily accessible collection of classical masterpieces . . . With their digitization, [the translations] have crossed yet another frontier."

TOM HOLLAND,  
*Wall Street Journal*



Sign up for HUP News



Stay informed of the latest books in your favorite subjects.

Visit [www.hup.harvard.edu/news/mailling-list](http://www.hup.harvard.edu/news/mailling-list) to sign up to receive emails or catalogs of new books.

Blog: [harvardpress.typepad.com](http://harvardpress.typepad.com)

Facebook: [www.facebook.com/HarvardPress](http://www.facebook.com/HarvardPress)

Twitter: [twitter.com/Harvard\\_Press](http://twitter.com/Harvard_Press)

Order now—simply complete and mail this order form by December 31, 2015.

If paying by credit card, you may call us toll-free at 800-405-1619, fax your order to 800-406-9145, or order online: [www.hup.harvard.edu](http://www.hup.harvard.edu)

Qty	Author/Title	ISBN (i.e., 9780674066564)	Price

Subtotal \$ \_\_\_\_\_

(free before December 31, 2015) Postage \$ \_\_\_\_\_

(see list below) Sales tax \$ \_\_\_\_\_

(you won't be charged Canada Post's handling fee) 5% GST, Canadian orders only \$ \_\_\_\_\_

Total due \$ \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Daytime phone (\_\_\_\_) \_\_\_\_\_

6-digit code from mailing label \_\_\_\_\_

Payment details

Check or money order enclosed     Visa     MasterCard     American Express

(to Harvard University Press)

Acct. no.

Exp. date

Signature \_\_\_\_\_

**Prices subject to change. Offer good in the U.S. and Canada only.** All others pay list price plus separate postage.

International air: \$16.50 for the first book, \$3.00 for each additional book. Payable in U.S. funds.

**The Harvard Guarantee:** You must be completely satisfied with the books you order or you may return them within 30 days of receipt for a full refund or credit to your charge card.

**Sales Tax:** Residents of these states must include sales tax: CA, CT, DC, FL, GA, IL, IN, KY, MA, MD, MI, MN, NJ, NM, NY, OH, PA, RI, TX, VA, WI

**Remove address:** To remove your address from our mailing list or for a change of address, you must mail this entire page with any corrections marked to

Direct Mail  
Harvard University Press  
79 Garden Street  
Cambridge, MA 02138

**Attention Professors:** Visit our Resources for Educators on our website to view coursebooks for examination online: [www.hup.harvard.edu/resources/educators](http://www.hup.harvard.edu/resources/educators)

H40575



Harvard University Press

79 Garden St. Cambridge MA 02138  
[www.hup.harvard.edu](http://www.hup.harvard.edu)

Non-Profit  
U.S. Postage  
PAID  
Boston, MA  
Permit No. 2709

**The Sea: Ideas and Observations on Progress in the Study of the Seas**



## *The Sea*

*Volume 16: Marine Ecosystem-Based Management*

**Michael J. Fogarty • James J. McCarthy**

**With marine ecosystems endangered by a warming climate and exploding human population growth, a critical transformation is taking place in the way the world's ocean resources are managed. With contributions from an international team of experts, this volume synthesizes the scientific literature of holistic practices in ecosystem-based management (EBM), focusing on protecting the marine ecologies that humans and countless other organisms vitally depend upon.**

2014 26 color illus., 65 halftones, 11 line illus., 13 tables  
568 pp. cloth \$175.00 • £129.95 9780674072701  
For information on all volumes, go to the HUP website:  
[www.hup.harvard.edu](http://www.hup.harvard.edu)

**H40575 / 20M / 0115**