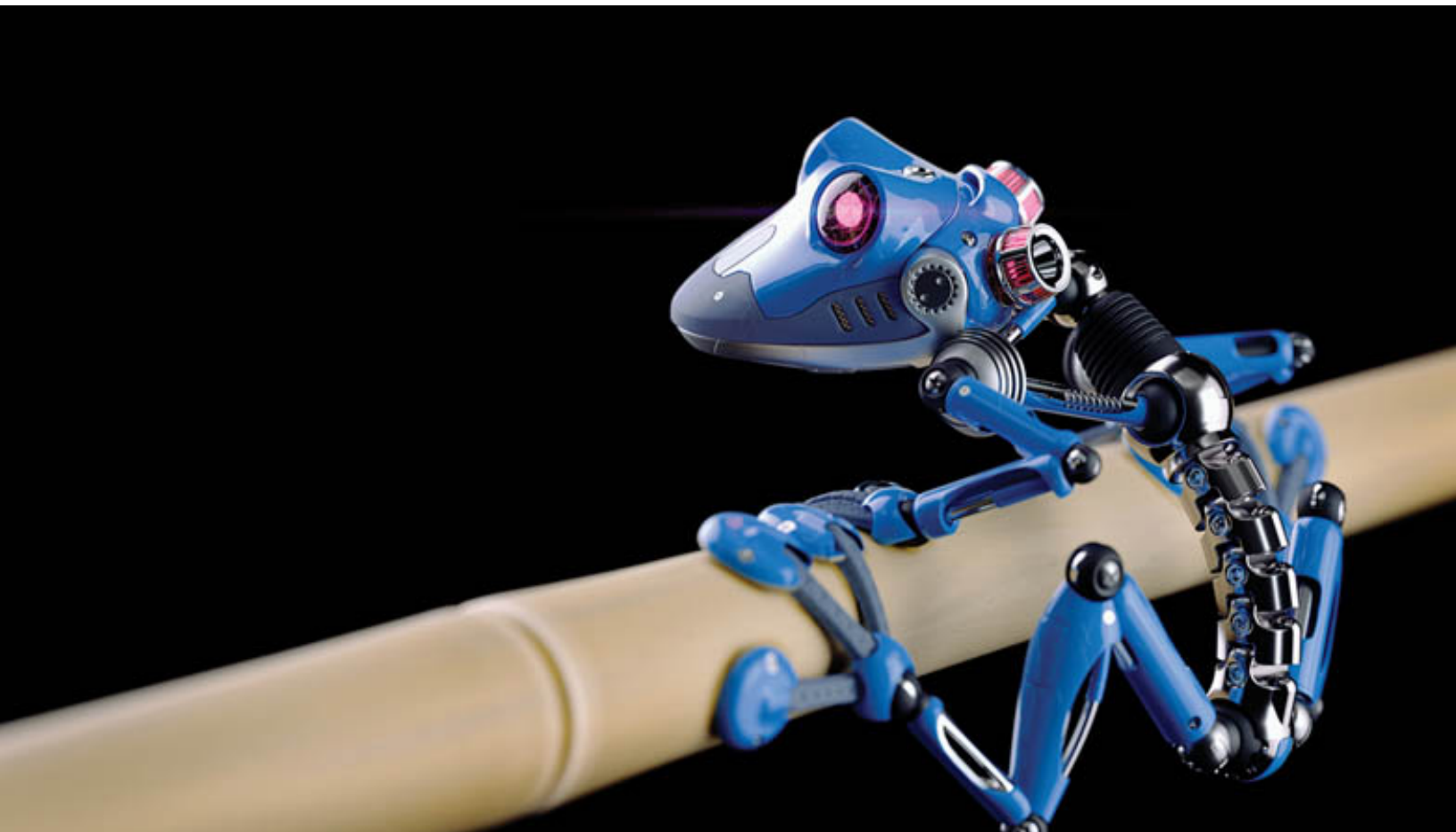
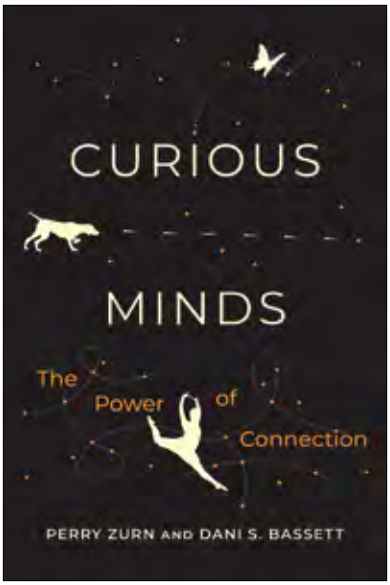
MIT Press Rights Guide
2022 Frankfurt Book Fair



Curious Minds

The Power of Connection

Perry Zurn and Dani S. Bassett



An exhilarating, genre-bending exploration of curiosity's powerful capacity to connect ideas and people.

Curious about something? Google it. Look at it. Ask a question. But is curiosity simply information seeking? According to this exhilarating, genre-bending book, what's left out of the conventional understanding of curiosity are the wandering tracks, the weaving concepts, the knitting of ideas, and the thatching of knowledge systems—the networks, the relations between ideas and between people. Curiosity, say Perry Zurn and Dani Bassett, is a practice of connection: it connects ideas into networks of knowledge, and it connects knowers themselves, both to the knowledge they seek and to each other.

Zurn and Bassett—identical twins who write that their book "represents the thought of one mind and two bodies"—harness their respective expertise in the humanities and the sciences to get irrepressibly curious about curiosity. Traipsing across literatures of antiquity and medieval science, Victorian poetry and nature essays, as well as work by writers from a variety of marginalized communities, they trace a multitudinous curiosity. They identify three styles of curiosity—the busybody, who collects stories, creating loose knowledge networks; the hunter, who hunts down secrets or discoveries, creating tight networks; and the dancer, who takes leaps of creative imagination, creating loopy ones. Investigating what happens in a curious brain, they offer an accessible account of the network neuroscience of curiosity. And they sketch out a new kind of curiosity-centric and inclusive education that embraces *everyone's* curiosity. The book performs the very curiosity that it describes, inviting readers to participate—to be curious with the book and not simply about it.

"*Curious Minds* not only opens up a stunning new landscape for the study of innovation and creativity, but also provides fresh, practical insights into the kernel of inquisitiveness in each of us."

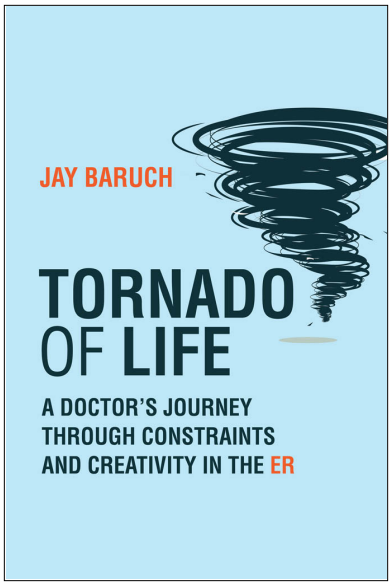
—Scott Barry Kaufman, host of The Psychology Podcast and author of *Transcend: The New Science of Self-Actualization*

Perry Zurn is an Assistant Professor of Philosophy at American University. He is the author of *Curiosity and Power: The Politics of Inquiry*. **Dani S. Bassett** is J. Peter Skirkanich Professor of Bioengineering at the University of Pennsylvania. They are the author of more than 300 scientific research articles in neuroscience, physics, network science, and complex systems science.

psychology

September
6 x 9, 312 pp.
29 b&w illus.

US $27.95T/$36.95 CAN cloth
978-0-262-04703-6



Tornado of Life

A Doctor's Journey through Constraints and Creativity in the ER

Jay Baruch

Stories from the ER: a doctor shows how empathy, creativity, and imagination are the cornerstones of clinical care.

To be an emergency room doctor is to be a professional listener to stories. Each patient presents a story; finding the heart of that story is the doctor's most critical task. More technology, more tests, and more data won't work if doctors get the story wrong. When caring for others can feel like venturing into unchartered territory without a map, empathy, creativity, imagination, and thinking like a writer become the cornerstones of clinical care. In *Tornado of Life*, ER physician Jay Baruch shares these struggles in a series of short, powerful, and affecting essays that invite the reader into stories rich with complexity and messiness.

Patients come to the ER with lives troubled by scales of misfortune that have little to do with disease or injury. ER doctors must be problem-finders before they are problem-solvers. Cheryl, for example, whose story is a chaos narrative of "and this happened, and then that happened, and then, and then and then and then," tells Baruch she is "stuck in a tornado of life." What will help her, and and what will help Mr. K., who seems like a textbook case of post-combat PTSD but turns out not to be? Baruch describes, among other things, the emergency of loneliness (invoking Chekhov, another doctor-writer); his own (frightening) experience as a patient; the patient who demanded a hug; and emergency medicine during COVID-19. These stories often end without closure or solutions. The patients are discharged into the world. But if they're lucky, the doctor has listened to their stories as well as treated them.

Jay Baruch, a practicing emergency room physician, is Professor of Emergency Medicine at Alpert Medical School of Brown University and the author of two award-winning short fiction collections, *What's Left Out* and *Fourteen Stories: Doctors, Patients, and Other Strangers*.

medicine

August
5 1/4 x 8, 320 pp.

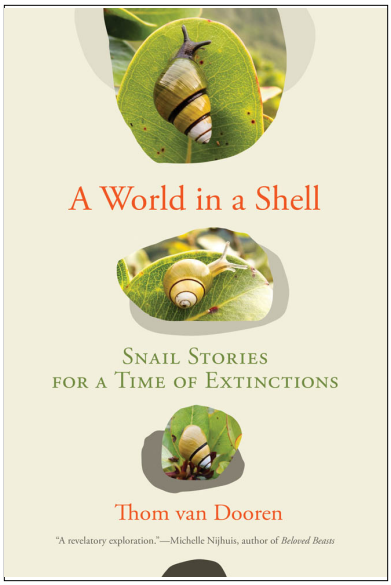
US $27.95T/$36.95 CAN cloth
978-0-262-04697-8

"Through stories that are often tender, sometimes chaotic, and always revealing, Jay Baruch beautifully conveys the messy art of doctoring. Read *Tornado of Life* to understand the emergency room in all its glory—warts and all."

—Sandeep Jauhar, author of *Intern: A Doctor's Initiation*

"Among the vast literature of doctors writing about their profession, Dr. Jay Baruch is a unique talent, a spellbinding storyteller and an expert and experienced diagnostician. With literary references and poetic flare, *Tornado of Life* reveals the whirlwind of emotions gusting through emergency rooms. Rarely does a physician admit his own vulnerabilities and uncertainties in a way that illuminates the true art of his healing."

—Randi Hutter Epstein, author of *Aroused: The History of Hormones and How They Control Just About Everything*



A World in a Shell

Snail Stories for a Time of Extinctions

Thom van Dooren

Following the trails of Hawai'i's snails to explore the simultaneously biological and cultural significance of extinction.

In this time of extinctions, the humble snail rarely gets a mention. And yet snails are disappearing faster than any other species. In *A World in a Shell*, Thom van Dooren offers a collection of snail stories from Hawai'i—once home to more than 750 species of land snails, almost two-thirds of which are now gone. Following snail trails through forests, laboratories, museums, and even a military training facility, and meeting with scientists and indigenous Hawaiians, van Dooren explores ongoing processes of ecological and cultural loss as they are woven through with possibilities for hope, care, mourning, and resilience.

Van Dooren recounts the fascinating history of snail decline in the Hawaiian Islands: from deforestation for agriculture, timber, and more, through the nineteenth century shell collecting mania of missionary settlers, and on to the contemporary impacts of introduced predators. Along the way he asks how both snail loss and conservation efforts have been tangled up with larger processes of colonization, militarization, and globalization. These snail stories provide a potent window into ongoing global process of environmental and cultural change, including the largely unnoticed disappearance of countless snails, insects, and other less charismatic species. Ultimately, van Dooren seeks to cultivate a sense of wonder and appreciation for our damaged planet, revealing the world of possibilities and relationships that lies coiled within a snail's shell.

Thom van Dooren is a field philosopher at the University of Sydney and the University of Oslo. He is the author of *Flight Ways: Life and Loss at the Edge of Extinction* and *The Wake of Crows: Living and Dying in Shared Worlds*. Donna Haraway has called him "a leader in learning to learn without the tools of human exceptionalism."

nature

September
6 x 9, 288 pp.
6 b&w illus., 16 color plates

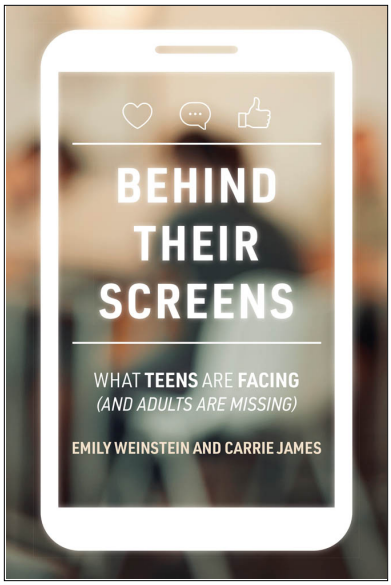
US $29.95T/$39.95 CAN cloth
978-0-262-04702-9

"A revelatory exploration."

—Michelle Nijhuis, author of *Beloved Beasts*

"A lyrical elegy, as beautifully written as a poem."

—Anna Tsing, author of *The Mushroom at the End of the World*



Behind Their Screens

What Teens Are Facing (and Adults Are Missing)

Emily Weinstein and Carrie James

How teens navigate a networked world and how adults can support them.

What are teens actually doing on their smartphones? Contrary to many adults' assumptions, they are not simply "addicted" to their screens, oblivious to the afterlife of what they post, or missing out on personal connection. They are just trying to navigate a networked world. In *Behind Their Screens*, Emily Weinstein and Carrie James, Harvard researchers who are experts on teens and technology, explore the complexities that teens face in their digital lives, and suggest that many adult efforts to help—"Get off your phone!" "Just don't sext!"—fall short.

Weinstein and James warn against a single-minded focus by adults on "screen time." Teens worry about dependence on their devices, but disconnecting means being out of the loop socially, with absence perceived as rudeness or even a failure to be there for a struggling friend. Drawing on a multiyear project that surveyed more than 3,500 teens, the authors explain that young people need empathy, not exasperated eye-rolling. Adults should understand the complicated nature of teens' online life rather than issue commands, and they should normalize—let teens know that their challenges are shared by others—without minimizing or dismissing. Along the way, Weinstein and James describe different kinds of sexting and explain such phenomena as watermarking nudes, comparison quicksand, digital pacifiers, and collecting receipts. *Behind Their Screens* offers essential reading for any adult who cares about supporting teens in an online world.

Emily Weinstein is a Research Director at Project Zero at Harvard and a Lecturer at the Graduate School of Education. **Carrie James** is a sociologist and Principal Investigator at Project Zero at the Harvard Graduate School of Education. She is the author of *Disconnected: Youth, New Media, and the Ethics Gap* (MIT Press).

parenting | technology

August
6 x 9, 240 pp.
1 illus.

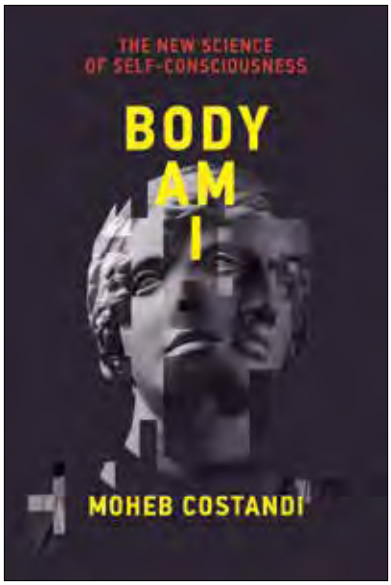
US $27.95T/$36.95 CAN paper
978-0-262-04735-7

"Weinstein and James have nailed it! This book is a superb blend of research and real-life vignettes from teens. It's the perfect vehicle to ensure productive conversations—share tactics rather than scare tactics."

—Delaney Ruston, MD, filmmaker, Screenagers and Screenagers Next Chapter, and author of *Parenting in the Screen Age*

"It's such a relief to see a book about screen time that centers young peoples' voices and treats them with respect."

—Anya Kamenetz, author of *The Art of Screen Time* and reporter for NPR



Body Am I

The New Science of Self-Consciousness

Moheb Costandi

How the way we perceive our bodies plays a critical role in the way we perceive ourselves: stories of phantom limbs, rubber hands, anorexia, and other phenomena.

The body is central to our sense of identity. It can be a canvas for self-expression, decorated with clothing, jewelry, cosmetics, tattoos, and piercings. But the body is more than that. Bodily awareness, says scientist-writer Moheb Costandi, is key to self-consciousness. In *Body Am I*, Costandi examines how the brain perceives the body, how that perception translates into our conscious experience of the body, and how that experience contributes to our sense of self. Along the way, he explores what can happen when the mechanisms of bodily awareness are disturbed, leading to such phenomena as phantom limbs, alien hands, and amputee fetishes.

Costandi explains that the brain generates maps and models of the body that guide how we perceive and use it, and that these maps and models are repeatedly modified and reconstructed. Drawing on recent bodily awareness research, the new science of self-consciousness, and historical milestones in neurology, he describes a range of psychiatric and neurological disorders that result when body and brain are out of sync, including not only the well-known phantom limb syndrome but also phantom breast and phantom penis syndromes; body integrity identity disorder, which compels a person to disown and then amputate a healthy arm or leg; and such eating disorders as anorexia.

Wide-ranging and meticulously researched, *Body Am I* (the title comes from Nietzsche's *Thus Spoke Zarathustra*) offers new insight into self-consciousness by describing it in terms of bodily awareness.

Moheb Costandi, trained as a neuroscientist, is a science writer based in London whose work has appeared in publications including *Nature*, *Science*, *New Scientist*, and *Scientific American*. He is the author of *Neuroplasticity* (MIT Press) and *50 Human Brain Ideas You Really Need to Know*.

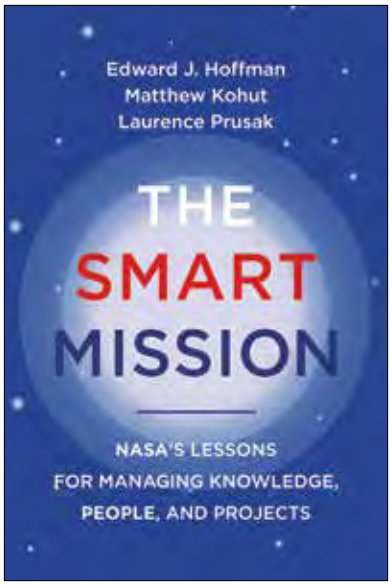
science | psychology

October
6 x 9, 216 pp.
6 b&w illus.

US $27.95T/$36.95 CAN cloth
978-0-262-04659-6

"A deeply enjoyable review of the latest scientific findings that makes you realize that you actually knew nothing before about your own body."

—Frederique de Vignemont, deputy director of the Jean Nicod Institut and author of *Mind the Body: An Exploration of Bodily Self-Awareness*



The Smart Mission

NASA's Lessons for Managing Knowledge, People, and Projects

Edward J. Hoffman, Matthew Kohut, and Laurence Prusak

Why human skills and expertise, not technical tools, are what make projects succeed.

The project is the basic unit of work in many industries. Software applications, antiviral vaccines, launch-ready spacecraft: all were produced by a team and managed as a project. Project management emphasizes control, processes, and tools—but, according to *The Smart Mission*, that is not the right way to run a project. Human skills and expertise, not technical tools, are what make projects successful. Projects run on knowledge. This paradigm-shifting book—by three project management experts, all of whom have decades of experience at NASA and elsewhere—challenges the conventional wisdom on project management, focusing on the human dimension: learning, collaboration, teaming, communication, and culture.

The authors emphasize three themes: projects are fundamentally about how teams work and learn together to get things done; the local level—not an organization's upper levels—is where the action happens; and projects don't operate in a vacuum but exist within organizations that are responsible to stakeholders. Drawing on examples and case studies from NASA and other organizations, the authors identify three project models—micro, macro, and global—and their different knowledge needs. Successful organizations have a knowledge-based culture. Successful project management guides the interplay of knowledge, projects, and people.

Edward J. Hoffman, currently CEO of Knowledge Strategies, LLC, and Senior Lecturer at Columbia University, was NASA's first Chief Knowledge Officer and founder of the NASA Academy of Program/Project and Engineering Leadership (APPEL). Following the Columbia shuttle failure, he led the team that designed the Strategic Management and Governance Handbook. He is the coauthor of *Shared Voyage: Learning and Unlearning from Remarkable Projects*. **Matthew Kohut**, former major communication advisor to NASA, is coauthor of *Compelling People: The Hidden Qualities That Make Us Influential*, named one of Amazon's Best Business Books of 2013. **Laurence Prusak**, former strategy consultant to Hoffman at NASA, is Senior Lecturer in the Information and Knowledge Strategy graduate program at Columbia University and the coauthor of *Working Knowledge*, a widely cited text about how knowledge works in organizations, and other books.

business

August
6 x 9, 176 pp.
6 charts

US $26.95T/$35.95 CAN cloth
978-0-262-04688-6

"This book is about people (often a missing ingredient), knowledge, and the grand value of stories....and oh yes, projects too. The three authors gave me more concrete advice on leading people, knowledge, and projects in this book than I could have ever learned from hiring an outside consultant for a year."

—E. LaVerne Johnson, Founder, President and CEO, International Institute for Learning, Inc.

"Every leader who leads and manages teams should read The Smart Mission. It explains the intangibles of successful knowledge organizations in a tangible way. The authors master the art of explaining how people culture, process, and relationships drive the successes and failures of projects. The book helped me to gain clarity and focus about the challenges we try to solve in our organization."

—Susann Roth, Chief of Knowledge Management, Asian Development Bank

Working with AI

Real Stories of Human-Machine Collaboration

Thomas H. Davenport and Steven M. Miller

Two management and technology experts show that AI is not a job destroyer, exploring worker-AI collaboration in real-world work settings.

This book breaks through both the hype and the doom-and-gloom surrounding automation and the deployment of artificial intelligence enabled systems at work. Management and technology experts Thomas Davenport and Steven Miller show that, contrary to widespread predictions, prescriptions, and denunciations, AI is not primarily a job destroyer. Rather, AI changes the way we work—by taking over some tasks but not entire jobs, freeing people to do other, more important and more challenging work. By offering detailed, real-world case studies of AI-augmented jobs in settings that range from finance to the factory floor, Davenport and Miller also show that AI in the workplace is not the stuff of futuristic speculation. It is happening now to many companies and workers.

These cases include a digital system for life insurance underwriting that analyzes applications and third-party data in real time, allowing human underwriters to focus on more complex cases; an intelligent telemedicine platform with a chat-based interface; a machine-learning system that identifies impending train-maintenance issues by analyzing diesel fuel samples; and Flippy, a robotic assistant for fast food preparation. For each one, Davenport and Miller describe in detail the work context for the system, interviewing job incumbents, managers, and technology vendors. Short "insight" chapters draw out common themes and consider the implications of human collaboration with these smart systems.

Thomas H. Davenport is Distinguished Professor of Information Technology and Management at Babson College, Visiting Professor at Oxford's Saïd Business School, Fellow of the MIT Initiative on the Digital Economy, and Senior Advisor to Deloitte's AI practice. He is the author of *The AI Advantage* (MIT Press) and coauthor of *Only Humans Need Apply*, and other books. **Steven M. Miller** is Professor Emeritus of Information Systems at Singapore Management University, where he previously served as Founding Dean of the School of Computing and Information System Vice Provost for Research. He is coauthor of *Robotics Applications and Social Implications*.

business

September
6 x 9, 312 pp.

US $34.95T/$45.95 CAN cloth
978-0-262-04724-1

Management on the Cutting Edge series, published in cooperation with *MIT Sloan Management Review*

"What work can AI accomplish—and what can workers accomplish with AI? Setting aside hype, Davenport and Miller probe the beating heart of dozens of real-world AI implementations to find out. The lessons are subtle, eye-opening, and occasionally comical. No matter what you thought you knew about AI in the workplace, this book will change your mind."

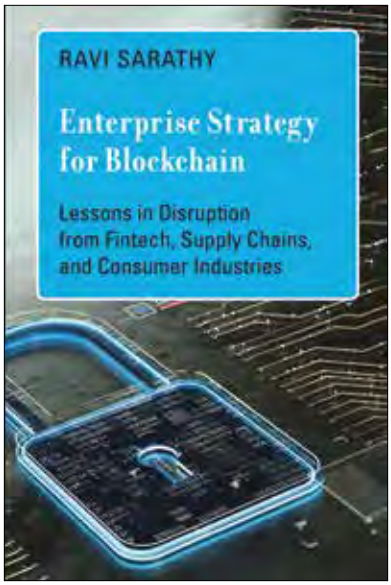
—David Autor, Ford Professor of Economics, MIT

"AI is already changing the world, and for the first time we have a collection of case studies written in a way that everyone can understand. This is an essential read for anyone trying to understand the breadth of change that is coming."

—DJ Patil, former U.S. Chief Data Scientist

"This book brings AI to life and gives practical, grounded examples of what AI can do now and how it is augmenting human roles in the workplace. This is a fantastic guide for any organization attempting to unleash the power of AI at scale."

—Dave Gledhill, former CIO, DBS bank; Director, Singapore Airlines



Enterprise Strategy for Blockchain

Lessons in Disruption from Fintech, Supply Chains, and Consumer Industries

Ravi Sarathy

How companies can gain strategic advantage by developing blockchain capabilities.

Blockchain is far more than cryptocurrency. Regarded for a decade as complex and with limited application, blockchain has now matured to be on the verge of fully realizing its disruptive potential. In *Enterprise Strategy for Blockchain*, business strategy expert Ravi Sarathy shows how companies can gain competitive advantage by developing and deploying blockchain capabilities. Sarathy explains what makes blockchain unique, including its capacities to eliminate intermediaries, guard against hackers, decentralize, and protect privacy. Presenting examples drawn from such sectors as finance, supply chains, computer services, consumer products, and entertainment, he describes how executives can strategically assess blockchain's applicability to their business.

After outlining blockchain's technological features—and its technological obstacles—Sarathy describes disruptive technologies already happening in the financial services market with the emergence of decentralized finance, or DeFi, arguing that a wave of innovation might be positioning DeFi as blockchain's "killer app." He also explores, among many other uses, a blockchain application that addresses chronic supply chain problems, pilot blockchain programs aimed at facilitating cross-border payments, and the use of NFTs (non-fungible tokens) that allow digital art to be collected and traded. And he outlines a path for organizations that includes establishing a business case for applying blockchain, evaluating enterprise cost-benefits, and preparing the organization to develop the requisite knowledge and people skills while overcoming resistance to change.

Business leaders should invest, explore and experiment with blockchain now, positioning their organizations to be first in their fields, ahead of both rising startups and late-to-the game incumbent peers.

"While the ever-broadening reach of the technology is remarkable, the size, power, and commitment of the entities embracing blockchain is telling. They are positioning themselves to be first in their fields and to meet competition from rising start-ups and late-to-the-game incumbent peers. Why? Blockchain's advanced encryption and decentralized storage of copies across nodes makes it almost impossible for hackers to intrude and alter or extract information."

—from the introduction

Ravi Sarathy is Professor of International Business and Strategy at Northeastern University's D'Amore-McKim School of Business. He is the coeditor of *Firms within Families: Enterprising in Diverse Country Contexts*.

business | technology

October
6 x 9, 304 pp.
26 figures

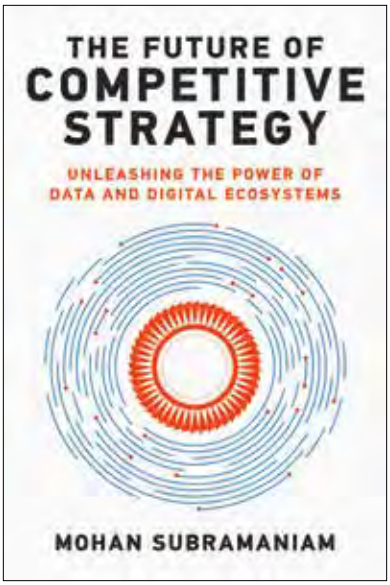
US $32.95T/$43.95 CAN cloth
978-0-262-04716-6

Management on the Cutting Edge series, published in cooperation with *MIT Sloan Management Review*

The Future of Competitive Strategy

Unleashing the Power of Data and Digital Ecosystems

Mohan Subramaniam



How legacy firms can combine their traditional strengths with the power of data and digital ecosystems to forge a new competitive strategy for the digital era.

How can legacy firms remain relevant in the digital era? In *The Future of Competitive Strategy*, strategic management expert Mohan Subramaniam explains how firms can leverage both their traditional strengths and the modern-day power of data and digital ecosystems to forge a new competitive strategy. Drawing on the experiences of a range of companies, including Caterpillar, Sleep Number, and Whirlpool, he explains how firms can benefit from data's enlarged role in modern business, develop digital ecosystems tailored to their unique business needs, and use new frameworks to harness the power of data for competitive advantage.

Subramaniam presents digital ecosystems as a combination of *production* and *consumption* ecosystems, which can be used by legacy firms to unlock the value of data at various levels—from improving operational efficiencies to creating new data-driven services and transforming traditional products into digital platforms. He explores the ways sensors and the Internet of Things provide new kinds of customer data; presents the concept of *digital competitors*—other firms that have access to similar data; discusses the new digital capabilities that firms need to develop; and addresses privacy and security issues associated with data sharing.

Who needs this book? Any firm that wants to revitalize traditional business models, offer a richer customer experience, and expand its competitive arena into new digital ecosystems.

Mohan Subramaniam has been a Strategy Professor for over 20 years. He has trained senior executives around the world on digital competitive strategy and strategic digital transformation.

"Mohan Subramaniam offers a new paradigm for competitive strategy essential for all firms that desire to remain relevant in the digital era. This book provides a unique perspective for firms on the quest for competitive advantage."

—Jahangir Doongaji, Member of the Executive Board and designated CEO, Hilti Corporation

"The elegant simplicity of Mohan Subramaniam's *The Future of Competitive Strategy* provides a framework for any company to balance the pressures of managing present customers with the demands of creating future customers. Discovering value in digital customers, competitors, and capabilities and building a competitive strategy is an important idea that should permeate the strategic thinking at all companies."

—Praveen K. Kopalle, Signal Companies' Professor of Management, Tuck School of Business at Dartmouth

business

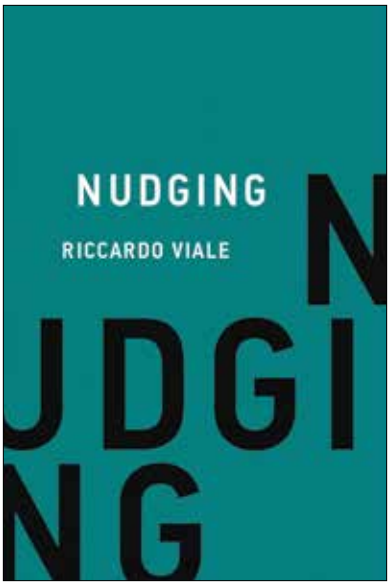
August
6 x 9, 312 pp.
33 figures

US $29.95T/$39.95 CAN cloth
978-0-262-04699-2

Management on the Cutting Edge series, published in cooperation with *MIT Sloan Management Review*

Nudging

Riccardo Viale



How "nudges" by government can empower citizens without manipulating their preferences or exploiting their biases.

We're all familiar with the idea of "nudging"—using behavioral mechanisms to encourage people to make certain choices—popularized by Richard Thaler and Cass Sunstein in their bestselling 2008 book *Nudge*. This approach, also known as "libertarian paternalism," goes beyond typical programs that simply provide information and incentives; nudges can range from automatic enrollment in a pension plan to flu-shot scheduling. In *Nudging*, Riccardo Viale explores the evolution of nudging and proposes new approaches that would empower citizens without manipulating them paternalistically. He shows that we can use the tools of the behavioral sciences without abandoning the principle of conscious decision-making.

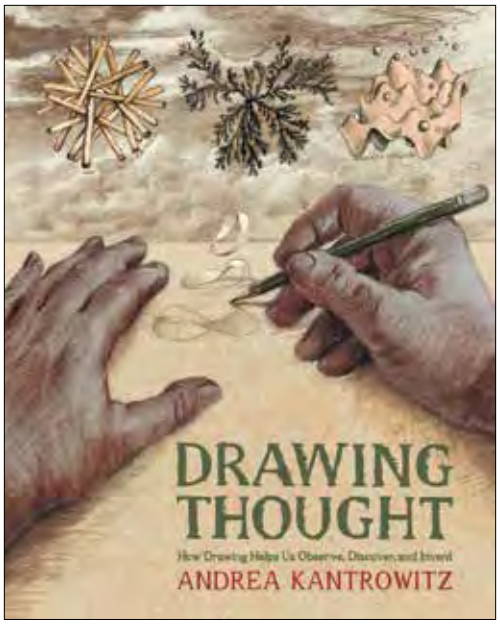
Viale discusses the work of Herbert Simon, Gerd Gigerenzer, Daniel Kahneman, and Amos Tversky that laid the foundation of behavioral economics, describes how policy makers have sought to help people avoid bad decisions, offers examples of effective nudging, and considers how to nudge the nudgers. How can we tell good nudges from bad nudges? Viale explains that good nudges help us avoid bias and encourage deliberate decision making; bad nudges, on the other hand, use bias to nudge people unconsciously into unintentional behaviors. Bad nudges attempt to compel decisions based on economic rationality. Good nudges encourage decisions based on a pragmatic, adaptive, ecological kind of rationality. Policy makers should take note.

Riccardo Viale is Professor of Behavioral Sciences and Cognitive Economics in the Department of Economics at the University of Milano Bicocca, where he is President of BIB-Behavioral Insights Bicocca. He is also Professor of Behavioral Economics at the School of Government and the School of European Public Economics of LUISS, Rome, and Founder and Secretary General of the Herbert Simon Society. He is the author of *Economics, Bounded Rationality and the Cognitive Revolution* (with Herbert Simon, Massimo Egidi, and Robin Marris) and other books.

business | psychology

October
6 x 9, 256 pp.
2 b&w illus.

US $27.95T/$36.95 CAN cloth
978-0-262-54444-3



Drawing Thought

How Drawing Helps Us Observe, Discover, and Invent

Andrea Kantrowitz

Drawing as a tool of thought: an investigation of drawing, cognition, and creativity that integrates text and hand-drawn images.

Drawing is a way of constructing ideas and observations as much as it is a means of expressing them. When we are not ready or able to put our thoughts into words, we can sometimes put them down in arrangements of lines and marks. Artists, designers, architects, and others draw to generate, explore, and test perceptions and mental models. In *Drawing Thought*, artist-educator Andrea Kantrowitz invites readers to use drawing to extend and reflect on their own thought processes. She interweaves illuminating hand-drawn images with text, integrating recent findings in cognitive psychology and neuroscience with accounts of her own artistic and teaching practices.

The practice of drawing seems to be found across almost all known human cultures, with its past stretching back into the caves of prehistory. It takes advantage of the ways in which human cognition is embodied and situated in relationship to the environments in which we find ourselves. We become more aware of the interplay between our external surroundings and the inner workings of our minds as we draw. We can trace moments of perception and understanding in a sketchbook that might otherwise be lost, and go back to reexamine and revise those traces later. Kantrowitz encourages readers to draw out their own ideas and observations through a series of guided exercises and experiments, with her lively drawings and engaging text pointing the way. Drawing is a tool for thought in anyone's hands; it is creativity in action.

Andrea Kantrowitz, an artist and educator, is Graduate Program Director and Assistant Professor in the Art Education Program at SUNY New Paltz. She leads workshops and symposia on art and cognition around the world.

art | psychology

October
8 x 10, 192 pp.
Full color

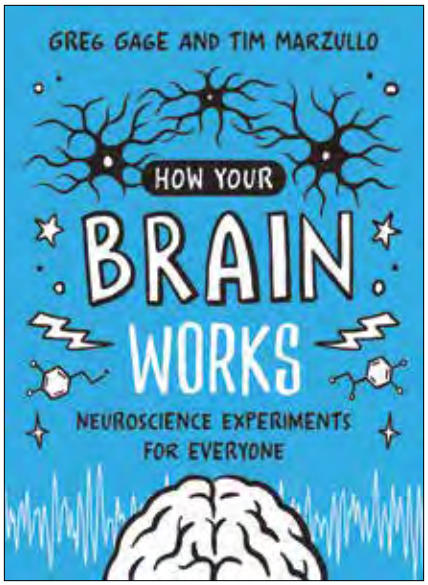
US $28.95T/$38.95 CAN paper
978-0-262-54432-0

"Kantrowitz masterfully intertwines the mental and physical acts of drawing through beautiful images, textual clarity, and scholarly foundations. I can't wait to use this book—bravo!"

— Lois Hetland, Professor Emerita, Massachusetts College of Art and Design and co-author of *Studio Thinking: The Real Benefits of Visual Arts Education* and *Studio Thinking from the Start: The K-8 Art Educator's Handbook*

"Drawing isn't about making pretty pictures. It's about feeling and learning and engaging with the world. It's about thinking more deeply and living more richly. This gorgeous, erudite book will show you how."

— Danny Gregory, author of *The Creative License* and *Art Before Breakfast*



How Your Brain Works

Neuroscience Experiments for Everyone

Greg Gage and Tim Marzullo

Discover the hidden electrical world inside your nervous system using DIY, hands-on experiments, for all ages.

The workings of the brain are mysterious: What are neural signals? What do they mean? How do our senses really sense? How does our brain control our movements? What happens when we meditate? Techniques to record signals from living brains were once thought to be the realm of advanced university labs —but not anymore! This book allows anyone to participate in the discovery of neuroscience through hands-on experiments that record the hidden electrical world beneath our skin and skulls. In *How Your Brain Works*, neuroscientists Greg Gage and Tim Marzullo offer a practical guide—accessible and useful to readers from middle schoolers to college undergraduates to curious adults—for learning about the brain through hands-on experiments.

Armed with some DIY electrodes, readers will get to see what brain activity really looks like through simple neuroscience experiments. Written by two neuroscience researchers who invented open-source techniques to record signals from neurons, muscles, hearts, eyes, and brains, *How Your Brain Works* includes more than forty-five experiments to gain a deeper understanding of your brain, offering fascinating reading for students at any level, curious readers, and scientists interested in using electrophysiology in their research or teaching.

Greg Gage and **Tim Marzullo** are award-winning neuroscientists who met while getting their PhDs at Neural Engineering Lab at the University of Michigan. They are the cofounders of Backyard Brains (backyardbrains.com), which produces kits that are used by students at all levels to learn about the brain.

science

October
7 x 9, 328 pp.
259 line drawings

US $25.95T/$34.95 CAN paper
978-0-262-54438-2

Stars in Your Hand

A Guide to 3D Printing the Cosmos

Kimberly Arcand and Megan Watzke

An illustrated guide to exploring the Universe in three dimensions.

Astronomers have made remarkable discoveries about our Universe, despite their reliance on the flat projection, or 2D view, the sky has offered them. But now, drawing on the vast stores of data available from telescopes and observatories on the ground and in space, astronomers are using 3D technology to go beyond a flattened view of the cosmos. In *Stars in Your Hand*, Kimberly Arcand and Megan Watzke offer an illustrated guide to exploring the Universe in three dimensions, with easy-to-follow instructions for creating models of stars and constellations using a 3D printer and 3D computer imaging.

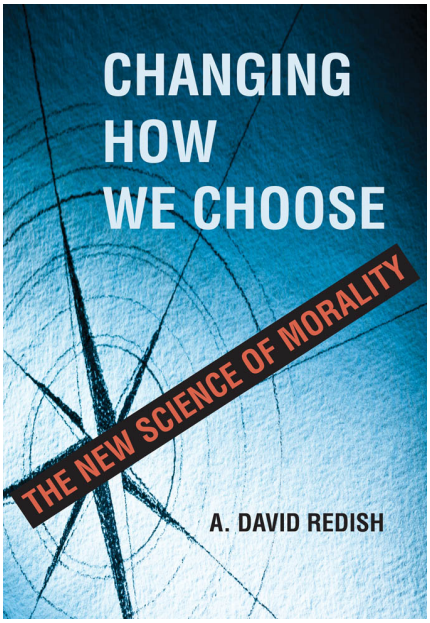
Stars in Your Hand and 3D technology make learning about space an adventure. Intrigued by the stunning images from high-powered telescopes? Using this book, you can fly virtually through a 3D spacescape and hold models of cosmic objects in your hand. Arcand and Watzke outline advances in 3D technology, describe some amazing recent discoveries in astronomy, reacquaint us with the night sky, and provide brief biographies of the telescopes, probes, and rovers that are bringing us so much data. They then offer images and instructions for printing and visualizing stars, nebulae, supernovae, galaxies, and even black holes in 3D. The 3D Universe is a marvel, and *Stars in Your Hand* serves as a unique and thrilling portal to discovery.

Kimberly Arcand is Visualization Scientist and Emerging Technology Lead at the Chandra X-ray Center, the headquarters for a NASA space-based telescope at the Smithsonian Astrophysical Observatory in Cambridge, Massachusetts. **Megan Watzke** is the Press Officer for the Chandra X-ray Observatory, a NASA space-based telescope that is the sister mission to the Hubble Space Telescope. She helped create the "public science" model that brings scientific content into everyday spaces, such as public parks, subway stations, and libraries. Together, they have co-authored five non-fiction books, including *Your Ticket to the Universe: A Guide to Exploring the Cosmos*, *Light: The Visible Spectrum and Beyond*, and *Magnitude: The Scale of the Universe*.

science | astronomy

September
6 x 9, 136 pp.
57 b&w illus., 40 color plates

US $21.95T/$28.95 CAN paper
978-0-262-54415-3



Changing How We Choose

The New Science of Morality

A. David Redish

The "new science of morality" that will change how we see each other, how we build our communities, and how we live our lives.

In *Changing How We Choose*, David Redish makes a bold claim: Science has "cracked" the problem of morality. Redish argues that moral questions have a scientific basis and that morality is best viewed as a technology—a set of social and institutional forces that create communities and drive cooperation. This means that some moral structures really are better than others and that the moral technologies we use have real consequences on whether we make our societies better or worse places for the people living within them. Drawing on this new scientific definition of morality and real-world applications, *Changing How We Choose* is an engaging read with major implications for how we see each other, how we build our communities, and how we live our lives.

Many people think of human interactions in terms of conflicts between individual freedom and group cooperation, where it is better for the group if everyone cooperates but better for the individual to cheat. Redish shows that moral codes are technologies that change the game so that cooperating is good for the community and for the individual. Redish, an authority on neuroeconomics and decision-making, points out that the key to moral codes is how they interact with the human decision-making process. Drawing on new insights from behavioral economics, sociology, and neuroscience, Redish shows that there really is a "new science of morality" and that this new science has implications—not only for how we understand ourselves but also for how we should construct those new moral technologies.

A. David Redish is a Distinguished McKnight University Professor in the Department of Neuroscience at the University of Minnesota. A poet, playwright, and scientist, his previous books include *The Mind Within the Brain: How We Make Decisions and How Those Decisions Go Wrong* and *Computational Psychiatry: New Perspectives on Mental Illness*.

science | philosophy

December
6 x 9, 376 pp.

US $32.95T/$43.95 CAN cloth
978-0-262-04736-4

Snapshots of the Mind

Gary Klein

How people make decisions, size up situations, spot anomalies, and anticipate problems in real-world settings.

Gary Klein, author of the bestselling *Sources of Power*, is the cognitive psychologist who discovered how people actually make decisions, particularly under time pressure and uncertainty. In *Snapshots of the Mind*, he offers a set of short essays—"snapshots" of different aspects of cognitive functioning in real-world settings that will help us learn to recognize the cognitive processes that underlie and drive performance. In these essays Klein provides practical tools for escaping fixation on initial hunches and learning to detect the ways that people make decisions, size up situations, spot anomalies, and anticipate problems.

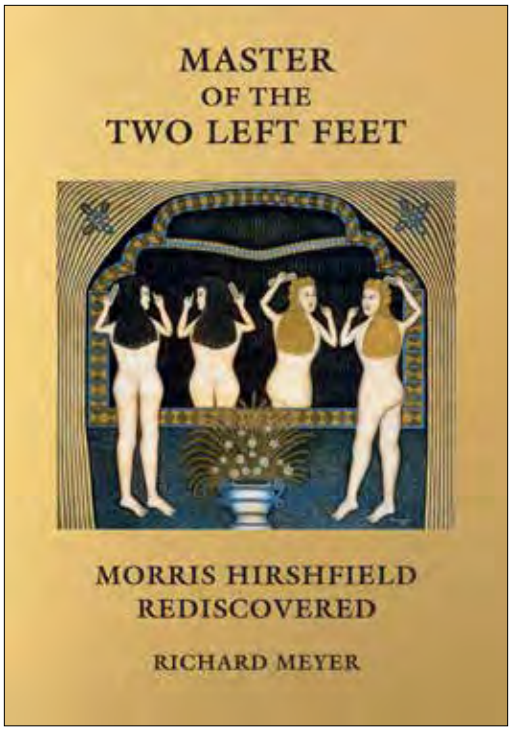
Snapshots of the Mind grows out of the Naturalistic Decision Making movement, which studies how decision makers handle uncertainty and complexity in high-stakes situations. In the essays, Klein examines how people make tough choices and assessments in the real-world, discussing such topics as training, information technology, teamwork, expertise, and insights. Debunking the idea that artificial intelligence will soon take over human decision making, he argues instead for machines that make us smarter and expand our expertise. He describes his Recognition-Primed Decision (RPD) model, which has been incorporated into Army doctrine and was one of the inspirations for Malcolm Gladwell's *Blink*. *Snapshots of the Mind* offers fresh takes on such topics as confirmation bias, anomaly detection, intuition, anticipatory thinking and perspective-taking. Readers come away attuned to the primary aspects of expert cognition: the mindsets, mental models, and perceptual sensitivity.

Gary Klein is Senior Scientist at MacroCognition LLC and Chairman and Chief scientist at ShadowBox LLC. He is the author of *Seeing What Others Don't*, *Streetlights and Shadows*, and *Sources of Power* (the last two published by the MIT Press).

psychology

October
6 x 9, 448 pp.
35 illus.

US $29.95T/$39.95 CAN paper
978-0-262-54442-9



Master of the Two Left Feet

Morris Hirshfield Rediscovered

Richard Meyer

An account of the life and work of a once-famous, self-taught American artist of the 1940s, and a study of how artists go missing from public memory.

A garment worker and slipper manufacturer with no training in art, Morris Hirshfield was never expected to make history. Against all odds, his wildly stylized paintings became internationally known in the 1940s. Admired by Pablo Picasso, Piet Mondrian, and the French surrealists, his peak moment of visibility occurred in 1943, when the Museum of Modern Art mounted a one-man show of his work. The exhibition was widely reviewed—though mostly reviled—by the press, who jeeringly crowned Hirshfield "Master of the Two Left Feet" for his tendency to display the female body in an unorthodox fashion.

After the artist's death in 1946, his work was largely forgotten. In *Master of the Two Left Feet*, Richard Meyer rediscovers Hirshfield for twenty-first century viewers, offering full-color reproductions that capture the eye-popping palette, vibrant patterns, and sheer visual pleasure of Hirshfield's paintings, and a catalog of works compiled by curator Susan Davidson which provides the most comprehensive documentation of the artist's paintings ever assembled.

Ten years in the making, the book presents Hirshfield's unlikely career as a painter not only as a missing episode in the history of twentieth-century art but also as a case study of the ways in which artists go missing from historical knowledge and public memory. By looking at the ways in which Hirshfield mattered in the 1940s, Meyer demonstrates how much we have yet to learn, and to see, of the visual past.

Richard Meyer is Robert and Ruth Halperin Professor in Art History at Stanford University. He is author of *Outlaw Representation: Censorship and Homosexuality in Twentieth-Century American Art* and *What Was Contemporary Art?* (MIT Press) as well as coeditor, with Catherine Lord, of *Art and Queer Culture*, and coauthor, with Peggy Phelan, of *Contact Warhol: Photography without End*.

EXHIBITION

MORRIS HIRSHFIELD REDISCOVERED
American Folk Art Museum
September 22, 2022–January 27, 2023

art

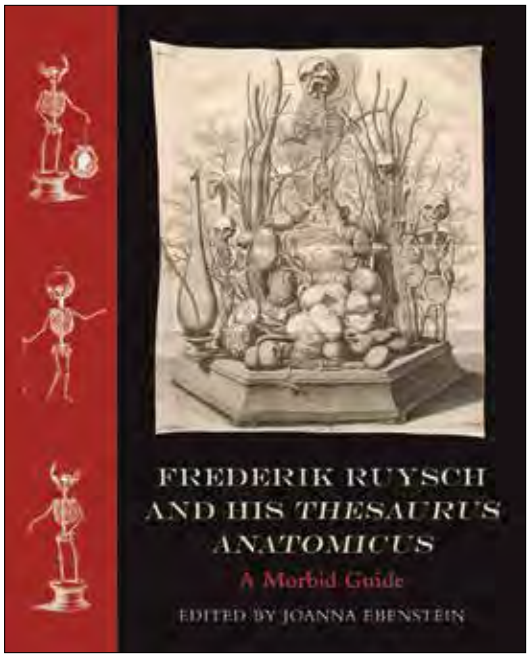
August
9 x 13, 320 pp.
204 color illus.

US $58.95T/$78.95 CAN cloth
978-0-262-04728-9

Frederik Ruysch and His *Thesaurus Anatomicus*

A Morbid Guide

edited by Joanna Ebenstein



A lavishly illustrated guide to the magnum opus of the great seventeenth-century anatomist, master embalmer, artist, and collector of specimens.

Frederik Ruysch (1638–1731) was a celebrated Dutch anatomist, master embalmer, and museologist. He is best remembered today for strange tableaux, crafted from fetal skeletons and other human remains, that flicker provocatively at the edges of science, art, and memento mori. Ruysch exhibited these pieces, along with hundreds of other artful specimens, in his home museum and catalogued them in his lavishly illustrated *Thesaurus Anatomicus*. This book offers the first English translation of Ruysch's guide to his collection, along with all the illustrations from the original volume, photographs of some his most imaginative extant specimens, and more.

Ruysch was at once a brilliant scientist, a preternaturally gifted technician, an esteemed physician, a religious moralizer, and an artist whose prime form of expression was the medium of human remains. His works were sometimes described as "Rembrandts of anatomical preparation"; today, they seem so strange that we can hardly believe that they even existed, much less that they were so popular in their time. His combination of the religious and the scientific, the painstakingly accurate and the extravagantly fantastical, offers vivid testimony of an era in which science overlapped seamlessly with religion and art. Essays accompanying Ruysch's text and images consider such topics as the historical context of Ruysch's work, the paradox of an artist of death whose work engenders the illusion of life, the conservation of Ruysch's specimens, and the shifting ascendancies of romanticism and rationality in the natural sciences.

Joanna Ebenstein is a Brooklyn-based artist, writer, curator, photographer, and graphic designer. She is the creator of the Morbid Anatomy blog, library, and event series and cofounded the now-shuttered Morbid Anatomy Museum.

art

September
8 x 10, 256 pp.
85 color illus.

US $34.95T/$45.95 CAN cloth
978-0-262-04603-9

"A true masterpiece that persists at capturing the reader's attention in the most imaginative ways possible. The book's amazing images and anatomical sculptures certainly make the history of science significantly more visually spectacular."

—John Troyer, Director of the Centre for Death and Society at the University of Bath; author of *Technologies of the Human Corpse*

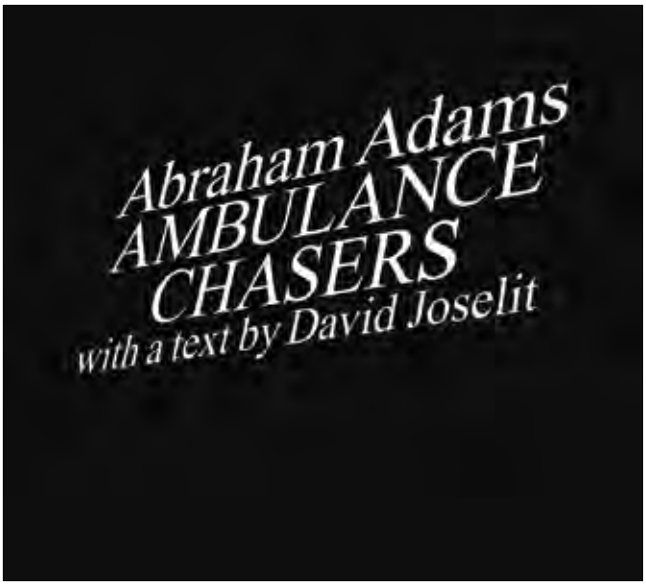
"The macabre and fantastical tableaux of Frederik Ruysch are among the strangest and most exquisite creations in the history of anatomy. In this lavish and much-anticipated volume, Joanna Ebenstein and her collaborators bring exuberant scholarship to bear on their history, their artistry, their science, and their multiple meanings, and present us with the first English translation of Ruysch's own guide to the wonders of his collection."

—Mike Jay, author of *The Influencing Machine*

Ambulance Chasers

Abraham Adams

text a by David Joselit



A series of photographic diptychs that investigate the behavior of images and offer an account of American precarity.

Ambulance Chasers offers a series of photographic diptychs by the artist Abraham Adams: on the left, the faces of personal injury lawyers photographed from roadside billboards; on the right, the landscapes they survey. The gesture is a double rotation: each photograph is imagined as the spectator of the other, and in each pairing, the exorbitant promises of the animated lawyers are deflated by their juxtaposition with an often featureless roadside landscape. The ambulance chasers smile, grin, grimace, scowl; their hair is neatly coiffed, slicked back, unnaturally dark. They gaze at country roads, busy highways, empty intersections, blue skies, building sites, and parking lots. They offer assistance—at a price. Adams's conceptual performance and art historian David Joselit's text tell a story of American precarity.

Joselit's text unrolls alongside the photographs like a long, broken caption. Adams and Joselit conceived their collaboration as an investigation of the behavior and poetics of images—both in the world as billboards and in the book as reproductions—in a visual and textual language quite different from standard theoretical texts. In a long interview, they explore the project's aesthetic and historical concerns, focusing on its hybridization of typologies central to post–World War II photography—the conceptual catalogs best exemplified by the work of Bernd and Hilla Becher and their students, and the "anti-heroic" American landscape, as charted by artists ranging from Ed Ruscha to Lewis Baltz and Robert Adams.

"Strange, provocative, unique, opaque—to say the least—but also strong and enigmatic, *Ambulance Chasers* makes an important statement about the visual landscape of twenty-first-century America."

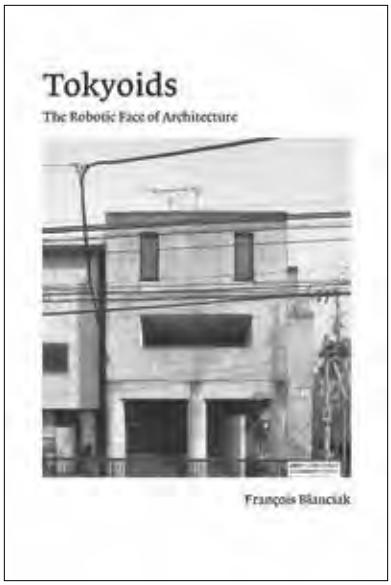
—Shelley Rice, New York University

Abraham Adams is an artist whose work has been exhibited at Galerie Barbara Weiss in Berlin, Artists Space in New York, and elsewhere. The author of *Nothing in MoMA*, he is a master's candidate at the Royal College of Art. **David Joselit** is Professor and Chair in the Department of Art, Film, and Visual Studies at Harvard University. His most recent book, *Heritage and Debt: Art in Globalization* (MIT Press), received the 2021 Robert Motherwell Book Award.

art | photography

August
10 x 9, 136 pp.
62 figures

US $39.95T/$53.95 CAN paper
978-0-262-04710-4



Tokyoids

The Robotic Face of Architecture

François Blanciak

A photographic survey of the robotic face of Tokyo buildings and an argument that robot aesthetics plays a central role in architectural history.

In *Tokyoids*, architect François Blanciak surveys the robotic faces omnipresent in Tokyo buildings, offering an architectural taxonomy based not on the usual variables—size, material, historical style—but on the observable expressions of buildings. Are the eyes (windows) twinkling, the mouth (door) laughing? Is that balcony a howl of distress? Investigating robot aesthetics through his photographs of fifty buildings, Blanciak argues that the robot face originated in architecture—before the birth of robotics—and has played a central role in architectural history.

Blanciak first puts the robot face into historical perspective, examining the importance of the face in architectural theory and demonstrating that the construction of architecture's emblematic portraits triggered the emergence of a robot aesthetics. He then explores the emotions conveyed by the photographed buildings' robot faces, in chapters titled "Awe," "Wrath," "Mirth," "Pain," "Angst," and "Hunger." As he does so he considers, among other things, the architectural relevance of Tokyo's ordinary buildings; the repression of the figural in contemporary architecture; an aesthetic of dismemberment, linked to the structure of the Japanese language and local building design; and the influence of automation technology upon human interaction.

Part photographic survey, part theoretical inquiry, *Tokyoids* upends the usual approach to robotics in architecture by considering not the automation of architectural output but the aesthetic properties of the robot.

François Blanciak is an architect and Associate Professor in the Department of Architecture at the National University of Singapore. He is the author of *Siteless: 1001 Building Forms* (MIT Press).

architecture

September
5 1/4 x 8, 216 pp.
70 b&w illus.

US $24.95T/$33.95 CAN paper
978-0-262-54423-8

"This book is more than a treatise on robotic aesthetics. It is a psycho-historical critique—and simultaneously a visual celebration—of the techno-biological world in which we live. It brings to the fore the overlapping intellectual and visual dimensions of our modern culture."

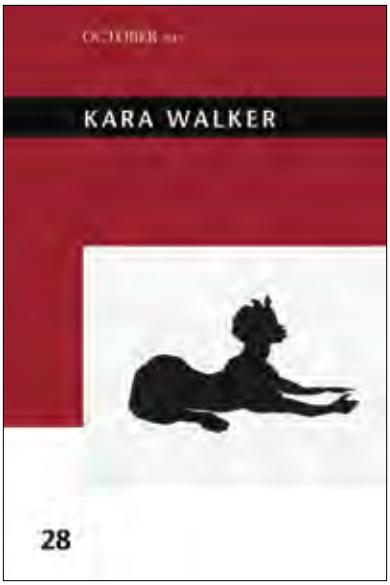
—Mark Jarzombek, Professor of the History and Theory of Architecture at MIT

"From *architecture parlante* to Gundam towers, this fascinating book offers a panorama of the many faces that define the messy skyline of late-modern Tokyo, situating the aesthetics of cacophony and narcissism in the complex confrontations between autonomy and automation, tradition and modernity, Japan and the world."

—Seng Kuan, Project Associate Professor, University of Tokyo; Lecturer in Architecture at Harvard University

Kara Walker

edited by Vanina Géré



Selected texts that survey the full range of Kara Walker's artistic practice, emphasizing the work itself rather than the debates and controversies around it.

Kara Walker's work and its borrowings from an iconography linked to the fantasized and travestied history of American chattel slavery has been theorized and critiqued in countless texts throughout her career. Exegeses of her work have been shaped by the numerous debates on the very debates it generated. How, then, do we approach a work that has been covered by such "thick theoretical layers"? This collection is unique in emphasizing Walker's work itself rather than the controversies surrounding it. These essays and interviews survey Walker's artistic practice from her early works in the 1990s through her most recent ones, from her famous silhouette projects to her lesser-known drawings and lantern shows.

The texts, by art historians, curators, critics, scholars, and writers engage scrupulously with Walker's pieces as material works of art, putting them in the context of the sociopolitical and cultural environments that shape—but never determine—them. They include an interview of the artist by Thelma Golden of the Studio Museum in Harlem; an essay in the form of a lexicon, cataloguing key elements in Walker's art, by curator Yasmil Raymond; and an essay by volume editor Vanina Géré on Walker's use of historical archives. Finally, novelist Zadie Smith considers Walker's public art as counter-propositions to colonial monuments and as a reflection on colonial history.

Vanina Géré is Professor of Art History and Theory at the Villa Arson National School of Fine Arts in Nice, France. She is the author of a monograph on Kara Walker, *Les mauvais sentiments: l'art de Kara Walker*.

Contributors

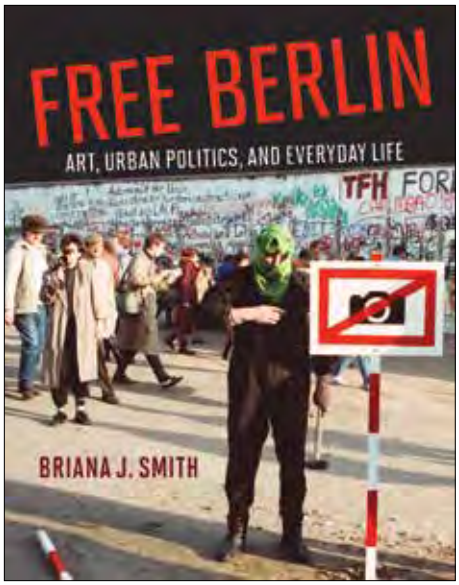
Lorraine Morales Cox, Vanina Géré, Thelma Golden, Tavia Nyong'o, Yasmil Raymond, Jerry Saltz, Zadie Smith, Anne M. Wagner, Hamza Walker

art

November
6 x 9, 264 pp.
93 b&w illus.

US $24.95T/$33.95 CAN paper
978-0-262-54447-4

October Files



Free Berlin

Art, Urban Politics, and Everyday Life

Briana J. Smith

An alternative history of art in Berlin, detaching artistic innovation from art world narratives and connecting it instead to collective creativity and social solidarity.

In pre- and post-reunification Berlin, socially engaged artists championed collective art making and creativity over individual advancement, transforming urban space and civic life in the process. During the Cold War, the city's state of exception invited artists on both sides of the Wall to detour from artistic tradition; post-Wall, art became a tool of resistance against the orthodoxy of economic growth. In *Free Berlin*, Briana Smith explores the everyday peculiarities, collective joys, and grassroots provocations of experimental artists in late Cold War Berlin and their legacy in today's city.

These artists worked intentionally outside the art market, believing that art should be everywhere, freed from its confinement in museums and galleries. They used art as a way to imagine new forms of social and creative life. Smith introduces little-known artists including West Berlin feminist collective Black Chocolate, the artist duo paint the town red (p.t.t.r), and the Office for Unusual Events, creators of satirical urban political theater, as well as East Berlin action art and urban interventionists Erhard Monden, Kurt Buchwald, and others. Artists and artist-led urban coalitions in 1990s Berlin carried on the participatory spirit of the late Cold War, with more overt forms of protest and collaboration at the neighborhood level. The temperament lives on in twenty-first century Berlin, animating artists' resolve to work outside the market and citizens' spirited defenses of green spaces, affordable housing, and collectivist projects.

With *Free Berlin*, Smith offers an alternative history of art in Berlin, detaching artistic innovation from art world narratives and connecting it instead to Berliners' historic embrace of care, solidarity, and cooperation.

"In *Free Berlin* Smith shows vividly what has made dour Berlin twinkle: the offbeat creatives who dared to live out their eccentricities on its streets and in the drafty walkups—not for money but because this is who they had to be, and Berlin was the best place to be it."

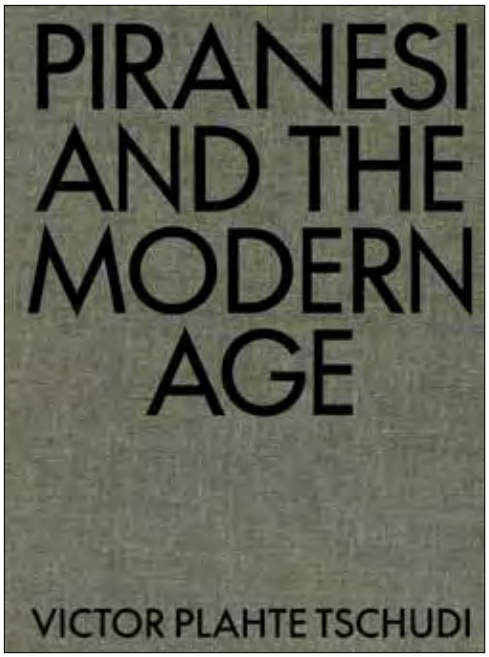
—Paul Hockenos, author of *Berlin Calling: A Story of Anarchy, Music, The Wall, and the Birth of the New Berlin*.

Briana J. Smith is Assistant Director and Lecturer in the Committee on Degrees in History and Literature at Harvard University and teaches for the Harvard Extension School.

art

August
7 x 9, 328 pp.
79 figures

US $29.95T/$39.95 CAN cloth
978-0-262-04719-7



Piranesi and the Modern Age

Victor Plahte Tschudi

The complex appropriation of Piranesi by modern literature, photography, art, film, and architecture.

The etchings of the Italian printmaker, architect, and antiquarian Giovanni Battista Piranesi (1720–78) have long mesmerized viewers. But, as Victor Plahte Tschudi shows, artists and writers of the modern era found in these works—Piranesi's visions of contradictory space, endless vistas, and self-perpetuating architecture—a formulation of the modern. In *Piranesi and the Modern Age*, Tschudi explores the complex appropriation and continual rediscoveries of Piranesi by modern literature, photography, art, film, and architecture. Tracing the ways that the modern age constructed itself and its origin through Piranesi across genres, he shows, for example, how Piranesi's work formulates the ideas of "contrast" in photography, "abstraction" in painting and "montage" in cinema.

Piranesi's modern-day comeback, Tschudi argues, relied on new dimensions found within his work that inspired attempts to inscribe within them a world that was very modern. For more than a century, these interpretations have helped legitimize new forms, theories, technologies, and movements. Tschudi examines, among other things, how Piranesi's disturbing prison interiors—the *Carceri*—became modern metaphors for the mind; how Alfred H. Barr and the Museum of Modern Art made the case for Piranesi's alleged abstraction in the 1930s; and how Sergei Eisenstein reinvented Piranesi as a progenitor of his own innovative filmmaking techniques. Tschudi's exploration of Piranesi's influence on modern architectural discourse includes interviews with such distinguished architects as Peter Eisenman, Bernard Tschumi, Steven Holl, and Rem Koolhaas. Generously illustrated, *Piranesi and the Modern Age* offers an entirely new reading of Piranesi's work.

Victor Plahte Tschudi is Professor in Architectural History at the Oslo School of Architecture and Design and the author of *Baroque Antiquity: Archaeological Imagination in Early Modern Europe*. He curated the 2022 exhibition "Piranesi and the Modern Age" at the National Museum of Norway.

art | architecture

November
7 1/2 x 10, 288 pp.
81 color illus., 25 b&w illus.

US $49.95T/$65.95 CAN cloth
978-0-262-04717-3

"The etchings of the eighteenth-century Venetian printmaker, architect, and antiquarian Giovanni Battista Piranesi have long mesmerized viewers. But, as Victor Plahte Tschudi shows, these same images continued to fascinate assorted onlookers in the twentieth and twenty-first centuries, becoming points of reference not just for artists and architects, but also for photographers, writers, filmmakers, and psychoanalysts. While there are many studies that deal with Piranesi's significance for particular artists and practices, no one before has comprehensively treated his impact upon all these different media in one work. Tschudi's achievement is to have done this, and to have made it into an opportunity not just to think about what underlies the modern fascination with Piranesi, but to explore Piranesi's impact upon the modern mind. The result is a truly wonderful book."

—Adrian Forty, Emeritus Professor of the History of Architecture, The Bartlett School of Architecture, University College London

Some Reasons for Traveling to Italy

Peter Wilson

An idiosyncratic guidebook to architectural (and other) wonders of Italy, accompanied by the author's own witty illustrations.

In *Some Reasons for Traveling to Italy*, architect Peter Wilson offers a Grand Tour of Grand Tours, providing an idiosyncratic guidebook to architectural (and other) wonders of Italy, illustrated by his own witty watercolors and sketches. Wilson chronicles the reasons that people throughout history have traveled to Italy—ranging from "To Be the Subject of an Equestrian Painting by Uccello in Florence Cathedral" to "To Rebuild Herculaneum in Malibu" (the desire of oil tycoon J. Paul Getty in the 1970s)—while giving readers a deeper understanding of Italy's architectural habitat and cultural mythology.

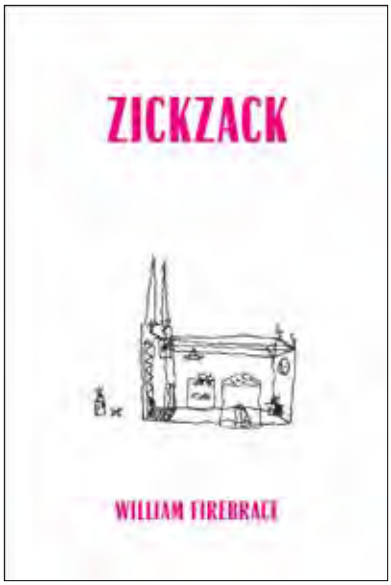
In Wilson's narratives and anecdotes, place names function as talismans; the events may not tally with recorded history, or with the exact topographies of actual places. Wilson offers historical reworkings, appropriations, and an architect's scrutiny of certain Italian tropes. He recounts that Edward de Vere, 17th Earl of Oxford, set out "To Flee England Out of Embarrassment" after breaking wind when he bowed to Queen Elizabeth I; French novelist Stendhal went "To Discover an Anti-France"; and an English architect went "To Get Some Ideas for a Mausoleum." At the first Venice Biennale of Architecture in 1980, a dapper architect found that he had come to Italy "To Fall Overboard in a White Suit," the artist Cy Twombly went simply "To See," and Wilson himself found that he was "Captured by the Ospedale Degli Innocenti," enchanted by the sight of Brunelleschi's architrave.

Peter Wilson is an architect based in Münster, Germany. He is the founder, with his wife Julia Bolles, of the architectural firm BOLLES + WILSON, architects of many significant buildings across Europe.

architecture | travel

October
5 x 7, 272 pp.
120 color illus.

US $32.95T/$43.95 CAN cloth
978-0-262-04726-5



Zickzack

William Firebrace

Zigzagging through six locations on the edges of the German-speaking world, exploring them through politics, architecture, literature, film, art, music, food, and history.

"Zickzack" is the German word for "zigzag": hopping around, moving back and forth, never following a straight line, avoiding the monotony of one thing following another. *Zickzack* is William Firebrace's zigzagging exploration of six places on the edges of the German-speaking world. Deploying essays, narration, conversations, descriptions, and lists, Firebrace celebrates locations on defined and undefined borders, where cultures, languages, and histories mix. In his nonlinear wandering, he touches on ethnicity, topography, history, film, literature, myth, languages, and gastronomy.

These locales are not the famous cities of Berlin, Vienna, and Zurich, but areas that straddle countries, geographies, and influences. Two are within Germany itself, one lies on (and over) the border with Poland, and three were once within the loose German cultural zone but now belong to other countries. Firebrace explores Strasbourg, capital of Alsace and part of a long-running territorial dispute between France and Germany; Königsberg, which spent some of the twentieth century as Kaliningrad; and Görlitz and Zgorcelec, twin cities on either side of a river. He plays hopscotch with churches in Backstein and takes a train trip past cities with double names—Sterzing-Vipiteno, Brixen-Bressanone, Klausen-Chiusa, signs of the double culture, where everything happens twice but in a slightly different way. In the zigzags of the German-speaking world, the original culture sometimes survives, sometimes is deliberately destroyed, sometimes merges with other cultures, and often, if submerged, resurfaces in a different form.

"Firebrace is at once keen dragoman, critic, poet, constantly astonished spectator, and informal reporter. His curiosity is boundless."

—Jonathan Meades

William Firebrace is an architect and writer in London. He is the author of a trilogy of books: *Marseille Mix*, *Memo for Nemo*, and *Zickzack*.

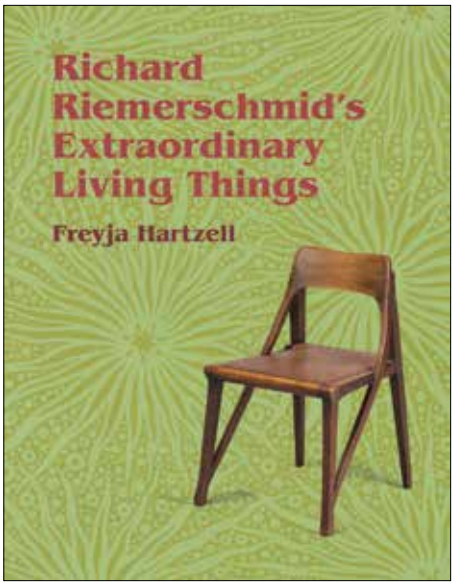
architecture | travel

October
5 1/2 x 9, 304 pp.
24 b&w illus.

US $34.95T/$45.95 CAN paper
978-0-262-54406-1

Richard Riemerschmid's Extraordinary Living Things

Freyja Hartzell



How Richard Riemerschmid's designs of everyday—but "extraordinary"—objects recalibrate our understanding of modernism.

At the beginning of the twentieth century, German artist Richard Riemerschmid (1868–1957) was known as a symbolist painter and, by the advent of World War I, had become an important modern architect. This, however, the first English-language book on Riemerschmid, celebrates his understudied legacy as a designer of everyday objects—furniture, tableware, clothing—that were imbued with an extraordinary sense of vitality and even personality. Freyja Hartzell makes a case for the importance of Riemerschmid's designed objects in the development of modern design—and for the power of everyday things to change the way we live our lives, understand history, and design our future. Hartzell offers for the first time an interpretive history of Riemerschmid's design practice embedded in a fresh examination of modernism told by the objects themselves.

Hartzell explores Riemerschmid's early drawings, paintings, and prints; his interiors and housewares, which represent a modernist shift from exclusive image to accessible object; his designs for women's clothing; his immensely popular wooden furniture; his serially produced ceramics and their appeal to German nationalism of the period; and his complex and compelling pattern designs for textiles and wallpapers, the only part of his creative practice that spanned his entire career. Riemerschmid, Hartzell writes, was at his most inventive, playful, and free when designing things for everyday use. His uniquely designed forms allow us to recognize the utilitarian object not just as a tool but as an individual being—a thing with a soul.

"Freyja Hartzell's pioneering study examines Richard Riermschmid's uncanny, seemingly animated, designed objects in relation to empathy theory, emergent psychoanalytic concepts, and to biological and art historical discourses. By making visible the paradoxes of Riemerschmid—iconoclast and historicist; avant-gardist and commercial designer; progressive and nationalist—Hartzell offers a significant rethinking of modernism itself."

—Tim Barringer, Yale University Paul Mellon Professor of the History of Art, Yale University

Freyja Hartzell teaches the history of design, architecture, and art at Bard Graduate Center in New York City. She is currently involved in new research on dolls, automatons, and robots in the history of design and their relationship to humans and humanness; she will curate an exhibition on this topic opening at Bard Graduate Center in 2025.

design

October
7 x 9, 336 pp.
92 color illus., 42 b&w illus.

US $39.95T/$53.95 CAN cloth
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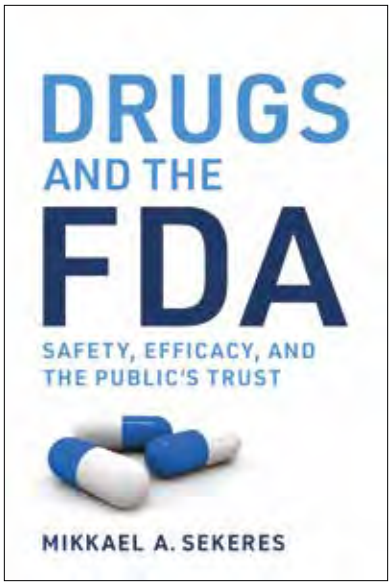


Drugs and the FDA

Safety, Efficacy, and the Public's Trust

Mikkael A. Sekeres

How the FDA was shaped by public health crises and patient advocacy, told against a background of the contentious hearings on the breast cancer drug Avastin.

Food and Drug Administration approval for COVID-19 vaccines and the controversial Alzheimer's drug Aduhelm made headlines, but few of us know much about how the agency does its work. Why is the FDA the ultimate US authority on a drug's safety and efficacy? In *Drugs and the FDA*, Mikkael Sekeres—a leading oncologist and former chair of the FDA's cancer drug advisory committee—tells the story of how the FDA became the most trusted regulatory agency in the world. It took a series of tragedies and health crises, as well as patient advocacy, for the government to take responsibility for ensuring the efficacy and safety of drugs and medical devices.

Before the FDA existed, drug makers could hawk any potion, claim treatment of any ailment, and make any promise on a label. But then, throughout the twentieth century, the government was forced to take action when children were poisoned by contaminated diphtheria and smallpox vaccines, an early antibiotic contained antifreeze, a drug prescribed for morning sickness in pregnancy caused babies to be born disfigured, and access to AIDS drugs was limited to a few clinical trials while thousands died. Sekeres describes all these events against the backdrop of the contentious 2011 hearings on the breast cancer drug Avastin, in which he participated as a panel member. The Avastin hearings, he says, put to the test a century of the FDA's evolution, demonstrating how its system of checks and balances works—or doesn't work.

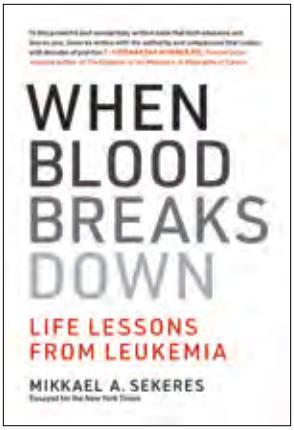
Mikkael A. Sekeres is Professor of Medicine and Chief of the Division of Hematology at the Sylvester Comprehensive Cancer Center, University of Miami Miller School of Medicine, and former Chair of the Oncologic Drugs Advisory Committee of the FDA. A regular contributor to the Well section of the *New York Times*, he is the author of *When Blood Breaks Down: Life Lessons from Leukemia* (MIT Press).

health | medicine

September
6 x 9, 320 pp.
20 b&w illus.

US $29.95T/$39.95 CAN cloth
978-0-262-04731-9

photo caption



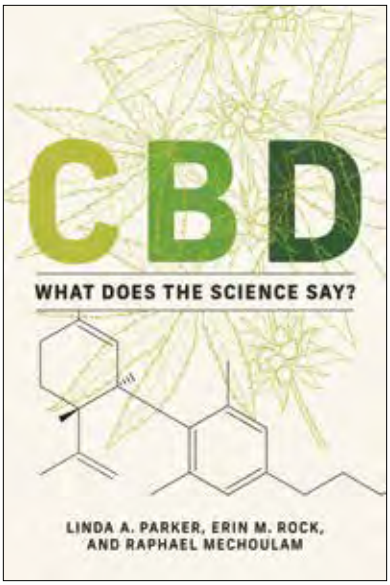
Also Available

When Blood Breaks Down
Life Lessons from Leukemia
Mikkael A. Sekeres
$26.95T cloth
978-0-262-04372-4

CBD

What Does the Science Say?

Linda A. Parker, Erin M. Rock, and Raphael Mechoulam



A comprehensive review of the scientific literature on the possible benefits of CBD, describing findings from both preclinical and human clinical studies.

CBD (cannabidiol), a nonintoxicating compound derived from the cannabis plant, can be found in products ranging from lotion and smoothies to chewable gummies and pet treats. It's been promoted—but not always scientifically validated—as a treatment for medical conditions including psychosis, anxiety, pain, and even cancer. In this book, three leading cannabis researchers look at the science of CBD, offering a comprehensive review of the scientific literature on the possible benefits of CBD and describing their findings from both preclinical and human clinical studies.

As it turns out, the current CBD fad has some basis in preclinical animal research that indicates potential beneficial effects. Clinical studies, hampered by regulations governing research with cannabis, have lagged behind the basic animal research. The authors examine what research shows about chemical and pharmacological aspects of CBD and CBD's interaction with THC, the main psychotropic compound found in cannabis. They go on to review the current state of knowledge about CBD's effectiveness in treating epilepsy, cancer, nausea, pain, anxiety, PTSD, depression, sleep disorders, psychosis, and addiction.

Linda A. Parker is Professor Emeritus in the Psychology and Collaborative Neuroscience Program at the University of Guelph and the author of *Cannabinoids and the Brain* (MIT Press). **Erin M. Rock** is a Postdoctoral Fellow and Adjunct Faculty member in the Psychology and Collaborative Neuroscience Program at the University of Guelph. **Raphael Mechoulam**, often called "the father of cannabis research," is Lionel Jacobson Professor of Medicinal Chemistry at Hebrew University and winner of the 2019 Harvey Prize for outstanding contributions to science and technology.

health | medicine

August
6 x 9, 320 pp.
8 b&w illus.

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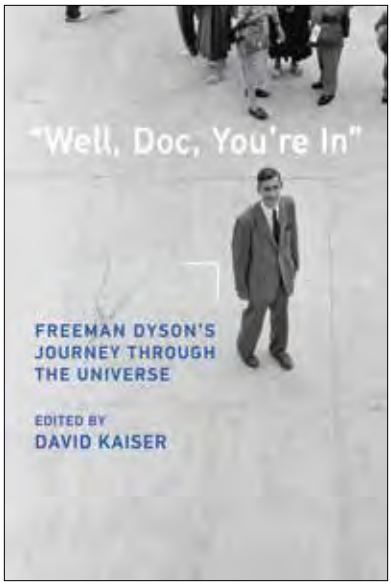
978-0-262-54405-4

"CBD is a topic surrounded by anecdote and hype, but this book offers an accessible, timely and even-handed evaluation of evidence. Without overselling or pushing a particular agenda (problems that are rife in the cannabis field), the book raises critical scientific issues and is an important and interesting contribution to the literature."

—Margaret Haney, Director of the Cannabis Research Laboratory; Professor of Neurobiology at the Columbia University Irving Medical Center

"Cannabinoid science is novel and the market has grown at a faster rate than research and regulation. This book provides a comprehensive, fact-based summary that is desperately needed by consumers, patients, practitioners, and policy makers to inform important decisions."

—Shawn Hauser, Partner, Vicente Sederberg LLP



"Well, Doc, You're In"

Freeman Dyson's Journey through the Universe

edited by David Kaiser

The life and work of Freeman Dyson—renowned scientist, visionary, and iconoclast—and his particular way of thinking about deep questions.

Freeman Dyson (1923–2020)—renowned scientist, visionary, and iconoclast—helped invent modern physics. Not bound by disciplinary divisions, he went on to explore foundational topics in mathematics, astrophysics, and the origin of life. General readers were introduced to Dyson's roving mind and heterodox approach in his 1979 book *Disturbing the Universe*, a poignant autobiographical reflection on life and science. *"Well, Doc, You're In"* (the title quotes Richard Feynman's remark to Dyson at a physics conference) offers a fresh examination of Dyson's life and work, exploring his particular way of thinking about deep questions that range from the nature of matter to the ultimate fate of the universe.

The chapters—written by leading scientists, historians, and science journalists, including some of Dyson's colleagues—trace Dyson's formative years, his budding interests and curiosities, and his wide-ranging work across the natural sciences, technology, and public policy. They describe Dyson's innovations at the intersection of quantum theory and relativity, his novel nuclear reactor design (and his never-realized idea of a spacecraft powered by nuclear weapons), his years at the Institute for Advanced Study, and his foray into cosmology. In the coda, Dyson's daughter Esther reflects on growing up in the Dyson household. *"Well, Doc, You're In"* assesses Dyson's successes, blind spots, and influence, assembling a portrait of a scientist's outsized legacy.

David Kaiser is Germeshausen Professor of the History of Science and Professor of Physics at MIT. He is the author of several award-winning books on the history of science, including *Quantum Legacies: Dispatches from an Uncertain World*, and the editor of *Becoming MIT: Moments of Decision* (MIT Press). His work has been featured in *Science*, *Nature*, the *New York Times*, and the *New Yorker*.

science | physics

October
6 x 9, 304 pp.
40 b&w illus.

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978-0-262-04734-0

Contributors
Jeremy Bernstein, Robbert Dijkgraaf, Esther Dyson, George Dyson, Ann Finkbeiner, Amanda Gefter, Ashutosh Jogalekar, David Kaiser, Caleb Scharf, William Thomas

"This remarkable volume not only surveys the staggeringly diverse activities of Freeman Dyson—spanning World War II, the Cold War, and the cosmos—but also what thinking like Dyson must have been like. It's engrossing."

—Michael D. Gordin, Rosengarten Professor of Modern and Contemporary History, Princeton University"

Salvador Luria

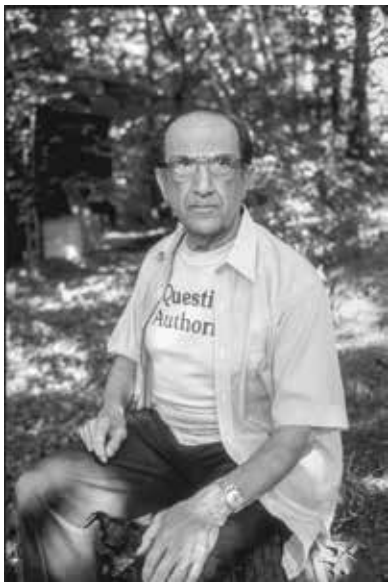
Rena Selya

The life of Nobel-winning biologist Salvador Luria, whose passion for science was equaled by his commitment to political engagement in Cold War America.

Blacklisted from federal funding review panels but awarded a Nobel Prize for his research on bacteriophage, biologist Salvador Luria (1912–1991) was as much an activist as a scientist. In this first full-length biography of Luria, Rena Selya draws on extensive archival research; interviews with Luria's family, colleagues, and students; and FBI documents obtained through the Freedom of Information Act to create a compelling portrait of a man committed to both science and society.

In addition to his work with viruses and bacteria in the 1940s, Luria broke new ground in molecular biology and cancer research from the 1950s to the 1980s and was a leader in calling for scientists to accept an educational and advisory responsibility to the public. In return, he believed, the public should rely on science to strengthen social and political institutions.

Luria was born in Italy, where the Fascists came to power when he was ten. He left Italy for France due to the antisemitic Race Laws of 1938, and then fled as a Jewish refugee from Nazi Europe, making his way to the United States. Once an American citizen, Luria became a grassroots activist on behalf of civil rights, labor representation, nuclear disarmament, and American military disengagement from the Vietnam and Gulf Wars. Luria joined the MIT faculty in 1960, and was the founding director of the Center for Cancer Research. Throughout his life he remained as passionate about his engagement with political issues as about his science, and continued to fight for peace and freedom until his death.



Salvador Edward Luria, 1912–1991. Courtesy of Richard Howard.

"A harrowing and inspiring account of how one immigrant scientist maintained an activist identity over a career spanning Red Scares, blacklists, and the Vietnam War. Essential reading on the intersection of science and politics."

—Audra J. Wolfe, author of *Freedom's Laboratory: The Cold War Struggle for the Soul of Science*

Rena Selya is the archivist at Cedars-Sinai Medical Center.

science | biography

October
6 x 9, 248 pp.
11 illus.

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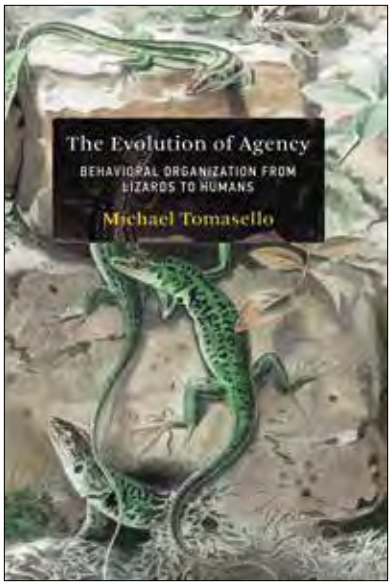


The Evolution of Agency

Behavioral Organization from Lizards to Humans

Michael Tomasello

A leading developmental psychologist proposes an evolutionary pathway to human psychological agency.

Nature cannot build organisms biologically prepared for every contingency they might possibly encounter. Instead, Nature builds some organisms to function as feedback control systems that pursue goals, make informed behavioral decisions about how best to pursue those goals in the current situation, and then monitor behavioral execution for effectiveness. Nature builds psychological agents. In a bold new theoretical proposal, Michael Tomasello advances a typology of the main forms of psychological agency that emerged on the evolutionary pathway to human beings.

Tomasello outlines four main types of psychological agency and describes them in evolutionary order of emergence. First was the goal-directed agency of ancient vertebrates, then came the intentional agency of ancient mammals, followed by the rational agency of ancient great apes, ending finally in the socially normative agency of ancient humans. Each new form of psychological organization represented increased complexity in the planning, decision-making, and executive control of behavior. Each also led to new types of experience of the environment and, in some cases, of the organism's own psychological functioning, leading ultimately to humans' experience of an objective and normative world that governs all of their thoughts and actions. Together, these proposals constitute a new theoretical framework that both broadens and deepens current approaches in evolutionary psychology.

Michael Tomasello is Professor of Psychology and Neuroscience at Duke University and Emeritus Director at the Max Planck Institute for Evolutionary Anthropology in Leipzig. His recent books include *Becoming Human, A Natural History of Human Morality, A Natural History of Human Thinking, Origins of Human Communication,* and *Why We Cooperate* (the last two published by the MIT Press).

cognitive science | philosophy

September
6 x 9, 176 pp.
15 illus.

US $30.00X/$40.00 CAN cloth
978-0-262-04700-5

"If animals are not mindless stimulus-response machines, what are they? Charles Darwin knew his theory of evolution depended on the answer. The radical idea proposed in Michael Tomasello's groundbreaking book is that animals are agents—their psychology evolved to allow control of their choices. One of the most accomplished psychologists of our time builds an overwhelming case that all psychology evolved to give freedom of choice to solve life's most unpredictable problems. As accessible as it is persuasive, this instant classic will drive scientific agendas and will be read by students of human nature for generations to come."

—Brian Hare, *New York Times* bestselling author of *The Genius of Dogs*

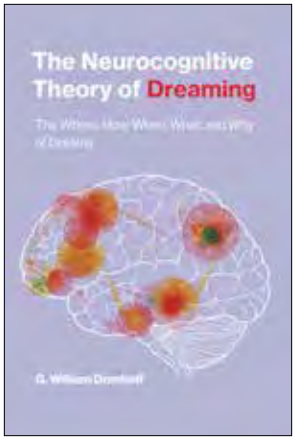
The Neurocognitive Theory of Dreaming

The Where, How, When, What, and Why of Dreams

G. William Domhoff

A comprehensive neurocognitive theory of dreaming based on the theories, methodologies, and findings of cognitive neuroscience and the psychological sciences.

G. William Domhoff's neurocognitive theory of dreaming is the only theory of dreaming that makes full use of the new neuroimaging findings on all forms of spontaneous thought and shows how well they explain the results of rigorous quantitative studies of dream content. Domhoff identifies five separate issues—neural substrates, cognitive processes, the psychological meaning of dream content, evolutionarily adaptive functions, and historically invented cultural uses—and then explores how they are intertwined. He also discusses the degree to which there is symbolism in dreams, the development of dreaming in children, and the relative frequency of emotions in the dreams of children and adults.



During dreaming, the neural substrates that support waking sensory input, task-oriented thinking, and movement are relatively deactivated. Domhoff presents the conditions that have to be fulfilled before dreaming can occur spontaneously. He describes the specific cognitive processes supported by the neural substrate of dreaming and then looks at dream reports of research participants. The "why" of dreaming, he says, may be the most counterintuitive outcome of empirical dream research. Though the question is usually framed in terms of adaptation, there is no positive evidence for an adaptive theory of dreaming. Research by anthropologists, historians, and comparative religion scholars, however, suggests that dreaming has psychological and cultural uses, with the most important of these found in religious ceremonies and healing practices. Finally, he offers suggestions for how future dream studies might take advantage of new technologies, including smart phones.

G. William Domhoff is Distinguished Professor Emeritus and Research Professor at the University of California, Santa Cruz.

cognitive neuroscience

October | 6 x 9, 386 pp. | 6 illus.

US $50.00X/$66.00 CAN paper
978-0-262-54421-4

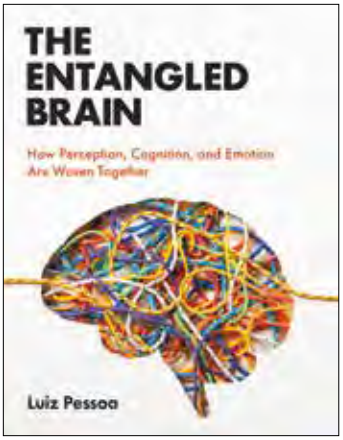
The Entangled Brain

How Perception, Cognition, and Emotion Are Woven Together

Luiz Pessoa

A new vision of the brain as a fully integrated, networked organ.

Popular neuroscience accounts often focus on specific mind-brain aspects like addiction, cognition, or memory, but *The Entangled Brain* tackles a much bigger question: What kind of object is the brain? Neuroscientist Luiz Pessoa describes the brain as a highly networked, interconnected system that cannot be neatly decomposed into a set of independent parts. One can't point to the brain and say, "This is where emotion happens" (or any other mental faculty). Pessoa argues that only by understanding how large-scale neural circuits combine multiple and diverse signals can we truly appreciate how the brain supports the mind.



Presenting the brain as an integrated organ and drawing on neuroscience, computation, mathematics, systems theory, and evolution, *The Entangled Brain* explains how brain functions result from cross-cutting brain processing, not the function of segregated areas. Parts of the brain work in a coordinated fashion across large-scale distributed networks in which disparate parts of the cortex and the subcortex work simultaneously to bring about behaviors. Pessoa intuitively explains the concepts needed to formalize this idea of the brain as a complex system and how to unleash powerful understandings built with "collective computations."

Luiz Pessoa is Professor of Psychology, member of the Program in Neuroscience and Cognitive Science, Principal Investigator of the Laboratory of Cognition and Emotion, and Director of the Maryland Neuroimaging Center at the University of Maryland, College Park.

psychology | cognitive science

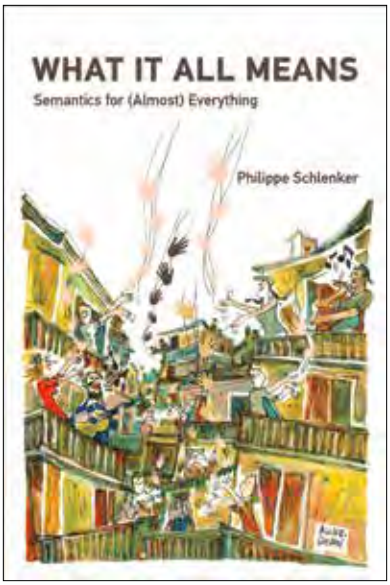
November | 6 x 9, 280 pp. | 6 color illus., 65 b&w illus.

US $40.00X/$54.00 CAN paper
978-0-262-54460-3

What It All Means

Semantics for (Almost) Everything

Philippe Schlenker



How meaning works—from monkey calls to human language, from spoken language to sign language, from gestures to music—and how meaning is connected to truth.

We communicate through language, connecting what we mean to the words we say. But humans convey meaning in other ways as well, with facial expressions, hand gestures, and other methods. Animals, too, can get their meanings across without words. In *What It All Means*, linguist Philippe Schlenker explains how meaning works, from monkey calls to human language, from spoken language to sign language, from gestures to music. He shows that these extraordinarily diverse types of meaning can be studied and compared within a unified approach—one in which the notion of truth plays a central role.

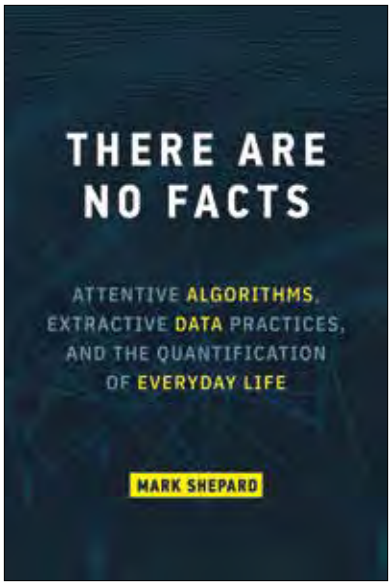
"It's just semantics" is often said dismissively. But Schlenker shows that semantics—the study of meaning—is an unsung success of modern linguistics, a way to investigate some of the deepest questions about human nature using tools from the empirical and formal sciences. Drawing on fifty years of research in formal semantics, Schlenker traces how meaning comes to life. After investigating meaning in primate communication, he explores how human meanings are built, using in some cases sign languages as a guide to the workings of our inner "logic machine." Schlenker explores how these meanings can be enriched by iconicity in sign language and by gestures in spoken language, and then turns to more abstract forms of iconicity to understand the meaning of music. He concludes by examining paradoxes, which—being neither true nor false—test the very limits of meaning.

Philippe Schlenker is Senior Research Fellow at CNRS (Institut Jean-Nicod, Paris) and Global Distinguished Professor at NYU. His work spans all aspects of meaning, from philosophical logic to formal semantics, in both spoken and signed languages.

linguistics

November
6 x 9, 520 pp.
176 b&w illus.

US $29.95T/$39.95 CAN cloth
978-0-262-04743-2



There Are No Facts

Attentive Algorithms, Extractive Data Practices, and the Quantification of Everyday Life

Mark Shepard

The entanglements of people and data, code and space, knowledge and power: how data and algorithms shape the world—and shape us within that world.

With the emergence of a post-truth world, we have witnessed the dissolution of the common ground on which truth claims were negotiated, individual agency enacted, and public spheres shaped. What happens when, as Nietzsche claimed, there are no facts, but only interpretations? In this book, Mark Shepard examines the entanglements of people and data, code and space, knowledge and power that have produced an uncommon ground—a disaggregated public sphere where the extraction of behavioral data and their subsequent processing and sale have led to the emergence of micropublics of ever-finer granularity.

Shepard explores how these new post-truth territories are propagated through machine learning systems and social networks, which shape the public and private spaces of everyday life. He traces the balkanization and proliferation of online news and the targeted distribution of carefully crafted information through social media. He examines post-truth practices, showing how truth claims are embedded in techniques by which the world is observed, recorded, documented, and measured. Finally, he shows how these practices play out, at scales from the translocality of the home to the planetary reach of the COVID-19 pandemic—with stops along the way at an urban minimarket, an upscale neighborhood for the one percent, a Toronto waterfront district, and a national election.

Mark Shepard is Associate Professor of Architecture and Media Study at the University at Buffalo, State University of New York, where he directs the Media Arts and Architecture Program (MAAP) and the Center for Architecture and Situated Technologies (CAST). He is the editor of *Sentient City* (MIT Press). His work has been exhibited at museums, galleries and festivals internationally.

technology

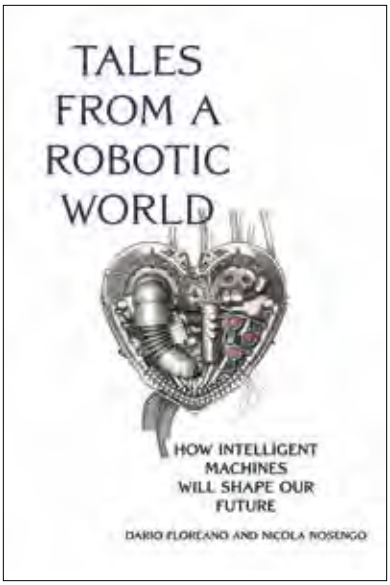
November
6 x 9, 280 pp.
56 color illus.

US $24.95T/$33.95 CAN cloth
978-0-262-04747-0

Tales from a Robotic World

How Intelligent Machines Will Shape Our Future

Dario Floreano and Nicola Nosengo



Stories from the future of intelligent machines—from rescue drones to robot spouses—and accounts of cutting-edge research that could make it all possible.

Tech prognosticators promised us robots—autonomous humanoids that could carry out any number of tasks. Instead, we have robot vacuum cleaners. But, as Dario Floreano and Nicola Nosengo report, advances in robotics could bring those rosy predictions closer to reality. A new generation of robots, directly inspired by the intelligence and bodies of living organisms, will be able not only to process data but to interact physically with humans and the environment. In this book, Floreano, a roboticist, and Nosengo, a science writer, bring us tales from the future of intelligent machines—from rescue drones to robot spouses—along with accounts of the cutting-edge research that could make it all possible.

These stories from the not-so-distant future show us robots that can be used for mitigating effects of climate change, providing healthcare, working with humans on the factory floor, and more. Floreano and Nosengo tell us how an application of swarm robotics could protect Venice from flooding, how drones could reduce traffic on the congested streets of mega-cities like Hong Kong, and how a "long-term relationship model" robot could supply sex, love, and companionship. After each fictional scenario, they explain the technologies that underlie it, describing advances in such areas as soft robotics, swarm robotics, aerial and mobile robotics, humanoid robots, wearable robots, and even biohybrid robots based on living cells. Robotics technology is no silver bullet for all the world's problems—but it can help us tackle some of the most pressing challenges we face.

Dario Floreano is Director of the Laboratory of Intelligent Systems at the Swiss Federal Institute of Technology Lausanne (EPFL). He is the coauthor of *Evolutionary Robotics* and *Bio-Inspired Artifcial Intelligence* (both published by the MIT Press). **Nicola Nosengo** is a science writer and science communicator at EPFL. His work has appeared in *Nature*, the *Economist*, *Wired*, and other publications, and he is the Chief Editor of *Nature Italy*.

technology

September
6 x 9, 280 pp.
10 b&w illus.

US $29.95T/$39.95 CAN cloth
978-0-262-04744-9

The Anthropocene Cookbook

Recipes and Opportunities for Future Catastrophes

Zane Cerpina and Stahl Stenslie

More than sixty speculative art and design projects explore how art, food, and creative thinking can prepare us for future catastrophes.

In the age of the Anthropocene—a era characterized by human-caused climate disaster—catastrophes and dystopias loom. *The Anthropocene Cookbook* takes our planetary state of emergency as an opportunity to seize the moment to imagine constructive change and new ideas. How can we survive in an age of constant environmental crises? How can we thrive? *The Anthropocene Cookbook* answers these questions by presenting a series of investigative art and design projects that explore how art, food, and creative thinking can prepare us for future catastrophes. This cookbook of ideas rethinks our eating habits and traditions, challenges our food taboos, and proposes new recipes for humanity's survival.

These more than sixty projects propose new ways to think and make food, offering tools for creative action rather than traditional recipes. They imagine modifying the human body to digest cellulose, turning plastic into food, tasting smog, extracting spices and medicines from sewage, and growing meat in the lab. They investigate provocative possibilities: What if we made cheese using human bacteria, enabled human photosynthesis through symbiosis with algae, and brought back extinct species in order to eat them? The projects are diverse in their creative approaches and their agendas—multilayered, multifaceted, hybrid, and cross-pollinated. *The Anthropocene Cookbook* offers a survival guide for a future gone rogue, a road map to our edible futures.

Zane Cerpina is a curator and writer working within experimental and digital arts. **Stahl Stenslie** is a curator and researcher specializing in experimental and emerging aesthetics, and disruptive technologies who has held positions at Academy of Media Arts Cologne, Oslo National Academy of the Arts, and Aalborg University.

design | environment

October
7 x 9, 272 pp.
59 color illus.

US $34.95T/$45.95 CAN cloth
978-0-262-04740-1

Educating for the Anthropocene

Schooling and Activism in the Face of Slow Violence

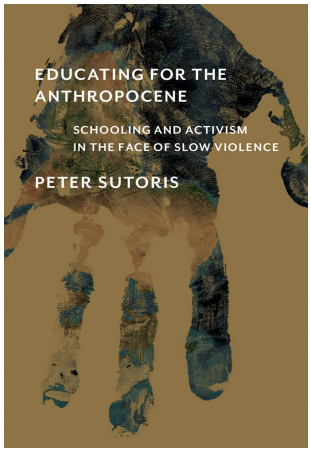
Peter Sutoris

The work of environmental educators and activists in India and South Africa offers new models for schooling and environmental activism.

Education has never played as critical a role in determining humanity's future as it does in the Anthropocene, an era marked by humankind's unprecedented control over the natural environment. Drawing on a multisited ethnographic project among schools and activist groups in India and South Africa, Peter Sutoris explores education practices in the context of impoverished, marginal communities where environmental crises intersect with colonial and racist histories and unsustainable practices. He exposes the depoliticizing effects of schooling and examines cross-generational knowledge transfer within and beyond formal education. Finally, he calls for the bridging of schooling and environmental activism, to find answers to the global environmental crisis.

The onset of the Anthropocene challenges the very definition of education and its fundamental goals, says Sutoris. Researchers must look outside conventional models and practices of education for inspiration if education is to live up to its responsibilities at this critical time. For decades, environmental activist movements in some countries have wrestled with questions of responsibility and action in the face of environmental destruction; they inhabited the mental world of the Anthropocene before much of the rest of the world. Sutoris highlights an innovative research methodology of participatory observational filmmaking, describing how films made by children in the Indian and South African communities provide a window into the ways that young people make sense of the future of the Anthropocene. It is through their capacity to imagine the world differently, Sutoris argues, that education can reinvent itself.

Peter Sutoris is an environmental anthropologist, Lecturer (Assistant Professor) in Education at the University of York, and Honorary Senior Research Associate at University College London.



education

October | 6 x 9, 296 pp. | 39 b&w illus.

US $40.00X/$54.00 CAN paper
978-0-262-54417-7

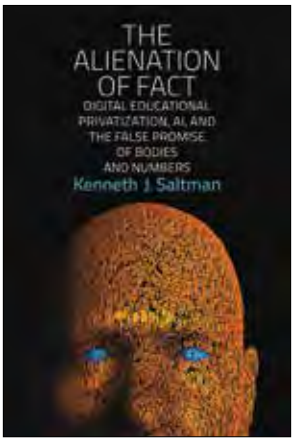
The Alienation of Fact

Digital Educational Privatization, AI, and the False Promise of Bodies and Numbers

Kenneth J. Saltman

An investigation of the role of educational privatization and technology in the crises of truth and agency.

Today, conspiracy theories run rampant, attacks on facts have become commonplace, and systemic inequities are on the rise as individual and collective agency unravels. *The Alienation of Fact* explains the educational, technological, and ideological preconditions for these contemporary crises of truth and agency and explores the contradictions and competing visions for the future of education that lie at the center of the problem.



Schools are increasingly reimagined as businesses, and high-stakes standardized testing and curricula, for-profit charter schools, and the rise of educational AI put capital and technology at the center of education. Yet even as our society demands measure, data, and facts, politicians and news outlets regularly make unfounded assertions. How should we make sense of the contradictions between the demand for radical data-driven empiricism and the flight from evidence, argument, or theoretical justification?

In this critical investigation of the new digital directions of educational privatization—AI education, adaptive learning technology, biometrics, the quantification of play and social emotional learning—and the politics of the body, Saltman shows how the false certainty of bodies and numbers replaces deliberative and thoughtful agency in a time of increasing precarity. A distinctive contribution to scholarship on public school privatization and educational technology, politics, policy, pedagogy, and theory, *The Alienation of Fact* is a spirited call for democratic education that values creating a society of "thinking people" over capitalistic gains.

Kenneth J. Saltman is a professor of Educational Policy Studies at the University of Illinois Chicago. His recent publications include *Scripted Bodies: Corporate Power, Smart Technologies, and the Undoing of Public Education*; *The Swindle of Innovative Educational Finance*; *The Failure of Corporate School Reform*; and *Capitalizing on Disaster: Taking and Breaking Schools*.

education

November 5 1/4 x 8, 232 pp.

US $25.00X/$34.00 CAN paper
978-0-262-54436-8

Fiscal Policy under Low Interest Rates

Olivier Blanchard

Rethinking fiscal and monetary policy in an economic environment of high debt and low interest rates.

Policy makers in advanced economies find themselves in an unusual fiscal environment: debt ratios are historically high, while real interest rates are extremely low. Such a fundamental change, which seems likely to last, calls for a rethinking of the role of fiscal and monetary policy—and this is just what Olivier Blanchard proposes in *Fiscal Policy under Low Interest Rates*.

There is a wide set of opinions about the direction fiscal policy should take. Some, pointing to the high debt levels, make debt reduction an absolute priority. Others, pointing to the low interest rates, are less worried; they suggest that there is still fiscal space, and, if justified, further increases in debt should not be ruled out. Blanchard argues that low interest rates decrease not only the fiscal costs of debt, but also the welfare costs of debt. At the same time, he shows how low rates decrease the room for maneuver of monetary policy—and thus increase the benefits of using fiscal policy, including deficits and debt, for macroeconomic stabilization. In short, low rates imply lower costs and higher benefits of debt.

Having sketched what optimal policy looks like, Blanchard considers three examples of fiscal policy in action: fiscal consolidation in the wake of the Global Financial Crisis, the large increase in debt in Japan, and the current US fiscal and monetary policy mix. His conclusions hold practical implications for economic and fiscal policy makers, bankers, and politicians around the world.

Olivier Blanchard is C. Fred Bergsten Senior Fellow at the Peterson Institute for International Economics and Robert Solow Professor Economics Emeritus at MIT. He was Chief Economist at the International Monetary Fund from 2008 to 2015.

January | 6 x 9, 192 pp. | 20 b&w illus.

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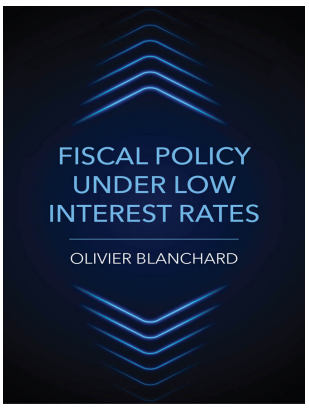

A World Trading System for the Twenty-First Century

Robert W. Staiger

When designing a world trading system for the twenty-first century, "Keep calm and carry on" beats "Move fast and break things."

Global trade is in trouble. Climate change, digital trade, offshoring, the rise of emerging markets led by China: Can the World Trade Organization (WTO), built for trade in the twentieth century, meet the challenges of the twenty-first? The answer is yes, Robert Staiger tells us, arguing that adapting the WTO to the changed economic environment would serve the world better than a radical reset.

Governed by the WTO, on the principles of the General Agreement on Tariffs and Trade (GATT), global trade rules traditionally focus on "shallow integration"—with an emphasis on reducing tariffs and trade impediments at the border—rather than "deep integration," or direct negotiations over behind-the-border measures. Staiger charts the economic environment that gave rise to the former approach, explains when and why it worked, and surveys the changing landscape for global trade. In his analysis, the terms-of-trade theory of trade agreements provides a compelling framework for understanding the success of GATT in the twentieth century. And according to this understanding, Staiger concludes, the logic of GATT's design transcends many, if not all, of the current challenges faced by the WTO.

With its penetrating view of the evolving global economic environment, *A World Trading System for the Twenty-First Century* shows us a global trading system in need of reform, and Staiger makes a persuasive case for using the architecture of the GATT/WTO as a basis for that reform.

Robert W. Staiger is Roth Family Distinguished Professor in the Arts and Sciences and Professor of Economics at Dartmouth College and a Research Associate of the National Bureau of Economic Research.

December | 6 x 9, 304 pp. | 19 figures

US $55.00X/$73.00 CAN cloth
978-0-262-04730-2

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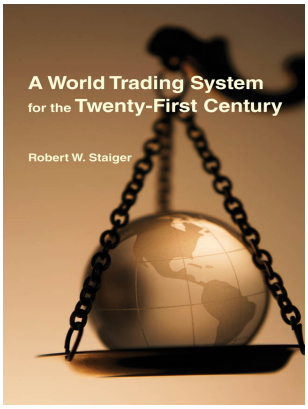

Age of Auto Electric

Environment, Energy, and the Quest for the Sustainable Car

Matthew N. Eisler

The electric vehicle revival reflects negotiations between public policy, which promotes clean, fuel-efficient vehicles, and the auto industry, which promotes high-performance vehicles.

Electric cars were once as numerous as internal combustion engine cars before all but vanishing from American roads around World War I. Now, we are in the midst of an electric vehicle revival and the quest for a sustainable car seems to be within reach. In *Age of Auto Electric*, Matthew N. Eisler shows that the halting development of the electric car in the intervening decades was a consequence of tensions between environmental, energy, and economic policy imperatives that informed a protracted reappraisal of the automobile system. These factors drove the electric vehicle revival, argues Eisler, hastening automaking's transformation into a science-based industry in the process.

Challenging the common assumption that the electric vehicle revival is due to the development of better batteries, *Age of Auto Electric* instead focuses on changing environmental and socioeconomic conditions, energy and environmental policies, systems of energy conversion and industrial production, and innovation practices that affected the prevalence and popularity of electric vehicles in recent decades. Eisler describes a world in transition from legacy to alternative energy-conversion systems and the promises, compromises, new problems, and unintended consequences that enterprise has entailed.

Matthew N. Eisler is Lecturer of History at the University of Strathclyde, Glasgow.

technology | business

December | 6 x 9, 378 pp.

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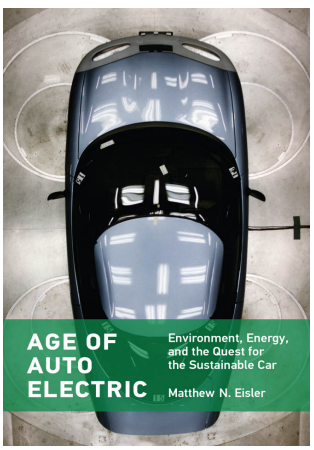
978-0-262-54457-3

Transformations: Studies in the History of Science and Technology



Arcade Britannia

A Social History of the British Amusement Arcade

Alan Meades

The story of the British amusement arcade from the 1800s to the present.

Amusement arcades are an important part of British culture, yet discussions of them tend to be based on American models. Alan Meades, who spent his childhood happily playing in British seaside arcades, presents the history of the arcade from its origins in traveling fairs of the 1800s to the present. Drawing on firsthand accounts of industry members and archival sources, including rare photographs and trade publications, he tells the story of the first arcades, the people who made the machines, the rise of video games, and the legislative and economic challenges spurred by public fears of moral decline.

Arcade Britannia highlights the differences between British and North American arcades, especially in terms of the complex relationship between gambling and amusements. He also underlines Britain's role in introducing coin-operated technologies into Europe, as well as the industry's close links to America and, especially, Japan. He shows how the British arcade is a product of centuries of public play, gambling, entrepreneurship, and mechanization. Examining the arcade's history through technological, social, cultural, biographic, and legislative perspectives, he describes a pendulum shift between control and liberalization, as well as the continued efforts of concerned moralists to limit and regulate public play. Finally, he recounts the impact on the industry of legislative challenges that included vicious taxation, questions of whether copyright law applied to video-game code, and the peculiar moment when every arcade game in Britain was considered a cinema.

Alan Meades teaches the undergraduate and postgraduate Games Design courses at Canterbury Christ Church University, UK. He is the author of *Understanding Counterplay in Videogames*.

game studies

October | 6 x 9, 343 pp. | 50 b&w illus.

US $30.00X/$40.00 CAN paper
978-0-262-54470-2

Whiteness

Martin Lund

The socially constructed phenomenon of whiteness: how it was created, how it changes, and how it protects and privileges people who are perceived as white.

This volume in the MIT Press Essential Knowledge series examines the socially constructed phenomenon of whiteness, tracing its creation, its changing formation, and its power to privilege and protect people who are perceived as white. Whiteness, author Martin Lund explains, is not one single idea but a shifting, overarching category, a flexible cluster of historically, culturally, and geographically contingent ideals and standards that enable systems of hierarchical classification. Lund discusses words used to talk about whiteness, from white privilege to white fragility; the intersections of whiteness with race, class, and gender; whiteness in popular culture; and such ideas as "colorblindness" and "reverse racism," which, he argues, actually uphold whiteness.

Lund shows why it is important to keep talking and thinking about whiteness. The word "whiteness," he writes, doesn't describe; it conjures something into being. Drawing on decades of critical whiteness studies and citing a range of examples (primarily from the United States and Sweden), Lund argues that whiteness is continually manufactured and sustained through language, laws, policies, science, and representations in media and popular culture. It is often positioned as normative, even universal. And despite its innocuous-seeming manifestations in sitcoms and superheroes, whiteness is always in the service of racial domination.

Martin Lund is Senior Lecturer, Department of Society, Culture, and Identity at Malmö University. He is the author of *Re-Constructing the Man of Steel: Superman 1938–1941*, *Jewish American History*, and the *Invention of the Jewish–Comics Connection*.

social science | cultural studies

October
5 x 7, 272 pp.
4 b&w illus.

US $16.95T/$22.95 CAN paper
978-0-262-54419-1

The MIT Press Essential Knowledge series

Placebos

Kathryn T. Hall

The biological power of the placebo effect.

The power of placebos to ameliorate symptoms has been with us for centuries. Western medicine today is finding it increasingly difficult to ignore the efficacy of placebos. In some clinical trials with placebos as controls, inert or sham replicas of active pharmaceutical drugs and even sham surgeries have been found to be as beneficial as the intervention being tested. In this volume in the MIT Press Essential Knowledge series, Kathryn Hall examines the power of placebos, showing how their effects can influence our clinical trials, clinical encounters and, collectively, Hall argues, our public health.

Hall, who has studied the placebo effect for years, reviews the history of the placebo in medicine, tracing its evolution from quackery and patent medicine to its use as a control in clinical trials. She considers the ways that expectations and learning affect our response to placebos; advances in neuroimaging that reveal the inner workings of the placebo effect; the "nocebo" effect; placebo controls in randomized clinical trials; and the use of psychological profiles and genetics to predict individual placebo response. The effects of placebos have been hiding in plain sight; with this book, Hall helps bring them into clearer view.

Kathryn T. Hall is Deputy Executive Director of Boston Public Health Commission and Assistant Professor (part-time) in Medicine at Harvard Medical School and Associate Molecular Biologist in the Division of Preventive Medicine at Brigham and Women's Hospital.

health | medicine

October
5 x 7, 216 pp.
15 b&w illus.

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The MIT Press Essential Knowledge series

Hunting

A Cultural History

Jan E. Dizard and Mary Zeiss Stange

The history of hunting, from Stone Age hunter-gatherers to today's sport hunters.

Hunting has a long history, beginning with our hominid ancestors. The invention of the spear allowed early humans to graduate from scavenging to actual hunting. The famous cave paintings at Lascaux show a meticulous knowledge of animal behavior and anatomy that only a hunter would have. This volume in the MIT Press Essential Knowledge series traces the evolution of hunting, from Stone Age hunting and gathering to today's regulated sport hunting.

Humans have been hunting since we became human—but did hunting make us human? The authors consider and question the "hunting hypothesis of human origins," noting that according to this theory, "hunting" meant hunting by men. They explore hunting in the Stone Age and how, beginning some ten thousand years ago, the spread of agriculture led to the emergence of empires and attempts by elites to monopolize hunting. They examine the democratization of hunting in the American colonies and how hunters decimated, but then, in the twentieth century, rallied to save game animals from extinction. They describe how some European and postcolonial societies have managed wildlife and hunting, consider the difficulties of living with abundant wildlife—even as many nongame species are disappearing—and trace the implications of the increasing participation of women in hunting for the future of hunting.

Jan E. Dizard is Charles Hamilton Houston Professor of American Culture Emeritus at Amherst College. He is the author of books and articles on the changing family, race relations, and, of particular relevance to hunting, articles on environmental policy, hunting ethics, and wildlife. **Mary Zeiss Stange** is Professor Emerita of Women's Studies and Religion at Skidmore College. She is internationally recognized as the authority on women and hunting, and specializes in writing and speaking about women, guns, hunting, and ecofeminism.

history | environment

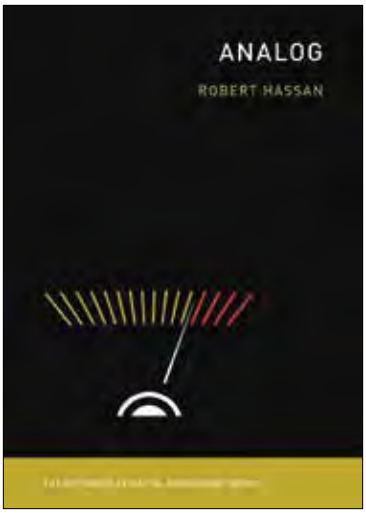
October
5 x 7, 248 pp.
2 figures

US $16.95T/$22.95 CAN paper
978-0-262-54329-3

The MIT Press Essential Knowledge series

Analog

Robert Hassan



Why, surrounded by screens and smart devices, we feel a deep connection to the analog—vinyl records, fountain pens, Kodak film, and other nondigital tools.

We're surrounded by screens; our music comes in the form of digital files; we tap words into a notes app. Why do we still crave the "realness" of analog, seeking out vinyl records, fountain pens, cameras with film? In this volume in the MIT Press Essential Knowledge series, Robert Hassan explores our deep connection to analog technology. Our analog urge, he explains, is about what we've lost from our technological past, something that's not there in our digital present. We're nostalgic for what we remember indistinctly as somehow more real, more human. Surveying some of the major developments of analog technology, Hassan shows us what's been lost with the digital.

Along the way, he discusses the appeal of the 2011 silent, black-and-white Oscar-winning film *The Artist*; the revival of the non-e-book book; the early mechanical clocks that enforced prayer and worship times; and the programmable loom. He describes the effect of the typewriter on Nietzsche's productivity, the pivotal invention of the telegraph, and the popularity of the first televisions despite their iffy picture quality.

The transition to digital is marked by the downgrading of human participation in the human-technology relationship. We have unwittingly unmoored ourselves, Hassan warns, from the anchors of analog technology and the natural world. Our analog nostalgia is for those ancient aspects of who and what we are.

Robert Hassan is Professor of Media and Communication at the University of Melbourne. He is the author of *The Condition of Digitality*, *The Age of Distraction*, and other books.

technology

January
5 x 7, 272 pp.
22 b&w illus.

US $16.95T/$22.95 CAN paper
978-0-262-54449-8

The MIT Press Essential Knowledge series

Happiness

Tim Lomas

A concise and engaging exploration of how we understand happiness.

What does it mean to feel happiness? As a state of mind, it's elusive. As a concept—despite the plethora of pop psychology books on the subject—it's poorly understood. In this volume of the MIT Press Essential Knowledge series, psychologist Tim Lomas offers a concise and engaging overview of our current understanding of happiness. Lomas explains that although the field of positive psychology, which focuses on happiness, emerged only in the last twenty-five years, interest in the meaning of happiness goes back several millennia. Drawing on a variety of disciplines, from philosophy and sociology to economics and anthropology, Lomas offers an expansive vision of what happiness means, exploring a significant range of experiential territory.

After considering such related concepts as wellbeing and flourishing, Lomas traces ideas of happiness from the ancient Buddhist notions of sukha and nirvana through Aristotle's distinction between hedonic and eudaemonic happiness to today's therapeutic and scientific approaches. He discusses current academic perspectives, looking at the breadth of happiness research across disciplines; examines the mechanics of happiness—the physiological, psychological, phenomenological, and sociocultural processes that make up happiness; explores the factors that influence happiness, both individual and social; and discusses the cultivation of happiness.

Tim Lomas is a Research Affiliate at the Human Flourishing Program at Harvard University and the author of *Translating Happiness: A Cross-Cultural Lexicon of Well-Being*. His work has been featured in *Time*, the *New Yorker*, *Vox*, *Scientific American*, and the *Atlantic*.

psychology | science

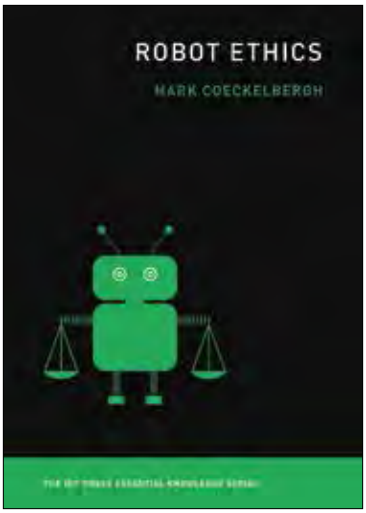
January
5 x 7, 304 pp.
15 b&w illus.

US $16.95T/$22.95 CAN paper
978-0-262-54420-7

The MIT Press Essential Knowledge series

Robot Ethics

Mark Coeckelbergh



A guide to the ethical questions that arise from our use of industrial robots, robot companions, self-driving cars, and other robotic devices

Does a robot have moral agency? Can it be held responsible for its actions? Do humans owe robots anything? Will robots take our jobs? These are some of the ethical and moral quandaries that we should address now, as robots and other intelligent devices become more widely used and more technically sophisticated. In this volume in the MIT Press Essential Knowledge series, philosopher Mark Coeckelbergh does just that. He considers a variety of robotics technologies and applications—from robotic companions to military drones—and identifies the ethical implications of their use. Questions of robot ethics, he argues, are not just about robots but are, crucially, about humans as well.

Coeckelbergh examines industrial robots and their potential to take over tasks from humans; "social" robots and possible risks to privacy; and robots in health care and their effect on quality of care. He considers whether a machine can be moral, or have morality built in; how we ascribe moral status; and if machines should be allowed to make decisions about life and death. When we discuss robot ethics from a philosophical angle, Coeckelbergh argues, robots can function as mirrors for reflecting on the human. Robot ethics is more than applied ethics; it is a way of doing philosophy.

Mark Coeckelbergh is Professor of Philosophy of Media and Technology at the University of Vienna. He is the author of *New Romantic Cyborgs: Romanticism, Information Technology, and the End of the Machine*, *AI Ethics* (both published by the MIT Press), *Introduction to Philosophy of Technology*, and other books.

technology | philosophy

September
5 x 7, 272 pp.
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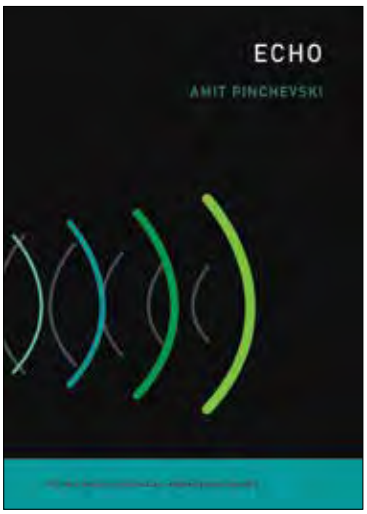

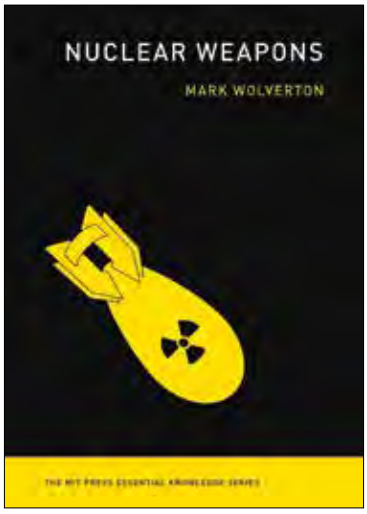

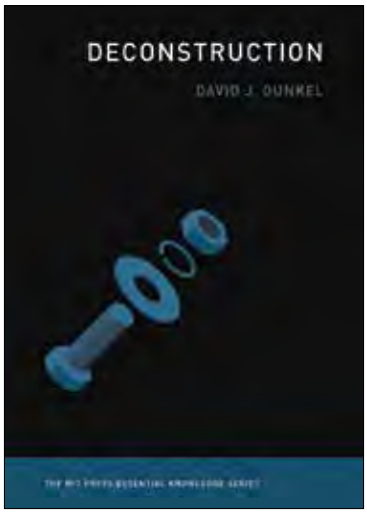

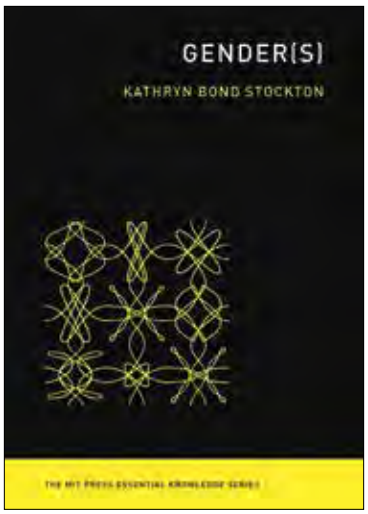
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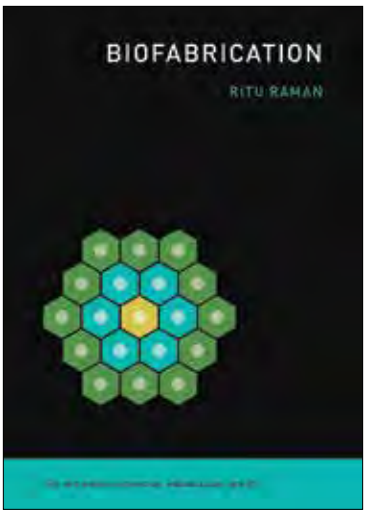
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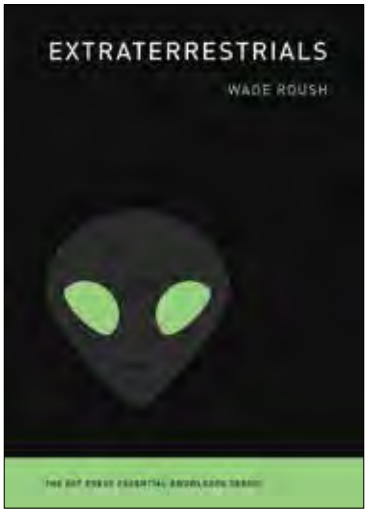
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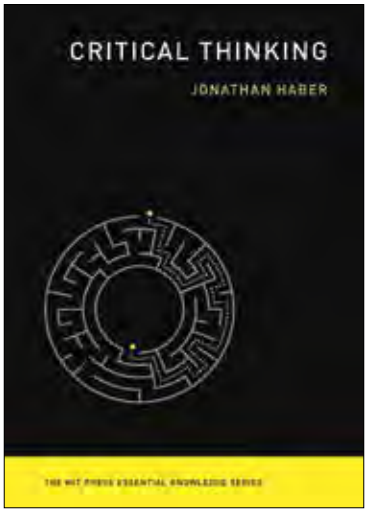
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JONATHAN HABER


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Under the direction of Joshua Glenn, the MIT Press's Radium Age is reissuing notable proto-science fiction stories from the underappreciated era between 1900 and 1935, with new contributions by historians, science journalists, and science fiction authors.

Covers by Seth

"Edwin Vincent Odle's ominous, droll, and unforgettable *The Clockwork Man* is a missing link between Lewis Carroll and John Sladek or Philip K. Dick."

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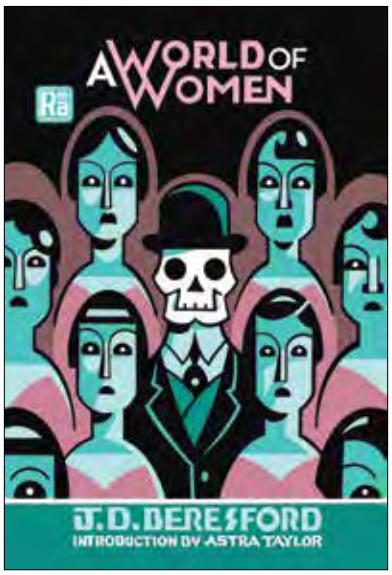

"*A World of Women* speaks as urgently to the world today as to that of 100 years ago in its insistence that crisis must also be recognized as opportunity—to change our society, not to restore it."

—Sherryl Vint, Professor and Chair, Department of English, University of California, Riverside

"For early SF buffs, this will be a substantial delight."

—Publishers Weekly

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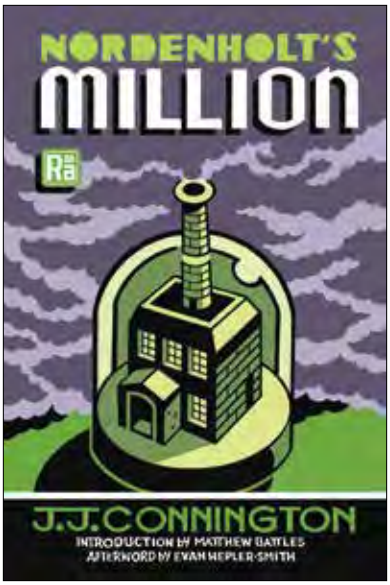
Nordenholt's Million

J. J. Connington

introduction by Matthew Battles

afterword by Evan Hepler-Smith



As a bacteria threatens to wipe out humankind, a plutocrat sets himself up as the benignant dictator of a survivalist colony.

In this novel originally published in 1923, as denitrifying bacteria inimical to plant growth spreads around the world, toppling civilizations and threatening to wipe out humankind, the British plutocrat Nordenholt sets himself up as the benignant dictator of a ruthlessly efficient, entirely undemocratic, survivalist colony established in Scotland's Clyde Valley. Discovering just how far their employer is willing to go in his effort to spare one million lives, Jack Flint, the colony's director of operations, and Elsa Huntingtower, Nordenholt's personal assistant, are forced to grapple with the question of whether a noble end justifies dastardly means.

Under the pseudonym J. J. Connington, **Alfred Walter Stewart** (1880–1947) wrote seventeen well-received detective novels; *Nordenholt's Million* is his only science fiction novel. Stewart was a distinguished British chemist and author of the popular textbooks Recent Advances in Organic Chemistry (1908) and Recent Advances in Physical and Inorganic Chemistry (1909). Via a 1918 theory of the physical chemistry of radioactivity, he contributed the term *isobar*—as complementary to the term isotope—to science. **Matthew Battles** is the author of *Library: An Unquiet History*, *Palimpsest*, and *Tree*, as well as the story collection *The Sovereignties of Invention*. His writing on the cultural dimensions of science, technology, and the natural world have appeared in the *Atlantic*, the *Boston Globe*, and *Orion*. For Harvard's metaLAB, he develops research into the dark abundance of collections, cultural and technology, and conditions of experience in the context of deep time. **Evan Hepler-Smith** teaches the history of science and technology and environmental history at Duke University. He has a special interest in the history of chemicals and chemistry, information technology, and environmental regulation. His book in progress is entitled *Compound Words: Chemical Information and the Molecular World*. His writing has been published in the *New York Times*, the *Wall Street Journal*, Time.com, and *Public Books*.

science fiction

August
5 1/4 x 8, 394 pp.

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Radium Age series

"The situations are tremendous, and there are horrors of all kinds. It is a thrilling book."

***—Daily Mail* (1923)**

"You may like *Nordenholt's Million* or you may detest it, but there is one thing I defy you to do, and that is to forget it."

***—Punch* (1923)**

"I can't think of a more timely moment to reissue *Nordenholt's Millions*, a chilling prediction of eco-catastrophe and the authoritarian regimes that can and do arise during such periods of chaos."

—Douglas Rushkoff, author of *Team Human*

Of One Blood

Pauline Hopkins

introduction by Minister Faust

A mixed-race Harvard medical student stumbles upon a hidden Ethiopian city, the inhabitants of which possess both advanced technologies and mystical powers.

Long before Marvel Comics gave us Wakanda, a high-tech African country that has never been colonized, this 1903 novel gave readers Reuel Brigg —a mixed-race Harvard medical student, passing as white, who stumbles upon Telassar. In this long-hidden Ethiopian city, whose wise, peaceful inhabitants possess both advanced technologies and mystical powers, Reuel discovers the incredible secret of his own birth. Now, he must decide whether to return to the life he's built, and the woman he loves, back in America—or play a role in helping Telassar take its rightful place on the world stage. Considered one of the earliest articulations of Black internationalism, *Of One Blood* takes as its theme the notion that race is a social construct perpetuated by racists.

Pauline Hopkins (1859-1930), an African-American journalist and editor of Boston's *The Colored American Magazine*, was the author of four novels: *Contending Forces: A Romance Illustrative of Negro Life North and South* (1900), *Hagar's Daughter: A Story of Southern Cast Prejudice* (1901–1902), *Winona: A Tale of Negro Life in the South and Southwest* (1902–1903), and *Of One Blood* (1903). Her work illuminated African history, racist injustice, and women's liberation, earning her a reputation as a key public intellectual of her time. **Minister Faust** is best known as author of *The Coyote Kings of the Space-Age Bachelor Pad* (2004) and 2007's Kindred Award-winning *From the Notebooks of Dr. Brain* (retitled *Shrinking the Heroes*, it also received the Philip K. Dick Award Special Citation). An award-winning journalist, community organizer, teacher, and workshop designer, Faust is also a former television host and producer, radio broadcaster, and podcaster. His 2011 TEDx talk, "The Cure For Death by Smalltalk," has been viewed more than 840,000 times.

science fiction

August
5 1/4 x 8, 260 pp.

US $19.95T/$25.95 CAN paper
978-0-262-54429-0

Radium Age series

"*Of One Blood* returns in this new edition, celebrating a seminal work of Black speculative fiction. Over a century since its original publication, Hopkins's classic remains as relevant today as ever."

—P. Djèlí Clark, author of *Ring Shout*

What Not

Rose Macaulay

introduction by Matthew De Abaitua

In a near-future England, a new government entity —the Ministry of Brains—attempts to stave off idiocracy through a program of compulsory selective breeding. Kitty Grammont, who shares the author's own ambivalent attitude to life, gets involved in the Ministry's propaganda efforts, which are detailed with an entertaining thoroughness. However, when Kitty falls in love with the Minister for Brains, a man whose genetic shortcomings make a union with her impossible, their illicit affair threatens to topple the government. Because it ridiculed wartime bureaucracy, the planned 1918 publication of *What Not*, whose alphabetical caste system would directly influence Aldous Huxley's 1932 dystopia *Brave New World*, was delayed until after the end of World War I.

Rose Macaulay (1881–1958) was an English writer who during the First World War worked in the British Propaganda Department; later, she became a civil servant in the War Office. Several of her satirical novels, including *Potterism* (1920), *Dangerous Ages* (1921), and *Told by an Idiot* (1923) were best-sellers. Macaulay was also a journalist, poet, and essayist, and the author of biographies and travelogues. She is best remembered today for her autobiographical final novel, *The Towers of Trebizond* (1956). **Matthew De Abaitua** is a Senior Lecturer in Creative Writing at the University of Essex. His debut science fiction novel *The Red Men* (2007) was shortlisted for the Arthur C. Clarke Award and adapted into a short film, Dr. Easy. His science fiction novels *IF THEN* (2015) and *The Destructives* (2016) complete the loose trilogy. His book *Self & I: A Memoir of Literary Ambition* (2018) was shortlisted for the New Angle Prize for Literature.

science fiction

October
5 1/4 x 8, 248 pp.

US $19.95T/$25.95 CAN paper
978-0-262-54430-6

Radium Age series

"A satire of Britain after World War One, where mental improvement has its own powerful government department. A cross between *Brave New World* and Orwell's 'Ministry of Truth'—all delivered with a sly wit and arch tongue."

—Philippa Levine, William Prescott Webb Chair in History and Ideas, University of Texas at Austin

"Miss Macaulay's 'prophetic comedy' is a joyous rag of Government office routine, flappery, Pelmania, Tribunals, State advertising, the Lower Journalism and 'What Not.' …. A very shrewd piece of observation, whimsicality and tempered malice."

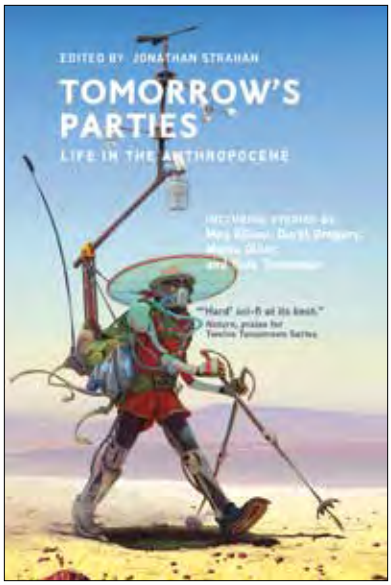
***—Punch* (1919)**

"One of the wittiest, most ironical, and altogether funniest books that have appeared these many years."

***—The Daily Telegraph* (1919)**

"As a frankly frivolous, always humorous and often witty caricature of modern tendencies, the thing is a brilllant success."

***—The Observer* (1919)**



Tomorrow's Parties

Life in the Anthropocene

edited by Jonathan Strahan

Twelve visions of living in a climate-changed world.

We are living in the Anthropocene—an era of dramatic and violent climate change featuring warming oceans, melting icecaps, extreme weather events, habitat loss, species extinction, and more. What will life be like in a climate-changed world? In *Tomorrow's Parties*, science fiction authors speculate how we might be able to live and even thrive through the advancing Anthropocene. In ten original stories by writers from around the world, an interview with celebrated writer Kim Stanley Robinson, and a series of intricate and elegant artworks by Sean Bodley, *Tomorrow's Parties* takes rational optimism as a moral imperative, or at least a pragmatic alternative to despair.

In these stories—by writers from the United Kingdom, the United States, Nigeria, China, Bangladesh, and Australia—a young man steals from delivery drones; a political community lives on an island made of ocean-borne plastic waste; and a climate change denier tries to unmask "crisis actors." Climate-changed life also has its pleasures and epiphanies, as when a father in Africa works to make his son's dreams of "Viking adventure" a reality, and an IT professional dispatched to a distant village encounters a marvelous predigital fungal network. Contributors include Pascall Prize for Criticism winner James Bradley, Hugo Award winners Greg Egan and Sarah Gailey, Philip K Dick Award winner Meg Elison, and *New York Times* bestselling author Daryl Gregory.

Jonathan Strahan is a World Fantasy Award–winning editor, anthologist, and podcaster. Reviews editor for *Locus* magazine and consulting editor for Tor.com, he cohosts and produces the Hugo-nominated *Coode Street Podcast*.

Contributors

Sean Bodley, James Bradley, Greg Egan, Meg Elison, Sarah Gailey, Daryl Gregory, Saad Z. Hossain, Malka Older, Chen Qiufan (translated by Emily Jin), Kim Stanley Robinson, Justina Robson, Tade Thompson

Praise for Twelve Tomorrows series:

"'Hard' sci-fi at its best."

—Nature

science fiction

August
6 x 9, 232 pp.
12 b&w illus.

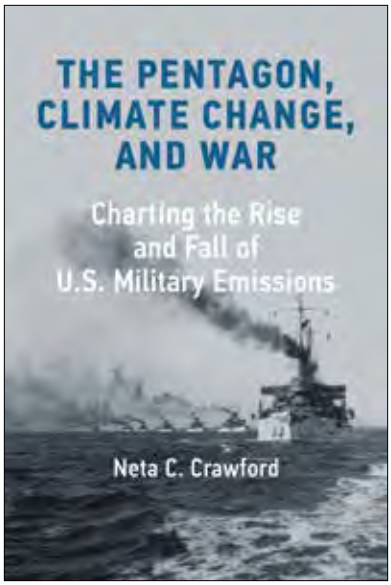
US $19.95T/$25.95 CAN paper
978-0-262-54443-6

Twelve Tomorrows

Also Available

Make Shift
edited by Gideon Lichfield
US $19.95 T paper
978-0-262-54240-1

Entanglements
Tomorrow's Lovers, Families, and Friends
edited by Sheila Williams
US $19.95 T paper
978-0-262-53925-8



The Pentagon, Climate Change, and War

Charting the Rise and Fall of U.S. Military Emissions

Neta C. Crawford

How the Pentagon became the world's largest single greenhouse gas emitter and why it's not too late to break the link between national security and fossil fuel consumption.

The military has for years acknowledged that climate change is real, anticipating that extreme conditions will lead to future climate wars. At the same time, the U.S. military is the largest single energy consumer in the United States and the world's largest institutional greenhouse gas emitter. In this eye-opening book, Neta Crawford traces the U.S. military's growing consumption of energy and calls for a reconceptualization of foreign policy and military doctrine. Only such a rethinking, she argues, will break the link between national security and fossil fuels.

The Pentagon, Climate Change, and War shows how the U.S. economy and military together have created a deep and long-term cycle of economic growth, fossil fuel use, and dependency. This cycle has shaped U.S. military doctrine and, over the past fifty years, has driven the mission to protect access to oil in the Persian Gulf and elsewhere. Crawford shows that even as the U.S. military has acknowledged and adapted to human-caused climate change, it has also resisted reporting its own greenhouse gas emissions.

Examining the idea of climate change as a "threat multiplier" in national security, Crawford argues that the United States faces more risk from climate change than from lost access to Persian Gulf oil—or from most military conflicts. The most effective way to cut military emissions, Crawford suggests, is to rethink U.S. grand strategy, which would enable the United States to reduce the size and operations of the military.

Neta C. Crawford is Montague Burton Professor of International Relations at the University of Oxford and Codirector of the Costs of War Project. She is the author of *Argument and Change in World Politics* (winner of a best book award from the American Political Science Association) and *Accountability for Killing: Moral Responsibility for Collateral Damage in America's Post-9/11 Wars*.

political science | environment

October
6 x 9, 392 pp.
49 b&w illus.

US $32.95T/$43.95 CAN cloth
978-0-262-04748-7

"Crawford's careful study provides pathways to decreasing U.S. military spending and reorienting the economy to more economically productive activities; heeding her informed advice could also free us to spend fewer anxious nights worrying about the next war and the next heat wave."

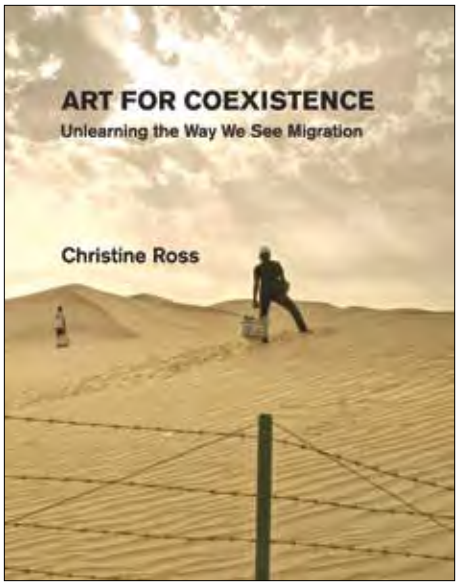
—Bill McKibben, Middlebury College; author of *The Flag, the Cross, and the Station Wagon*

"In this important and meticulously researched book, Crawford untangles the complex relationship between the military and its dependence on fossil fuels, warning that the United States faces greater risk from climate change than from lost access to oil—or from most military conflicts."

—Linda J. Bilmes, Harvard University; coauthor of *The Three Trillion Dollar War*

"Crawford exposes the self-reinforcing cycle of fossil fuel dependency and vast military deployments to ensure its availability. Without a radical shift in traditional military thinking and clear understanding of 'ecological security,' the United States—indeed the world—will never meet its climate goals."

—Jerry Brown, Governor of California, 1975–1983 and 2011–2019



Art for Coexistence

Unlearning the Way We See Migration

Christine Ross

An exploration of how contemporary art reframes and humanizes migration, calling for coexistence—the recognition of the interdependence of beings.

In *Art for Coexistence*, art historian Christine Ross examines contemporary art's response to migration, showing that art invites us to abandon our preconceptions about the current "crisis"—to unlearn them—and to see migration more critically, more disobediently. Viewers in Europe and North America must come to see migration in terms of coexistence: the interdependence of beings. The artworks explored by Ross reveal, contest, rethink, delink, and relink more reciprocally the interdependencies shaping migration today—connecting citizens-on-the-move from some of the poorest countries and acknowledged citizens of some of the wealthiest countries and democracies worldwide.

These installations, videos, virtual reality works, webcasts, sculptures, graffiti, paintings, photographs, and a rescue boat, by artists including Banksy, Ai Weiwei, Alejandro González Iñárritu, Laura Waddington, Tania Bruguera, and others, demonstrate art's power to mediate experiences of migration. Ross argues that art invents a set of interconnected calls for more mutual forms of coexistence: to historicize, to become responsible, to empathize, and to story-tell. Art history, Ross tells us, must discard the legacy of imperialist museology—which dissocializes, dehistoricizes, and depoliticizes art. It must reinvent itself, engaging with political philosophy, postcolonial, decolonial, Black, and Indigenous studies, and critical refugee and migrant studies.

Christine Ross is Distinguished James McGill Professor in Contemporary Art History at McGill University. She is the author of *The Past Is the Present; It's the Future Too: The Temporal Turn in Contemporary Art* and *The Aesthetics of Disengagement: Contemporary Art and Depression*.

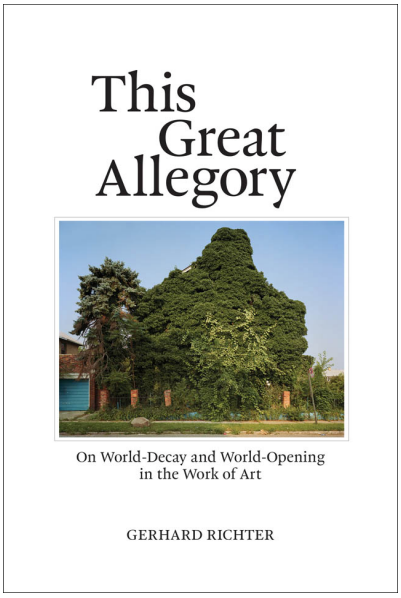
art

November
7 x 9, 424 pp.
23 color illus., 55 b&w illus.

US $38.00X/$51.00 CAN cloth
978-0-262-04739-5

"At this time of divisive differentiation, how might contemporary artists contribute to the creation of the coeval community that the world so urgently needs? Christine Ross boldly takes up this question at its sharpest point: the worldwide 'migration crisis' in which coexistence is cruelly denied and acutely felt. Key works by Banksy, Isaac Julien, John Akomfrah, Tanya Bruguera, Olu Oguibe, Forensic Oceanography, Ai Weiwei, Kader Attia, Candice Breitz, Stan Douglas, Kent Monkman, and several others are convincingly read as exemplary demonstrations of what it is to 'unlearn colonization,' as potent calls for empathy, and as modeling aspects of a more mutual coexistence."

—Terry Smith, Andrew W. Mellon Professor of Contemporary Art History and Theory, University of Pittsburgh; Professor in the Division of Philosophy, Art, and Critical Thought, European Graduate School; and author of *Art to Come: Histories of Contemporary Art*.



This Great Allegory

On World-Decay and World-Opening
in the Work of Art

Gerhard Richter

An engagement with the relation between the world in which an artwork is created—a world that perishes or decays over time—and the new world that the artwork opens up.

Gerhard Richter explores the relation between two worlds: the world in which an artwork is created, that is, a world that over time perishes or decays beyond interpretive understanding, and the new world that the artwork opens up. The multiple relations between these worlds are examined in a number of central thinkers and in various modes of aesthetic production, including poetry, painting, music, film, literature, and photography. It is precisely in and through the work of art, Richter shows, that central elements of the thinking of world as world are negotiated in the most essential and moving ways.

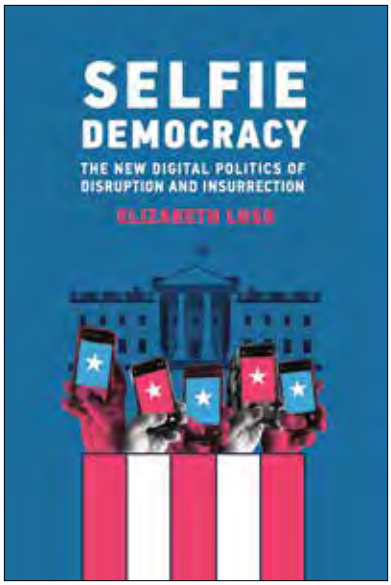
Exploring the relationship between these worlds through art and European philosophy, Richter offers bold new interpretations of Karl Marx, Friedrich Nietzsche, Martin Heidegger, Maurice Blanchot, Georges Bataille, Emmanuel Levinas, Theodor W. Adorno, Walter Benjamin, and Jacques Derrida. The book also provides stimulating new insights into the works of heterogeneous artists such as Paul Celan, Friedrich Hölderlin, Werner Herzog, Arnold Schönberg, Franz Kafka, Herman Melville, Andrew Moore, Botho Strauß, Didier Eribon, and even prehistoric cave painters. In each case, Richter's readings are guided by a consideration of the conceptual constraints and singular interpretive demands imposed by the specific genre and medium.

Gerhard Richter is University Professor and Professor of Comparative Literature and German Studies at Brown University. His most recent books include *Uncontainable Legacies: Theses on Intellectual, Cultural, and Political Inheritance* and *Thinking with Adorno: The Uncoercive Gaze*.

philosophy

November
5 1/2 x 9, 336 pp.
13 color illus., 2 b&w illus.

US $35.00X/$47.00 CAN paper
978-0-262-54414-6



Selfie Democracy

The New Digital Politics of Disruption and Insurrection

Elizabeth Losh

How politicians' digital strategies appeal to the same fantasies of digital connection, access, and participation peddled by Silicon Valley.

Smartphones and other digital devices seem to give us a direct line to politicians. But is interacting with presidential tweets really a manifestation of digital democracy? In *Selfie Democracy*, Elizabeth Losh examines the unintended consequences of politicians' digital strategies, from the Obama campaign's pioneering construction of an online community to Trump's Twitter dominance. She finds that politicians who use digital media appeal to the same fantasies of digital connection, access, and participation peddled by Silicon Valley. Meanwhile, smartphones and social media don't enable participatory democracy so much as they incentivize citizens to perform attention-getting acts of political expression.

Losh explores presidential rhetoric casting digital media as tools of democracy, describes the conflation of gender and technology that contributed to Hillary Clinton's defeat in 2016, chronicles the Biden campaign's early digital stumbles in 2020, and recounts the TikTok campaign that may have spoiled a Trump rally. She shows that although Obama and Trump may seem diametrically opposed in both style and substance, they both used mobile digital media in ways that reshaped the presidency and promised a new kind of digital democracy. Obama used data and digital media to connect to citizens without intermediaries; Trump followed this strategy to its most extreme conclusion. What were the January 6 insurrectionists doing, as they livestreamed themselves and their cohorts attacking the Capitol, but practicing their own brand of selfie democracy?

Elizabeth Losh is Duane A. and Virginia S. Dittman Professor of American Studies and English at William & Mary. She is the author of *Virtualpolitik: An Electronic History of Government Media-Making in a Time of War, Scandal, Disaster, Miscommunication, and Mistakes*, *The War on Learning: Gaining Ground in the Digital University* (both published by the MIT Press), and other books.

political science | technology

October
6 x 9, 368 pp.
22 b&w illus.

US $24.95T/$33.95 CAN paper
978-0-262-04705-0

Collective Wisdom

Co-Creating Media for Equity and Justice

Katerina Cizek and William Uricchio

with Juanita Anderson, Maria Agui Carter, Detroit Narrative Agency, Thomas Allen Harris, Maori Karmael Holmes, Richard Lachman, Louis Massiah, Cara Mertes, Sara Rafsky, Michèle Stephenson, Amelia Winger-Bearskin, and Sarah Wolozin

How to co-create—and why: the emergence of media co-creation as a concept and as a practice grounded in equity and justice.

Co-creation is everywhere: It's how the internet was built; it generated massive prehistoric rock carvings; it powered the development of vaccines for COVID-19 in record time. Co-creation offers alternatives to the idea of the solitary author privileged by top-down media. But co-creation is easy to miss, as individuals often take credit for—and profit from—collective forms of authorship, erasing whole cultures and narratives as they do so. *Collective Wisdom* offers the first guide to co-creation as a concept and as a practice, tracing co-creation in a media-making that ranges from collaborative journalism to human–AI partnerships.

Why co-create—and why now? The many coauthors, drawing on a remarkable array of professional and personal experience, focus on the radical, sustained practices of co-creating media within communities and with social movements. They explore the urgent need for co-creation across disciplines and organization, and the latest methods for collaborating with nonhuman systems in biology and technology. The idea of "collective intelligence" is not new, and has been applied to such disparate phenomena as decision making by consensus and hived insects. Collective *wisdom* goes further. With conceptual explanation and practical examples, this book shows that co-creation only becomes wise when it is grounded in equity and justice.

Katerina Cizek, an Emmy and Peabody–winning documentarian, is the Artistic Director and Cofounder of the Co-Creation Studio at MIT Open Documentary Lab. **William Uricchio** is Professor of Comparative Media Studies at MIT, where he is also Founder and Principal Investigator of the MIT Open Documentary Lab and Principal Investigator of the Co-Creation Studio.

technology | media

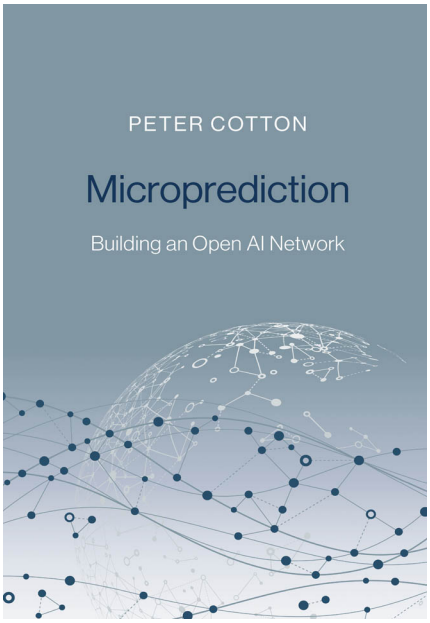
November
7 x 9, 400 pp.
198 color photos

US $34.95T/$43.95 CAN cloth
978-0-262-54377-4

Microprediction

Building an Open AI Network

Peter Cotton



How a web-scale network of autonomous micromanagers can challenge the AI revolution and combat the high cost of quantitative business optimization.

The artificial intelligence (AI) revolution is leaving behind small businesses and organizations that cannot afford in-house teams of data scientists. In *Microprediction*, Peter Cotton examines the repeated quantitative tasks that drive business optimization from the perspectives of economics, statistics, decision making under uncertainty, and privacy concerns. He asks what things currently described as AI are not "microprediction," whether microprediction is an individual or collective activity, and how we can produce and distribute high-quality microprediction at low cost. The world is missing a public utility, he concludes, while companies are missing an important strategic approach that would enable them to benefit—and also give back.

In an engaging, colloquial style, Cotton argues that market-inspired "superminds" are likely to be very effective compared with other orchestration mechanisms in the domain of microprediction. He presents an ambitious yet practical alternative to the expensive "artisan" data science that currently drains money from firms. Challenging the machine learning revolution and exposing a contradiction at its heart, he offers engineers a new liberty: no longer reliant on quantitative experts, they are free to create intelligent applications using general-purpose application programming interfaces (APIs) and libraries. He describes work underway to encourage this approach, one that he says might someday prove to be as valuable to businesses—and society at large—as the internet.

Peter Cotton is a Senior Vice President and Chief Data Scientist at Intech Investment Management LLC.

computer science | business

November
6 x 9, 232 pp.
9 b&w illus.

US $24.95T/$33.95 CAN cloth
978-0-262-04732-6

Code for What?

Computer Science for Storytelling and Social Justice

Clifford Lee and Elisabeth Soep

foreword by Christopher Emdin

epilogue by Kyra Kyles

Coding for a purpose: helping young people combine journalism, data, design, and code to make media that makes a difference.

Educators are urged to teach "code for all"—to make a specialized field accessible for students usually excluded from it. In this book, Clifford Lee and Elisabeth Soep instead ask the question, "code for what?" What if coding were a justice-driven medium for storytelling rather than a narrow technical skill? What if "democratizing" computer science went beyond the usual one-off workshop and empowered youth to create digital products for social impact? Lee and Soep answer these questions with stories of a diverse group of young people in Oakland, California, who combine journalism, data, design, and code to create media that make a difference.

These teenage and young adult producers created interactive projects that explored gendered and racialized dress code policies in schools; designed tools for LBGTQ+ youth experiencing discrimination; investigated facial recognition software and what can be done about it; and developed a mobile app to promote mental health through self-awareness and outreach for support, and more, for distribution to audiences that could reach into the millions. Working with educators and media professionals at YR Media, an award-winning organization that helps young people from underserved communities build skills in media, journalism, and the arts, these teens found their own vibrant answers to "why code?" They code for insight, connection and community, accountability, creative expression, joy, and hope.

Clifford Lee is Associate Professor and Director of Educators for Liberation, Justice, and Joy Teacher Education program at Mills College and Scholar-in-Residence at YR Media. **Elisabeth Soep** is Special Projects Producer and Senior Scholar-in-Residence at YR Media. Her work has been featured in major media including NPR, the *New York Times*, *National Geographic*, and *Teen Vogue*. She is the author of *Participatory Politics* (MIT Press).

education | computers

November
5 1/4 x 8, 320 pp.
31 b&w illus.

US $27.95T/$36.95 CAN cloth
978-0-262-04745-6

"*Code for What?* presents authentic and inspirational visions of young people making information technology their own, not for some imagined future, but right now—to enrich their lives and the lives of those around them."

—Hal Abelson, Professor of Computer Science and Engineering at MIT

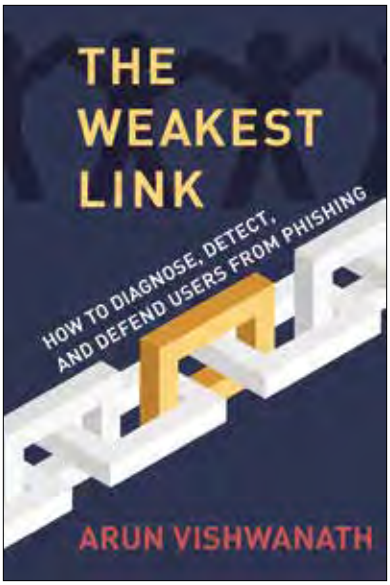
"A beautiful, thought-provoking book about reimagining education in our tech-saturated world. The authors reveal the brilliance of diverse youth and what happens when they are centered in learning. Educators across all subjects should read this book!"

—Jane Margolis, Senior Research UCLA CS Equity Project; co-author of *Power On!* and *Stuck in the Shallow End*

The Weakest Link

How to Diagnose, Detect, and Defend Users from Phishing

Arun Vishwanath



An expert in cybersecurity lays out an evidence-based approach for assessing user cyber risk and achieving organizational cyber resilience.

Phishing is the single biggest threat to cybersecurity, persuading even experienced users to click on hyperlinks and attachments in emails that conceal malware. Phishing has been responsible for every major cyber breach, from the infamous Sony hack in 2014 to the 2017 hack of the Democratic National Committee and the more recent Colonial Pipleline breach. The cybersecurity community's response has been intensive user training (often followed by user blaming), which has proven completely ineffective: the hacks keep coming. In *The Weakest Link*, cybersecurity expert Arun Vishwanath offers a new, evidence-based approach for detecting and defending against phishing—an approach that doesn't rely on continual training and retraining but provides a way to diagnose user vulnerability.

Vishwanath explains how organizations can build a culture of cyber safety. He presents a Cyber Risk Survey (CRS) to help managers understand which users are at risk and why. Underlying CRS is the Suspicion, Cognition, Automaticity Model (SCAM), which specifies the user thoughts and actions that lead to either deception by or detection of phishing come-ons. He describes in detail how to implement these frameworks, discussing relevant insights from cognitive and behavioral science, and then presents case studies of organizations that have successfully deployed the CRS to achieve cyber resilience. These range from a growing wealth management company with twenty regional offices to a small Pennsylvania nonprofit with forty-five employees.

The Weakest Link will revolutionize the way managers approach cyber security, replacing the current one-size-fits-all methodology with a strategy that targets specific user vulnerabilities.

"*The Weakest Link* is a much-needed antidote to the current fad of endless security awareness training. It offers an alternative based on actual evidence, one that puts user understanding at the start of the process and cyber-resilience at the end."

—Bruce Schneier, author of *Click Here to Kill Everybody: Security and Survival in a Hyperconnected World*

Arun Vishwanath, a leading expert in cybersecurity, has held faculty positions at the University at Buffalo, Indiana University, and the Berkman Klein Center for Internet & Society at Harvard University. He has written on human cyber vulnerability and related topics for CNN, the *Washington Post*, and other major media.

business | computers

August
6 x 9, 272 pp.
12 b&w illus.

US $29.95T/$39.95 CAN cloth
978-0-262-04749-4

Care-Centered Politics

From the Home to the Planet

Robert Gottlieb

Why a care economy and care-centered politics can influence and reorient such issues as health, the environment, climate, race, inequality, gender, and immigration.

This agenda-setting book presents a framework for creating a more just and equitable care-centered world. Climate change, pandemic events, systemic racism, and deep inequalities have all underscored the centrality of care in our lives. Yet care work is, for the most part, undervalued and exploited. In this book, Robert Gottlieb examines how a care economy and care politics can influence and remake health, climate, and environmental policy, as well as the institutions and practices of daily life. He shows how, through this care-centered politics, we can build an ethics of care and a society of cooperation, sharing, and solidarity.

Arguing that care is a form of labor, Gottlieb expands the ways we think about home care, child care, elder care, and other care relationships. He links them to the Green New Deal, Medicare for All, immigration, and the militarization of daily life. He also provides perspective on the events of 2020 and 2021 (including the COVID-19 pandemic, climate change, and movements calling attention to racism and inequality) as they relate to a care politics. Care, says Gottlieb, must be universal—whether healthcare for all, care for the earth, care at work, or care for the household, shared equally by men and women. Care-centered politics is about strategic and structural reforms that imply radical and revolutionary change. Gottlieb offers a practical, mindful, yet also utopian, politics of daily life.

Robert Gottlieb is Professor Emeritus of Urban and Environmental Policy and the Founder and former Director of the Urban & Environmental Policy Institute at Occidental College. He is the coauthor of *Food Justice* and *Global Cities* (both published by the MIT Press).

environment | political science

August
6 x 9, 248 pp.

US $30.00X/$40.00 CAN paper
978-0-262-54375-0

"Care for others is the moral hub of a great progressive wheel. Robert Gottlieb does a brilliant job connecting all the spokes with a powerfully unifying message."

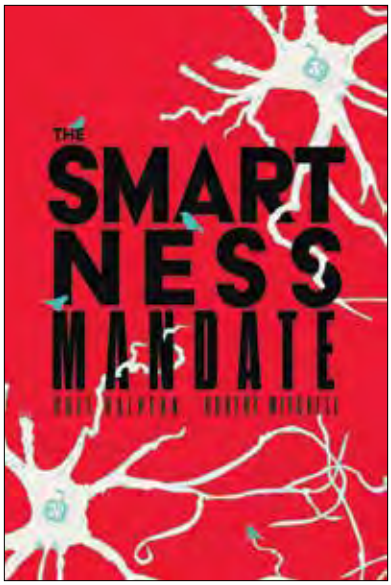
—Nancy Folbre, Professor Emerita of Economics, UMass Amherst

"This much-needed volume explores care from every angle, a concept not featured much in our public discourse, and shows us why, for example, it became part of the Green New Deal as much as solar panels."

—Bill McKibben, author of *The Flag, the Cross, and the Station Wagon*

"Economic sufficiency, real food, dignity for elders, racial justice: How do they tie together? With concrete and specific policy proposals, Gottlieb shows how care serves as the heart of a progressive agenda."

—Joan Tronto, Professor Emerita, University of Minnesota



The Smartness Mandate

Orit Halpern and Robert Mitchell

Over the last half-century, "smartness"—the drive for ubiquitous computing—has become a mandate: a new mode of managing and governing politics, economics, and the environment.

Smart phones. Smart cars. Smart homes. Smart cities. The imperative to make our world ever smarter in the face of increasingly complex challenges raises several questions: What is this "smartness mandate?" How has it emerged, and what does it say about our evolving way of understanding—and managing—reality? How have we come to see the planet and its denizens first and foremost as data-collecting instruments?

In *The Smartness Mandate*, Orit Halpern and Robert Mitchell radically suggest that "smartness" is not primarily a technology, but rather an epistemology. Through this lens, they offer a critical exploration of the practices, technologies, and subjects that such an understanding relies upon—above all, artificial intelligence and machine learning. The authors approach these not simply as techniques for solving problems of calculations, but rather as modes of managing life (human and other) in terms of neo-Darwinian evolution, distributed intelligences, and "resilience," all of which has serious implications for society, politics, and the environment.

The smartness mandate constitutes a new form of planetary governance, and Halpern and Mitchell aim to map the logic of this seemingly inexorable and now naturalized demand to compute, to illuminate the genealogy of how we arrived here, and to point to alternative imaginaries of the possibilities and potentials of smart technologies and infrastructures.

Orit Halpern, Lighthouse Professor and Chair of Digital Cultures and Societal Change at Technische Universität Dresden, is the author of *Beautiful Data: A History of Vision and Reason since 1945*. **Robert Mitchell** is Chair and Professor of English, as well as Director of the Center for Interdisciplinary Studies in Science and Cultural Theory, at Duke University. His books include, most recently, *Infectious Liberty: Biopolitics between Romanticism and Liberalism*.

media studies | technology

December
6 x 9, 328 pp.
50 b&w illus.

US $30.00X/$40.00 CAN paper
978-0-262-54451-1

Cyberinsurance Policy

Rethinking Risk in an Age of Ransomware, Computer Fraud, Data Breaches, and Cyberattacks

Josephine Wolff

Why cyberinsurance has not improved cybersecurity and what governments can do to make it a more effective tool for cyber risk management.

As cybersecurity incidents—ranging from data breaches and denial-of-service attacks to computer fraud and ransomware—become more common, a cyberinsurance industry has emerged to provide coverage for any resulting liability, business interruption, extortion payments, regulatory fines, or repairs. In this book, Josephine Wolff offers the first comprehensive history of cyberinsurance, from the early "Internet Security Liability" policies in the late 1990s to the expansive coverage offered today. Drawing on legal records, government reports, cyberinsurance policies, and interviews with regulators and insurers, Wolff finds that cyberinsurance has not improved cybersecurity or reduced cyber risks.

Wolff examines the development of cyberinsurance, comparing it to other insurance sectors, including car and flood insurance; explores legal disputes between insurers and policyholders about whether cyber-related losses were covered under policies designed for liability, crime, or property and casualty losses; and traces the trend toward standalone cyberinsurance policies and government efforts to regulate and promote the industry. Cyberinsurance, she argues, is ineffective at curbing cybersecurity losses because it normalizes the payment of online ransoms, whereas the goal of cybersecurity is the opposite—to disincentivize such payments to make ransomware less profitable. An industry built on modeling risk has found itself confronted by new technologies before the risks posed by those technologies can be fully understood.

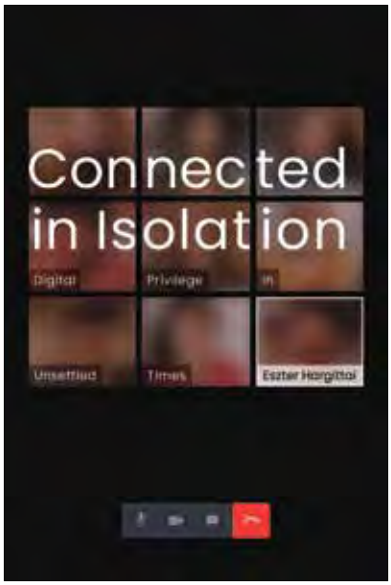
Josephine Wolff is Associate Professor of Cybersecurity Policy at the Fletcher School of Law and Diplomacy at Tufts University and the author of *You'll See This Message When It Is Too Late: The Legal and Economic Aftermath of Cybersecurity Breaches* (MIT Press). Her writing on cybersecurity has appeared in the *New York Times*, the *Washington Post*, *Wired*, and *Slate*.

technology | business

August
6 x 9, 296 pp.

US $35.00X/$47.00 CAN paper
978-0-262-54418-4

Information Policy series



Connected in Isolation

Digital Privilege in Unsettled Times

Eszter Hargittai

What life during lockdown reveals about digital inequality.

The vast majority of people in wealthy, highly connected, or digitally privileged societies may have crossed the digital divide, but being online does not mean that everyone is equally connected—and digital inequality reflects experience both online and off. In *Connected in Isolation* Eszter Hargittai looks at how this digital disparity played out during the unprecedented isolation imposed in the early days of the coronavirus pandemic.

During initial COVID-19 lockdowns the internet, for many, became a lifeline, as everything from family get-togethers to doctor's visits moved online. Using survey data collected in April and May of 2020 in the United States, Italy, and Switzerland, Hargittai explores how people from varied backgrounds and differing skill levels were able to take advantage of digital media to find the crucial information they needed—to help loved ones, procure necessities, understand rules and risks. Her study reveals the extent to which long-standing social and digital inequalities played a critical role in this move toward computer-mediated communication—and were often exacerbated in the process. However, Hargittai notes, context matters: her findings reveal that some populations traditionally disadvantaged with technology, such as older people, actually did better than others, in part because of the continuing importance of traditional media, television in particular.

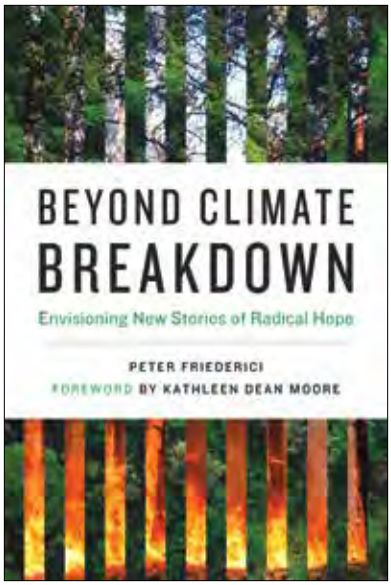
The pandemic has permanently shifted how reliant we are upon online information, and the implications of Hargittai's groundbreaking comparative research go far beyond the pandemic. *Connected in Isolation* informs and expands our understanding of digital media, including how they might mitigate or worsen existing social disparities; whom they empower or disenfranchise; and how we can identify and expand the skills people bring to them.

Eszter Hargittai is professor and chair of Internet Use & Society in the Department of Communication and Media Research at the University of Zurich. She is editor of the *Handbook of Digital Inequality*, as well as three books on the behind-the-scenes realities of doing empirical social science research.

social science | technology

November
6 x 9, 216 pp.
2 b&w photos, 35 b&w illus.

US $25.00X/$34.00 CAN paper
978-0-262-04737-1



Beyond Climate Breakdown

Envisioning New Stories of Radical Hope

Peter Friederici

foreword by Kathleen Dean Moore

The importance of telling new climate stories—stories that center the persistence of life itself, that embrace comedy and radical hope.

"How dare you!" asked teenage climate activist Greta Thunberg at the United Nations in 2019. How dare the world's leaders fiddle around the edges when the world is on fire? Why is society unable to grasp the enormity of climate change? In *Beyond Climate Breakdown*, Peter Friederici writes that the answer must come in the form of a story, and that our miscomprehension of the climate crisis comes about because we have been telling the wrong stories. These stories are pervasive; they come from long narrative traditions, sanctioned by capitalism, Hollywood, and social media, and they revolve around a myth: that the nation exists primarily as a setting for a certain kind of economic activity.

Stories are how we make sense of the world and our place in it. The story that "the economy" takes priority over everything else may seem foreordained, but, Friederici explains, actually reflect choices made by specific people out of self-interest. So we need new stories—stories that center the persistence of life, rather than of capitalism, stories that embrace contradiction and complexity. We can create new stories based on comedy and radical hope. Comedy never says no; hope sprouts like a flower in cracked concrete. These attitudes require a new way of thinking—an adaptive attitude toward life that slips the narrow yoke of definition.

Peter Friederici is Professor in the School of Communication and Coordinator of the Sustainable Communities Program at Northern Arizona University. The author of several books on nature and the environment, he has published essays and articles in publications ranging from *Audubon* and the *Georgia Review* to *Orion* and *Dark Mountain*.

environment

October
6 x 9, 184 pp.
4 b&w illus.

US $25.00X/$34.00 CAN paper
978-0-262-54393-4

One Planet series

"An insightful critique of the literary, political, and economic narratives that hide global warming from view, *Beyond Climate Breakdown* empowers us to acknowledge and repair the deep causes of the climate crisis that we're usually taught to ignore."

—Genevieve Guenther, Founding Director, End Climate Silence

"Careful, precise, and accessibly written, Friederici's metaperspective on climate discourse melds a journalist's clear voice with a scholar's incisive critique to ask, 'what is the matter with a society that would willingly destroy its future?'"

—Sarah Jaquette Ray, Professor of Environmental Studies, California Polytechnic State University, Humboldt; author of *A Field Guide to Climate Anxiety*

"An affirmation of our collective agency: how we all actually have it, and darned well need to use it—there is simply no dogmatically individualistic route through the climate crisis."

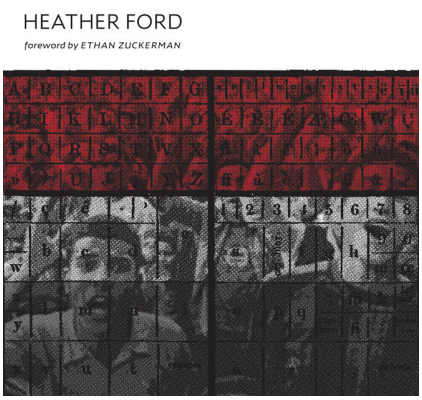
—Rupert Read, Associate Professor of Philosophy, University of East Anglia; author of *Why Climate Breakdown Matters*

Writing the Revolution

Wikipedia and the Survival of Facts in the Digital Age

Heather Ford

foreword by Ethan Zuckerman



A close reading of Wikipedia's article on the Egyptian Revolution reveals the complexity inherent in establishing the facts of events as they occur and are relayed to audiences near and far.

Wikipedia bills itself as an encyclopedia built on neutrality, authority, and crowd-sourced consensus. Platforms like Google and digital assistants like Siri distribute Wikipedia's facts widely, further burnishing its veneer of impartiality. But as Heather Ford demonstrates in *Writing the Revolution*, the facts that appear on Wikipedia are often the result of protracted power struggles over how data are created and used, how history is written and by whom, and the very definition of facts in a digital age.

In *Writing the Revolution*, Ford looks critically at how the Wikipedia article about the 2011 Egyptian Revolution evolved over the course of a decade, both shaping and being shaped by the Revolution as it happened. When data are published in real time, they are subject to an intense battle over their meaning across multiple fronts. Ford answers key questions about how Wikipedia's so-called consensus is arrived at; who has the power to write dominant histories and which knowledges are actively rejected; how these battles play out across the chains of circulation in which data travel; and whether history is now written by algorithms.

"This book powerfully shows how social, economic, and political facts are forged in the knowledge factory of Wikipedia. It is impossible to understand how histories are made in the contemporary world without letting Ford take you on this fascinating journey."

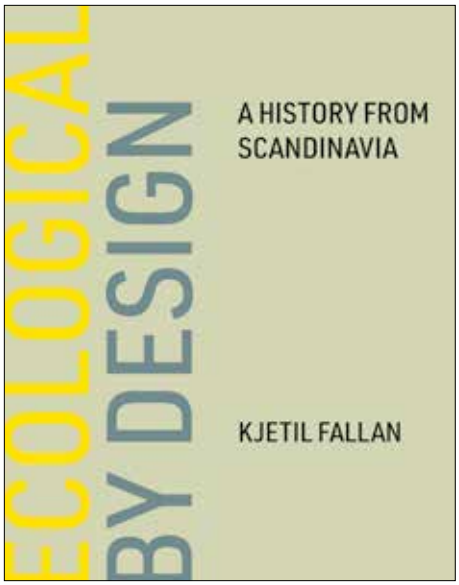
—Mark Graham, Professor of Internet Geography, University of Oxford

Heather Ford is Associate Professor and Head of Discipline for Digital and Social Media, School of Communication, University of Technology Sydney.

political science | media studies

November
6 x 9, 168 pp.
7 figures

US $25.00X/$34.00 CAN paper
978-0-262-04629-9



Ecological by Design

A History from Scandinavia

Kjetil Fallan

How ecological design emerged in Scandinavia during the 1960s and 1970s, building on both Scandinavia's design culture and its environmental movement.

Scandinavia is famous for its design culture, and for its pioneering efforts toward a sustainable future. In *Ecological by Design*, Kjetil Fallan shows how these two forces came together in the late 1960s and early 1970s, when Scandinavian designers began to question the endless cycle in which designed objects are produced, consumed, discarded, and replaced in quick succession. The emergence of ecological design in Scandinavia at the height of the popular environmental movement, Fallan suggests, illuminates a little-known reciprocity between environmentalism and design: not only did design play a role in the rise of modern environmentalism, but ecological thinking influenced the transformation in design culture in Scandinavia and beyond that began as the modernist faith in progress and prosperity waned.

Fallan describes the efforts of Scandinavian designers to forge an environmental ethics in a commercial design culture sustained by consumption; shows, by recounting a quest for sustainability through Norwegian wood(s), that one of the main characteristics of ecological design is attention to both the local and the global; and explores the emergence of a respectful and sustainable paradigm for international development. Case studies trace key connections to continental Europe, Britain, the US, Central America, and East Africa.

Today, ideas of sustainability permeate design discourse, but the historical emergence of ecological design remains largely undiscussed. With this trailblazing book, Fallan fills that gap.

Kjetil Fallan is Professor of Design History at the University of Oslo and the author of *Designing Modern Norway: A History of Design Discourse* and the editor of *The Culture of Nature in the History of Design*.

design | environment

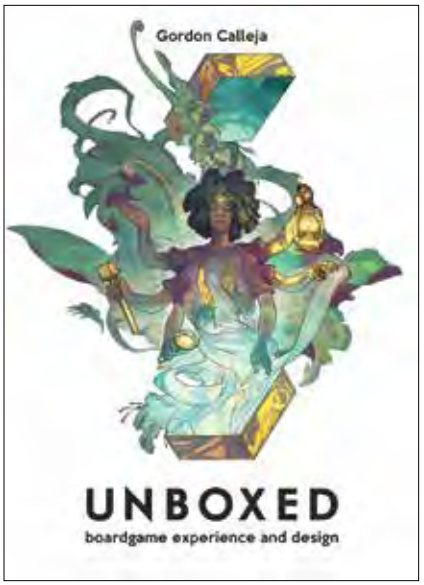
November
7 x 9, 352 pp.
33 color illus., 38 b&w illus.

US $40.00X/$54.00 CAN cloth
978-0-262-04713-5

Unboxed

Board Game Experience and Design

Gordon Calleja



Thirty-two leading game designers reflect on the experience of playing board games and how their work shapes that experience.

In *Unboxed*, Gordon Calleja explores the experience of playing board games and how game designers shape that experience. Calleja examines key aspects of board game experience—the nature of play, attention, rules, sociality, imagination, narrative, materiality, and immersion—to offer a theory of board game experience and a model for understanding game involvement that is relevant to the analysis, criticism, and design of board games. Drawing on interviews with thirty-two leading board game designers and critics, Calleja—himself a board game designer—provides the set of conceptual tools that board game design has thus far lacked.

After considering different conceptions of play, Calleja discusses the nature and role of attention and goes on to outline the key forms of involvement that make up the board game playing experience. In subsequent chapters, Calleja explores each of these forms of involvement, considering both the experience itself and the design considerations that bring it into being. Calleja brings this analysis together in a chapter that maps how these forms of involvement come together in the moment of gameplay, and how their combination shapes the flow of player affect. By tracing the processes by which players experience these moments of rule-mediated, imagination-fueled sociality, Calleja helps us understand the richness of the gameplay experience packed into the humble board game box.

Gordon Calleja is Associate Professor of Game Studies at the University of Malta's Institute of Digital Games, which he founded in 2012, and the author of *In-Game: From Immersion to Incorporation* (MIT Press). A game designer at Mighty Boards, a board game design studio, he has designed and published *Will Love Tear Us Apart?*, a videogame adaptation of the Joy Division song, and several board games, including *Posthuman Saga* and *Excavation Earth*.

"*Unboxed* is a must-have for everyone who designs and studies board games. Packed with designer interviews and written in a precise, funny, moving voice, this emotion-centered book is nothing short of brilliant."

—Richard Lemarchand, Associate Professor, USC Games and author of *A Playful Production Process*

INTERVIEWEES

Ted Alspach, Mark Bigney, Efka Bladukas, Elaine Bladukienė, Mark Casha, Bruno Cathala, Luke Crane, Rob Daviau, Roberto Di Meglio, Geoff Engelstein, Tim Fowers, Richard Garfield, Jonathan Gilmour, Heiko Günther, Richard Ham, Reiner Knizia, Corey Konieczka, Vital Lacerda, Matt Leacock, Matt Lees, Eric Martin, Emerson Matsuuchi, Alexander Pfister, Manuel Rozoy, Adam Sadler, Brady Sadler, Jun Sasaki, Quintin Smith, Jamey Stagmaier, Ignacy Trzewiczek, Mike Walker, Kevin Wilson

design | games

October
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33 b&w illus.

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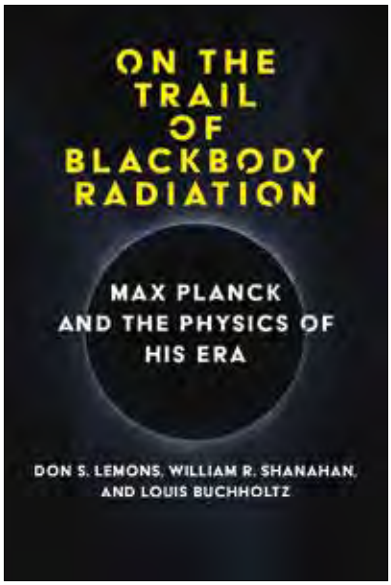


On the Trail of Blackbody Radiation

Max Planck and the Physics of His Era

Don S. Lemons, William R. Shanahan, and Louis Buchholtz

An account of Max Planck's construction of his theory of blackbody radiation, summarizing the established physics on which he drew.

In the last year of the nineteenth century, Max Planck constructed a theory of blackbody radiation—the radiation emitted and absorbed by nonreflective bodies in thermal equilibrium with one another—and his work ushered in the quantum revolution in physics. In this book, three physicists trace Planck's discovery. They follow the trail of Planck's thinking by constructing a textbook of sorts that summarizes the established physics on which he drew. By offering this account, the authors explore not only how Planck deployed his considerable knowledge of the physics of his era but also how Einstein and others used and interpreted Planck's work.

Planck did not set out to lay the foundation for the quantum revolution but to study a universal phenomenon for which empirical evidence had been accumulating since the late 1850s. The authors explain the nineteenth-century concepts that informed Planck's discovery, including electromagnetism, thermodynamics, and statistical mechanics. In addition, the book offers the first translations of important papers by Ludwig Boltzmann and Wilhelm Wien on which Planck's work depended.

Don S. Lemons is Professor of Physics Emeritus at Bethel College in North Newton, Kansas and the author of *Drawing Physics: 2,600 Years of Discovery from Thales to Higgs* and *Thermodynamic Weirdness: From Fahrenheit to Clausius* (both published by the MIT Press). **William R. Shanahan**, now retired, was a scientific staff member at the Los Alamos National Laboratory. **Louis Buchholtz** is Professor of Physics Emeritus at California State University, Chico.

science | physics

September
5 1/4 x 8, 224 pp.
14 illus.

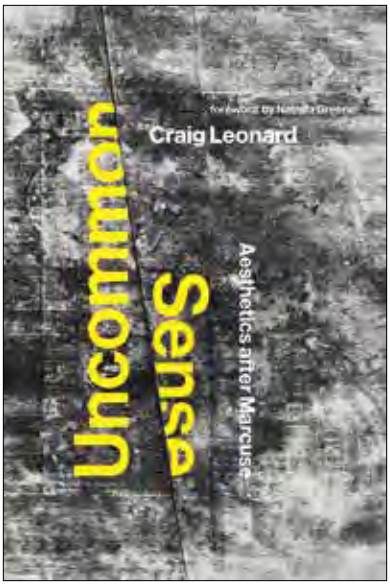
US $30.00X/$40.00 CAN cloth
978-0-262-04704-3

Uncommon Sense

Aesthetics after Marcuse

Craig Leonard

foreword by Nathifa Greene



An examination of Herbert Marcuse's political claim for the aesthetic dimension, focusing on defamiliarization as a means of developing radical sensibility.

In *Uncommon Sense*, Craig Leonard argues for the contemporary relevance of the aesthetic theory of Herbert Marcuse—an original member of the Frankfurt School and icon of the New Left—while also acknowledging his philosophical limits. His account reinvigorates Marcuse for contemporary readers, putting his aesthetic theory into dialogue with antiracist and anti-capitalist activism. Leonard emphasizes several key terms not previously analyzed within Marcuse's aesthetics, including defamiliarization, anti-art, and habit. In particular, he focuses on the centrality of defamiliarization—a subversion of common sense that can be a means to the development of what Marcuse refers to as "radical sensibility."

Leonard brings forward Marcuse's claim that the aesthetic dimension is political because of its refusal to operate according to the repressive common sense that establishes and maintains relationships dictated by advanced capitalism. For Marcuse, *defamiliarization* is at the center of the aesthetic dimension, offering the direct means of stimulating its political potential. Leonard expands upon Marcuse's aesthetics by drawing on the work of Sylvia Wynter, going beyond Marcuse's predominantly European and patrilineal intellectual framework—while still retaining his aesthetic theory's fundamental characteristics—toward a human dimension requiring decolonial, feminist, antiracist, and counterpoetic perspectives.

"Craig Leonard, who understands that Marcuse's aesthetic theory is inseparable from his critique of a one-dimensionalizing capitalism, critically revitalizes—by way of Sylvia Winter's radical insights—the liberatory potential of defamiliarization."

—Andrew T. Lamas, University of Pennsylvania, co-editor of *Herbert Marcuse, Philosopher of Utopia: A Graphic Biography*

Craig Leonard is an interdisciplinary artist and Associate Professor in Expanded Media and Graduate Studies at the Nova Scotia College of Art and Design.

art | philosophy

September
5 1/4 x 8, 256 pp.
10 b&w illus.

US $22.00X/$29.00 CAN paper
978-0-262-54446-7

Everyday Adventures with Unruly Data

Melanie Feinberg

Paired informal and scholarly essays show how everyday events reveal fundamental concepts of data, including its creation, aggregation, management, and use.

Whether questioning numbers on a scale, laughing at a misspelling of one's name, or finding ourselves confused in a foreign supermarket, we are engaging with data. The only way to handle data responsibly, says Melanie Feinberg in this incisive work, is to take into account its human character. Though the data she discusses may seem familiar, close scrutiny shows it to be ambiguous, complicated, and uncertain: unruly. Drawing on the tools of information science, she uses everyday events such as deciding between Blender A and Blender B on Amazon to demonstrate a practical, critical, and generative mode of thinking about data: its creation, management, aggregation, and use.

Each chapter pairs a self-contained main essay (an adventure) with a scholarly companion essay (the reflection). The adventure begins with an anecdote—visiting the library, running out of butter, cooking rice on a different stove. Feinberg argues that to understand the power and pitfalls of data science, we must attend to the data itself, not merely the algorithms that manipulate it. As she reflects on the implications of commonplace events, Feinberg explicates fundamental concepts of data that reveal the many tiny design decisions—which may not even seem like design at all—that shape how data comes to be. Through the themes of serendipity, objectivity, equivalence, interoperability, taxonomy, labels, and locality, she illuminates the surprisingly pervasive role of data in our daily thoughts and lives.

Melanie Feinberg is Associate Professor in the School of Information and Library Science at the University of North Carolina at Chapel Hill.

technology | data science

October
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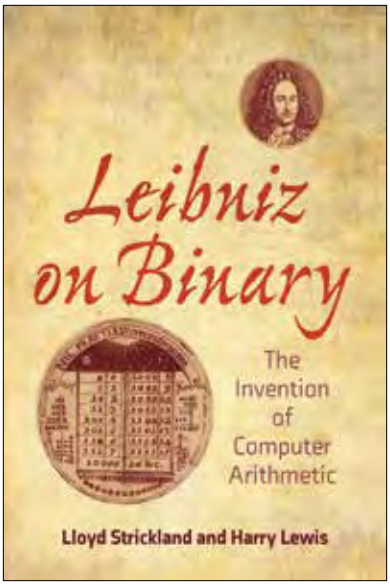
22 b&w illus.

US $35.00X/$47.00 CAN paper
978-0-262-54440-5

Leibniz on Binary

The Invention of Computer Arithmetic

Lloyd Strickland and Harry Lewis



The first collection of Leibniz's key writings on the binary system, newly translated, with many previously unpublished in any language.

The polymath Gottfried Wilhelm Leibniz (1646–1716) is known for his independent invention of the calculus in 1675. Another major—although less studied—mathematical contribution by Leibniz is his invention of binary arithmetic, the representational basis for today's digital computing. This book offers the first collection of Leibniz's most important writings on the binary system, all newly translated by the authors with many previously unpublished in any language. Taken together, these thirty-two texts tell the story of binary as Leibniz conceived it, from his first youthful writings on the subject to the mature development and publication of the binary system.

As befits a scholarly edition, Strickland and Lewis have not only returned to Leibniz's original manuscripts in preparing their translations, but also provided full critical apparatus. In addition to extensive annotations, each text is accompanied by a detailed introductory "headnote" that explains the context and content. Additional mathematical commentaries offer readers deep dives into Leibniz's mathematical thinking. The texts are prefaced by a lengthy and detailed introductory essay, in which Strickland and Lewis trace Leibniz's development of binary, place it in its historical context, and chart its posthumous influence, most notably on shaping our own computer age

Lloyd Strickland is Professor of Philosophy and Intellectual History at Manchester Metropolitan University, UK. He is the author of *Leibniz and the Two Sophies*, *Leibniz's Monadology*, and various other books. **Harry Lewis** is Gordon McKay Research Professor of Computer Science at Harvard University. He is the coauthor of *Blown to Bits: Your Life, Liberty, and Happiness after the Digital Explosion*, coeditor of *What Is College For?*, and editor of *Ideas That Created the Future* (MIT Press).

mathematics | history of science

October
7 x 10, 248 pp.
28 b&w illus.

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978-0-262-54434-4

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Although we are perhaps best known for texts in computer science, economics, game studies, engineering, and the sciences, we've expanded our textbook program in recent years to represent the full breadth of the MIT Press publishing program.

This past spring, we announced the largest collection of textbooks we've ever published, including, the forth edition of ***Introduction to Algorithms*** **by Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest, and Clifford Stein** and the fifth edition of ***Financial Modeling*** **by Simon Benninga and Tal Mofkadi**. For fall, we continue the tradition of publishing necessary, high-quality texts for undergraduate, graduate, and independent study.

For more information on our textbook program or to peruse all available textbooks, please visit **mitpress.mit.edu/textbooks**

Computational Imaging

Ayush Bhandari, Achuta Kadambi, and Ramesh Raskar

A comprehensive and up-to-date textbook and reference for computational imaging, which combines vision, graphics, signal processing, and optics.

Computational imaging involves the joint design of imaging hardware and computer algorithms to create novel imaging systems with unprecedented capabilities. In recent years such capabilities include cameras that operate at a trillion frames per second, microscopes that can see small viruses long thought to be optically irresolvable, and telescopes that capture images of black holes. This text offers a comprehensive and up-to-date introduction to this rapidly growing field, a convergence of vision, graphics, signal processing, and optics. It can be used as an instructional resource for computer imaging courses and as a reference for professionals. It covers the fundamentals of the field, current research and applications, and light transport techniques.

The text first presents an imaging toolkit, including optics, image sensors, and illumination, and a computational toolkit, introducing modeling, mathematical tools, model-based inversion, data-driven inversion techniques, and hybrid inversion techniques. It then examines different modalities of light, focusing on the plenoptic function, which describes degrees of freedom of a light ray. Finally, the text outlines light transport techniques, describing imaging systems that obtain micron-scale 3D shape or optimize for noise-free imaging, optical computing, and non-line-of-sight imaging. Throughout, it discusses the use of computational imaging methods in a range of application areas, including smart phone photography, autonomous driving, and medical imaging. End-of-chapter exercises help put the material in context.

Ayush Bhandari is Assistant Professor of Electrical and Electronic Engineering at Imperial College London. **Achuta Kadambi** is Assistant Professor of Electrical Engineering and Computer Science at the University of California, Los Angeles. **Ramesh Raskar** is Associate Professor at the MIT Media Lab and winner of the 2016 Lemelson-MIT Prize.

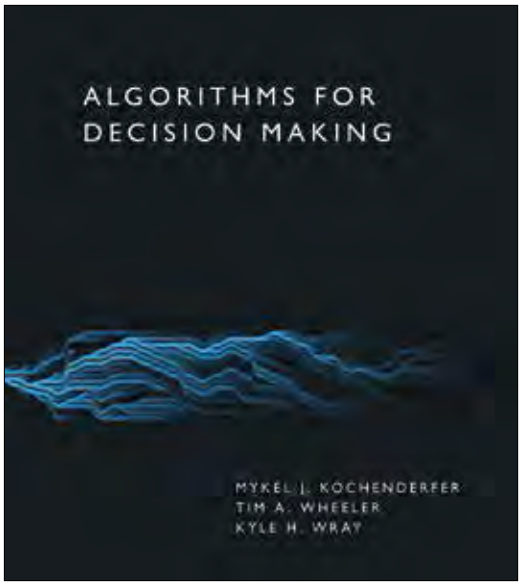
computer science | engineering

October
7 x 9, 488 pp.
260 figures

US $60.00X/$79.00 CAN cloth
978-0-262-04647-3

Algorithms for Decision Making

Mykel J. Kochenderfer, Tim A. Wheeler, and Kyle H. Wray



A broad introduction to algorithms for decision making under uncertainty, introducing the underlying mathematical problem formulations and the algorithms for solving them.

Automated decision-making systems or decision-support systems—used in applications that range from aircraft collision avoidance to breast cancer screening—must be designed to account for various sources of uncertainty while carefully balancing multiple objectives. This textbook provides a broad introduction to algorithms for decision making under uncertainty, covering the underlying mathematical problem formulations and the algorithms for solving them.

The book first addresses the problem of reasoning about uncertainty and objectives in simple decisions at a single point in time, and then turns to sequential decision problems in stochastic environments where the outcomes of our actions are uncertain. It goes on to address model uncertainty, when we do not start with a known model and must learn how to act through interaction with the environment; state uncertainty, in which we do not know the current state of the environment due to imperfect perceptual information; and decision contexts involving multiple agents. The book focuses primarily on planning and reinforcement learning, although some of the techniques presented draw on elements of supervised learning and optimization. Algorithms are implemented in the Julia programming language. Figures, examples, and exercises convey the intuition behind the various approaches presented.

"Its remarkable clarity, range, and depth make this a magnificent book both to learn from and to teach. It opens the door to so many modern techniques while firmly grounding them in the statistical and mathematical theory given us by the founders. Truly exceptional."

—Thomas J. Sargent, Department of Economics, New York University; Senior Fellow, Hoover Institution, Stanford University

"I love the topics covered—a great mix of classical approaches and more recent trends. It will be my main textbook for teaching reinforcement learning."

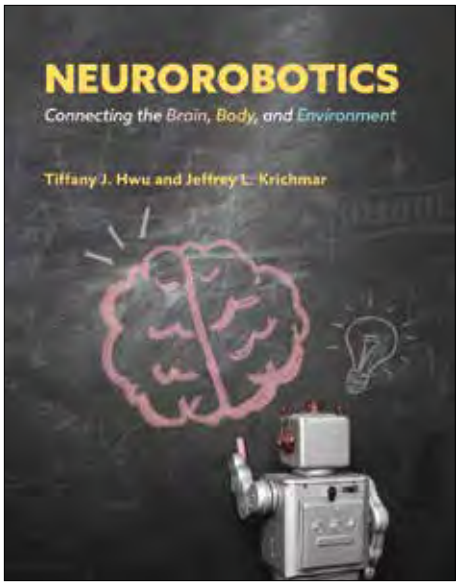
—Michael L. Littman, Professor of Computer Science, Brown University

Mykel Kochenderfer is Associate Professor at Stanford University, where he is Director of the Stanford Intelligent Systems Laboratory (SISL). He is the author of *Decision Making Under Uncertainty* (MIT Press). Kochenderfer and Tim Wheeler are coauthors of *Algorithms for Optimization* (MIT Press). **Tim Wheeler** is a software engineer in the Bay Area, working on autonomy, controls, and decision-making systems. Wheeler and Mykel Kochenderfer are coauthors of *Algorithms for Optimization* (MIT Press). **Kyle Wray** is a researcher who designs and implements the decision-making systems on real-world robots.

computer science

August
8 x 9, 700 pp.
225 color illus.

US $95.00X/$125.00 CAN cloth
978-0-262-04701-2



Neurorobotics

Connecting the Brain, Body, and Environment

Tiffany J. Hwu and Jeffrey L. Krichmar

An introduction to neurorobotics that presents approaches and design principles for developing intelligent autonomous systems grounded in biology and neuroscience.

Neurorobotics is an interdisciplinary field that draws on artificial intelligence, cognitive sciences, computer science, engineering, psychology, neuroscience, and robotics. Because the brain is closely coupled to the body and situated in the environment, neurorobots—autonomous systems modeled after some aspect of the brain—offer a powerful tool for studying neural function and may also be a means for developing autonomous systems with intelligence that rivals that of biological organisms. This textbook introduces approaches and design principles for developing intelligent autonomous systems grounded in biology and neuroscience. It is written for anyone interested in learning about this topic and can be used in cognitive robotics courses for students in psychology, cognitive science, and computer science.

Neurorobotics covers the background and foundations of the field, with information on early neurorobots, relevant principles of neuroscience, learning rules and mechanisms, and reinforcement learning and prediction; neurorobot design principles grounded in neuroscience and principles of neuroscience research; and examples of neurorobots for navigation, developmental robotics, and social robots, presented with the cognitive science and neuroscience background that inspired them. A supplementary website offers videos, robot simulations, and links to software repositories with neurorobot examples.

Tiffany J. Hwu is a research scientist working on projects in autonomous agents and human-machine communication. **Jeffrey L. Krichmar** is a Professor in the Department of Cognitive Sciences and the Department of Computer Science at the University of California, Irvine, where he teaches courses in artificial intelligence, cognitive robotics, and computational neuroscience.

computer science

November
7 x 9, 244 pp.
72 color illus., 53 b&w illus.

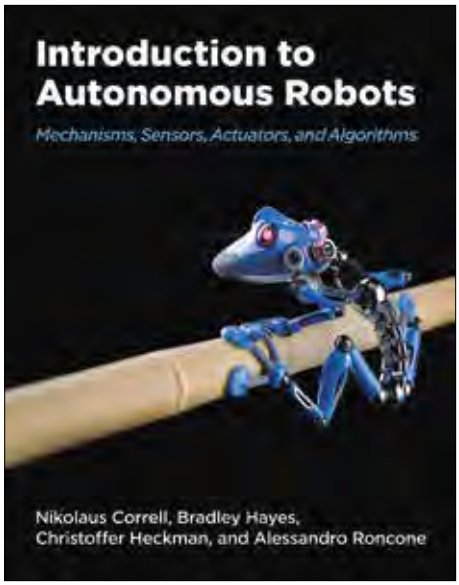
US $80.00X/$105.00 CAN cloth
978-0-262-04706-7

Intelligent Robotics and Autonomous Agents series

Introduction to Autonomous Robots

Mechanisms, Sensors, Actuators, and Algorithms

Nikolaus Correll, Bradley Hayes, Christoffer Heckman, and Alessandro Roncone



A comprehensive introduction to the field of autonomous robotics aimed at upper-level undergraduates and offering additional online resources.

Textbooks that provide a broad algorithmic perspective on the mechanics and dynamics of robots almost unfailingly serve students at the graduate level. *Introduction to Autonomous Robots* offers a much-needed resource for teaching third- and fourth-year undergraduates the computational fundamentals behind the design and control of autonomous robots. The authors use a class-tested and accessible approach to present progressive, step-by-step development concepts, alongside a wide range of real-world examples and fundamental concepts in mechanisms, sensing and actuation, computation, and uncertainty. Throughout, the authors balance the impact of hardware (mechanism, sensor, actuator) and software (algorithms) in teaching robot autonomy.

Rigorous and tested in the classroom, *Introduction to Autonomous Robots* is written for engineering and computer science undergraduates with a sophomore-level understanding of linear algebra, probability theory, trigonometry, and statistics. The text covers topics like basic concepts in robotic mechanisms like locomotion and grasping, plus the resulting forces; operation principles of sensors and actuators; basic algorithms for vision and feature detection; an introduction to artificial neural networks, including convolutional and recurrent variants.

Features:

- QR codes in the text that guide readers to online lecture videos and animations
- Extensive appendices that focus on project-based curricula, pertinent areas of mathematics, backpropagation, writing a research paper, and other topics
- A companion library of exercises in an open-source, platform-independent simulation (Webots)

Nikolaus Correll is Associate Professor of Computer Science at the University of Colorado Boulder. **Bradley Hayes** is Assistant Professor of Computer Science at the University of Colorado Boulder. **Christoffer Heckman** is Assistant Professor of Computer Science at the University of Colorado Boulder. **Alessandro Roncone** is Assistant Professor of Computer Science at the University of Colorado Boulder.

computer science

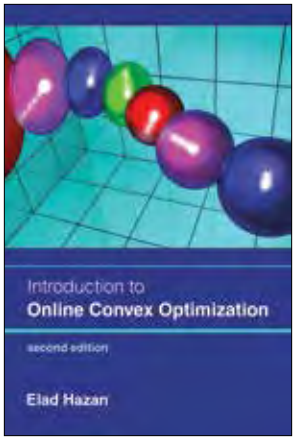
December
7 x 9, 376 pp.
86 illus.

US $65.00X/$86.00 CAN cloth
978-0-262-04755-5

Introduction to Online Convex Optimization

second edition

Elad Hazan



In many practical applications, the environment is so complex that it is not feasible to lay out a comprehensive theoretical model and use classical algorithmic theory and/or mathematical optimization. *Introduction to Online Convex Optimization* presents a robust machine learning approach that contains elements of mathematical optimization, game theory, and learning theory: an optimization method that learns from experience as more aspects of the problem are observed. This view of optimization as a process has led to some spectacular successes in modeling and systems that have become part of our daily lives.

Based on the "Theoretical Machine Learning" course taught by the author at Princeton University, the second edition of this widely used graduate level text features:

- Thoroughly updated material throughout
- New chapters on boosting, adaptive regret, and approachability and expanded exposition on optimization
- Examples of applications, including prediction from expert advice, portfolio selection, matrix completion and recommendation systems, SVM training, offered throughout
- Exercises that guide students in completing parts of proofs

Elad Hazan is Professor of Computer Science at Princeton University and cofounder and director of Google AI Princeton. An innovator in the design and analysis of algorithms for basic problems in machine learning and optimization, he is coinventor of the AdaGrad optimization algorithm for deep learning, the first adaptive gradient method.

computer science

September | 6 x 9, 248 pp. | 11 illus.

US $60.00X/$79.00 CAN cloth
978-0-262-04698-5

Adaptive Computation and Machine Learning series

Machine Learning from Weak Supervision

An Empirical Risk Minimization Approach

Masashi Sugiyama, Han Bao, Takashi Ishida, Nan Lu, Tomoya Sakai, and Gang Niu

Fundamental theory and practical algorithms of weakly supervised classification, emphasizing an approach based on empirical risk minimization.

Standard machine learning techniques require large amounts of labeled data to work well. When we apply machine learning to problems in the physical world, however, it is extremely difficult to collect such quantities of labeled data. This book presents theory and algorithms for weakly supervised learning, a paradigm of machine learning from weakly labeled data. Emphasizing an approach based on empirical risk minimization and drawing on state-of-the-art research in weakly supervised learning, the book provides both the fundamentals of the field and the advanced mathematical theories underlying them. It can be used as a reference for practitioners and researchers and in the classroom.

The book first mathematically formulates classification problems, defines common notations, and reviews various algorithms for supervised binary and multiclass classification. It then explores problems of binary weakly supervised classification, including positive-unlabeled (PU) classification, positive-negative-unlabeled (PNU) classification, and unlabeled-unlabeled (UU) classification. It then turns to multiclass classification, discussing complementary-label (CL) classification and partial-label (PL) classification. Finally, the book addresses more advanced issues, including a family of correction methods to improve the generalization performance of weakly supervised learning and the problem of class-prior estimation.

Masashi Sugiyama is Director of the RIKEN Center for Advanced Intelligence Project and Professor of Computer Science at the University of Tokyo. **Han Bao** is a PhD student in the Department of Computer Science at the University of Tokyo and Research Assistant at the RIKEN Center for Advanced Intelligence Project. **Takashi Ishida** is a Lecturer at the University of Tokyo and Visiting Scientist at the RIKEN Center for Advanced Intelligence Project. **Nan Lu** is a PhD student in the Department of Complexity Science and Engineering at the University of Tokyo and Research Assistant at the RIKEN Center for Advanced Intelligence Project. **Tomoya Sakai** is Senior Researcher at NEC Corporation and Visiting Scientist at the RIKEN Center for Advanced Intelligence Project. **Gang Niu** is Research Scientist in the Imperfect Information Learning Team at the RIKEN Center for Advanced Intelligence Project.

computer science

August | 7 x 9, 320 pp.

US $65.00X/$86.00 CAN cloth
978-0-262-04707-4

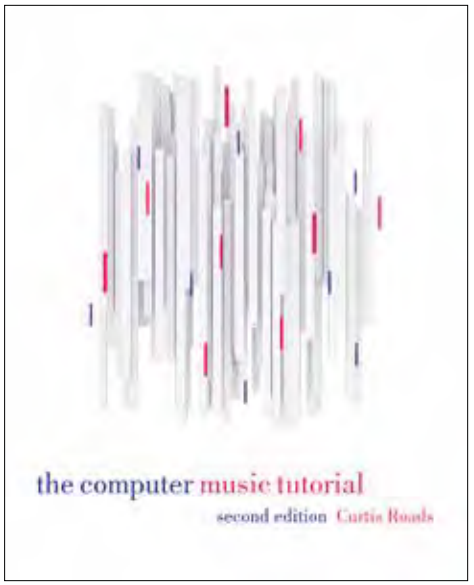
Adaptive Computation and Machine Learning series

The Computer Music Tutorial

second edition

Curtis Roads

with John M. Strawn, Bob L. T. Sturm, and Matthew Wright



Expanded, updated, and fully revised—the definitive introduction to electronic music is ready for new generations of students.

Essential and state of the art, *The Computer Music Tutorial*, second edition is a singular text that introduces computer and electronic music, explains its motivations, and puts topics into context. Curtis Roads's step-by-step presentation orients musicians, engineers, scientists, and anyone else new to computer and electronic music.

The new edition continues to be the definitive tutorial on all aspects of computer music, including digital audio, signal processing, musical input devices, performance software, editing systems, algorithmic composition, MIDI, and psychoacoustics, but the second edition also reflects the enormous growth of the field since the book's original publication in 1996. New chapters cover up-to-date topics like virtual analog, pulsar synthesis, concatenative synthesis, spectrum analysis by atomic decomposition, Open Sound Control, spectrum editors, and instrument and patch editors. Exhaustively referenced and cross-referenced, the second edition adds hundreds of new figures and references to the original charts, diagrams, screen images, and photographs in order to explain basic concepts and terms.

Curtis Roads is Professor of Media Arts and Technology, with an affiliate appointment in Music, at the University of California, Santa Barbara. His previous books include *Microsound and Composing Electronic Music: A New Aesthetic*.

performing arts | music

January
8 x 10, 1080 pp.
616 b&w illus.

US $110.00X/$143.00 CAN cloth
978-0-262-04491-2

Features

- New chapters: virtual analog, pulsar synthesis, concatenative synthesis, spectrum analysis by atomic decomposition, Open Sound Control, spectrum editors, instrument and patch editors, and an appendix on machine learning
- Two thousand references support the book's descriptions and point readers to further study
- Uses mathematical notation and program code examples only when necessary
- Twenty-five years of classroom, seminar, and workshop use inform the pace and level of the material

Game Theory and Behavior

Jeffrey Carpenter and Andrea Robbett

An introduction to game theory that offers not only theoretical tools but also the intuition and behavioral insights to apply these tools to real-world situations.

This introductory text on game theory provides students with both the theoretical tools to analyze situations through the logic of game theory and the intuition and behavioral insights to apply these tools to real-world situations. It is unique among game theory texts in offering a clear, formal introduction to standard game theory while incorporating evidence from experimental data and introducing recent behavioral models. Students will not only learn about incentives, how to represent situations as games, and what agents "should" do in these situations, but they will also be presented with evidence that either confirms the theoretical assumptions or suggests a way in which the theory might be updated.

Features:

- Each chapter begins with a motivating example that can be run as an experiment and ends with a discussion of the behavior in the example.
- Parts I–IV cover the fundamental "nuts and bolts" of any introductory game theory course, including the theory of games, simple games with simultaneous decision making by players, sequential move games, and incomplete information in simultaneous and sequential move games.
- Parts V–VII apply the tools developed in previous sections to bargaining, cooperative game theory, market design, social dilemmas, and social choice and voting.
- Part VIII offers a more in-depth discussion of behavioral game theory models including evolutionary and psychological game theory.
- Supplemental material on the book's website include solutions to end-of-chapter exercises, a manual for running each chapter's experimental games using pencil and paper, and the oTree codes for running the games online.

Jeffrey Carpenter is James Jermain Professor of Political Economy at Middlebury College. **Andrea Robbett** is Associate Professor in the Economics Department at Middlebury College.

economics

December | 8 x 9, 768 pp. | 150 figures

US $125.00X/$163.00 CAN cloth
978-0-262-04729-6

Economic Dynamics

second edition

Theory and Computation

John Stachurski

The second edition of a rigorous and example-driven introduction to topics in economic dynamics that emphasizes techniques for modeling dynamic systems.

This text provides an introduction to the modern theory of economic dynamics, with emphasis on mathematical and computational techniques for modeling dynamic systems. Written to be both rigorous and engaging, the book shows how sound understanding of the underlying theory leads to effective algorithms for solving real-world problems. The material makes extensive use of programming examples to illustrate ideas, bringing to life the abstract concepts in the text. Key topics include algorithms and scientific computing, simulation, Markov models, and dynamic programming. Part I introduces fundamentals and part II covers more advanced material. This second edition has been thoroughly updated, drawing on recent research in the field.

New for the second edition:

- "Programming-language agnostic" presentation using pseudocode.
- New chapter 1 covering conceptual issues concerning Markov chains such as ergodicity and stability.
- New focus in chapter 2 on algorithms and techniques for program design and high-performance computing.
- New focus on household problems rather than optimal growth in material on dynamic programming.
- Solutions to many exercises, code, and other resources available on a supplementary website.

John Stachurski is Professor of Economics at Australian National University and cofounder of QuantEcon. He is the author of *A Primer in Econometric Theory* (MIT Press).

economics

August | 7 x 9, 400 pp.

US $75.00X/$99.00 CAN paper
978-0-262-54477-1

Strategies and Games

second edition

Theory and Practice

Prajit K. Dutta and Wouter Vergote

The new edition of a widely used introduction to game theory and its applications, with a focus on economics, business, and politics.

This widely used introduction to game theory is rigorous but accessible, unique in its balance between the theoretical and the practical, with examples and applications following almost every theory-driven chapter. In recent years, game theory has become an important methodological tool for all fields of social sciences, biology and computer science. This second edition of *Strategies and Games* not only takes into account new game theoretical concepts and applications such as bargaining and matching, it also provides an array of chapters on game theory applied to the political arena. New examples, case studies, and applications relevant to a wide range of behavioral disciplines are now included. The authors map out alternate pathways through the book for instructors in economics, business, and political science.

The book contains four parts: strategic form games, extensive form games, asymmetric information games, and cooperative games and matching. Theoretical topics include dominance solutions, Nash equilibrium, Condorcet paradox, backward induction, subgame perfection, repeated and dynamic games, Bayes-Nash equilibrium, mechanism design, auction theory, signaling, the Shapley value, and stable matchings. Applications and case studies include OPEC, voting, poison pills, Treasury auctions, trade agreements, pork-barrel spending, climate change, bargaining and audience costs, markets for lemons, and school choice. Each chapter includes concept checks and tallies end-of-chapter problems. An appendix offers a thorough discussion of single-agent decision theory, which underpins game theory.

Prajit Dutta is Professor in the Department of Economics at Columbia University. **Wouter Vergote** is Lecturer in the Discipline Economics at Columbia University.

game theory

August
8 x 9, 712 pp.
110 figures

US $125.00X/$163.00 CAN cloth
978-0-262-04652-7

Features:

- Robust ancillaries include expertly prepared slides, solutions to end-of-chapter exercises, a test bank, and several sample syllabi tailored to economics, political science, and business courses
- New political science applications expand use beyond economics and business courses to include political science courses
- Case studies following each theoretical chapter illustrate concepts and chapter-length applications follow groups of related chapters for in-depth exploration and context
- Examples include pork-barrel spending, procurement auctions, trade agreements, climate change negotiations, legislative bargaining, labor market signaling, and school choice

"This outstanding text presents all the major concepts of game theory with crisp, clear exposition—and a rich array of examples across social science. It admirably conveys both the analytical power and intellectual joy of game theory, and will be useful for courses in departments of economics, political science, business, and related fields."

—Sean Gailmard, Professor of Political Science, University of California, Berkeley

Semantics as Science

Richard K. Larson

illustrated by Kimiko Ryokai and Stephen Nash

An introductory linguistics textbook that takes a novel approach: studying linguistic semantics as an exercise in scientific theory construction.

This introductory linguistics text takes a novel approach, one that offers educational value to both linguistics majors and nonmajors. Aiming to help students not only grasp the fundamentals of the subject but also engage with broad intellectual issues and develop general intellectual skills, *Semantics as Science* studies linguistic semantics as an exercise in scientific theory construction. Semantics offers an excellent medium through which to acquaint students with the notion of a formal, axiomatic system—that is, a system that derives results from a precisely articulated set of assumptions according to a precisely articulated set of rules.

The book develops semantic theory through the device of axiomatic T-theories, first proposed by Alfred Tarski more than eighty years ago, introducing technical elaboration only when required. It adopts Japanese as its core object of study, allowing students to explore and investigate the real empirical issues arising in the context of non-English structures, a non-English lexicon and non-English meanings. The book is structured as a laboratory science text that poses specific empirical questions, with short units, each of which can be covered in one class session. The layout is engagingly visual, designed to help students understand and retain the material, with lively illustrations, examples, and quotations from famous scholars.

Richard K. Larson is Professor of Linguistics at Stony Brook University and author of Grammar as Science.

linguistics

October | 7 x 9, 496 pp. | 422 b&w illus.

US $60.00X/$79.00 CAN paper
978-0-262-53995-1

Logical Methods

Greg Restall and Shawn Standefer

An accessible introduction to philosophical logic, suitable for undergraduate courses and above.

Rigorous yet accessible, *Logical Methods* introduces logical tools used in philosophy—including proofs, models, modal logics, meta-theory, two-dimensional logics, and quantification—for philosophy students at the undergraduate level and above. The approach developed by Greg Restall and Shawn Standefer is distinct from other texts because it presents proof construction on equal footing with model building and emphasizes connections to other areas of philosophy as the tools are developed.

Throughout, the material draws on a broad range of examples to show readers how to develop and master tools of proofs and models for propositional, modal, and predicate logic; to construct and analyze arguments and to find their structure; to build counterexamples; to understand the broad sweep of formal logic's development in the twentieth and twenty-first centuries; and to grasp key concepts used again and again in philosophy.

This text is essential to philosophy curricula, regardless of specialization, and will also find wide use in mathematics and computer science programs.

Features:

- An accessible introduction to proof theory for readers with no background in logic
- Covers proofs, models, modal logics, meta-theory, two-dimensional logics, quantification, and many other topics
- Provides tools and techniques of particular interest to philosophers and philosophical logicians
- Features short summaries of key concepts and skills at the end of each chapter
- Offers chapter-by-chapter exercises in two categories: basic, designed to reinforce important ideas; and challenge, designed to push students' understanding and developing skills in new directions

Greg Restall is Shelby Cullom Davis Professor of Philosophy at the University of St Andrews. He is the author of *Logic: An Introduction* and coauthor of *Logical Pluralism*. **Shawn Standefer** is Assistant Professor of Philosophy at National Taiwan University.

philosophy | cognitive Science

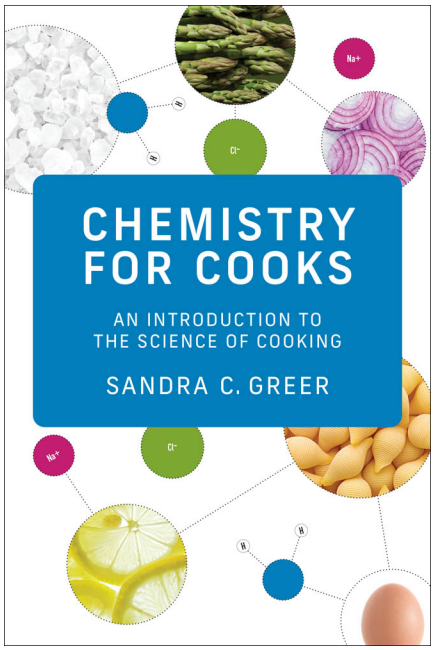
January | 7 x 10, 284 pp.

US $40.00X/$54.00 CAN paper
978-0-262-54484-9

Chemistry for Cooks

An Introduction to the Science of Cooking

Sandra C. Greer



A fun approach to teaching science that uses cooking to demonstrate principles of chemistry for undergraduate students who are not science majors, high school students, culinary students, and home cooks.

How does an armload of groceries turn into a culinary masterpiece? In this highly accessible and informative text, Sandra C. Greer takes students into the kitchen to show how chemistry—with a dash of biology and physics—explains what happens when we cook.

Chemistry for Cooks provides all the background material necessary for nonscientists to understand essential chemical processes and to see cooking as an enjoyable application of science. Greer uses a variety of practical examples, including recipes, to instruct readers on the molecular structure of food, the chemical reactions used in cooking to change the nature of food, and the essentials of nutrition and taste. She also offers kitchen hints and exercises based on the material in each chapter, plus do-it-yourself projects to encourage exploration of the chemistry that takes place when we cook food.

Sandra C. Greer is a retired chemistry professor who taught at the University of Maryland College Park and at Mills College in Oakland, California. She is a past winner of the American Chemical Society Francis P. Garvan–John M. Olin Medal and is the author of *Elements of Ethics for Physical Scientists* (MIT Press).

science | chemistry

January
6 x 9, 304 pp.
51 color illus., 9 b&w illus.

US $45.00X/$60.00 CAN paper
978-0-262-54479-5

Features

- Perfect for science courses aimed at non–science majors: does not require prior knowledge of chemistry, physics, or biology
- Equally useful for general readers, home and professional cooks, and culinary students
- Topics include what matter is made of, how the structure of matter is altered by heat, how we treat food in order to change its microscopic structure, why particular procedures or methods are used in the kitchen, and how to think critically about various cooking methods
- A reference section at the end of each chapter points readers to resources for further study
- Additional online resources include a solutions manual, a sample syllabus, and PowerPoint slides of all tables and figures

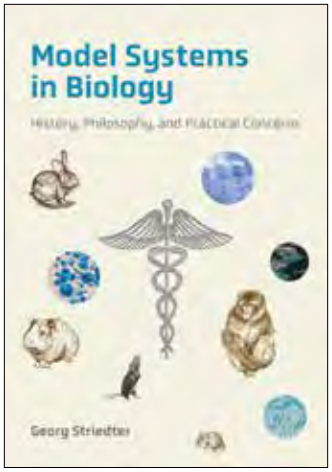
Model Systems in Biology

History, Philosophy, and Practical Concerns

Georg Striedter

How biomedical research using various animal species and in vitro cellular systems has resulted in both major successes and translational failure.

In *Model Systems in Biology*, comparative neurobiologist Georg Striedter examines how biomedical researchers have used animal species and in vitro cellular systems to understand and develop treatments for human diseases ranging from cancer and polio to Alzheimer's disease and schizophrenia. Although there have been some major successes, much of this "translational" research on model systems has failed to generalize to humans. Striedter explores the history of such research, focusing on the models used and considering the question of model selection from a variety of perspectives—the philosophical, the historical, and that of practicing biologists.



Striedter reviews some philosophical concepts and ethical issues, including concerns over animal suffering and the compromises that result. He traces the history of the most widely used animal and in vitro models, describing how they compete with one another in a changing ecosystem of models. He examines how therapies for bacterial and viral infections, cancer, cardiovascular diseases, and neurological disorders have been developed using animal and cell culture models—and how research into these diseases has both taken advantage of and been hindered by model system differences. Finally, Striedter argues for a "big tent" biology, in which a diverse set of models and research strategies can coexist productively.

Georg Striedter is Professor in the Department of Neurobiology and Behavior at the University of California, Irvine. He is the author of two books on nervous system evolution, as well as an introductory college-level textbook, *Neurobiology: A Functional Approach*.

science | biology

August | 7 x 10, 304 pp. | 27 b&w illus.

US $45.00X/$60.00 CAN cloth
978-0-262-04694-7

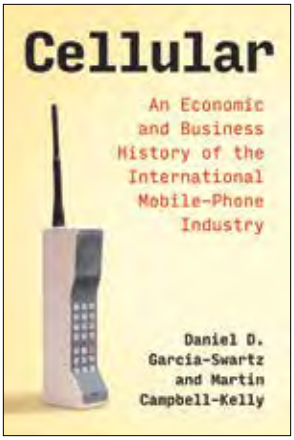
Cellular

An Economic and Business History of the International Mobile-Phone Industry

Daniel D. Garcia-Swartz and Martin Campbell-Kelly

Tracks the evolution of the international cellular industry from the late 1970s to the present.

The development of the mobile-phone industry into what we know today required remarkable cooperation between companies, governments, and industrial sectors. Companies developing cellular infrastructure, cellular devices, cellular network services, and eventually software and mobile semiconductors had to cooperate, not simply compete, with each other. In this global history of the mobile-phone industry, Daniel D. Garcia-Swartz and Martin Campbell-Kelly examine its development in the United States, Europe, Japan, and several emerging economies, including China and India. They present the evolution of mobile phones from the perspective of vendors of telephone equipment and network operators, users whose lives have been transformed by mobile phones, and governments that have fostered specific mobile-phone standards. *Cellular* covers the technical aspects of the cellphone, as well as its social and political impact.



Beginning with the 1980s, the authors trace the development of closed (proprietary) and open (available to all) cellular standards, the impact of network effects as cellular adoption increased, major technological changes affecting mobile phone hardware, and the role of national governments in shaping the industry. The authors also consider the changing roles that cellular phones have played in the everyday lives of people around the world and the implications 5G technology may have for the future.

Daniel D. Garcia-Swartz is an economist at Charles River Associates in Chicago. He is coauthor of *From Mainframes to Smartphones: A History of the International Computer Industry*. **Martin Campbell-Kelly** is Professor Emeritus of Computer Science at the University of Warwick. He is coauthor of *From Mainframes to Smartphones: A History of the International Computer Industry*.

technology | business

October | 6 x 9, 400 pp. | 75 figures

US $45.00X/$60.00 CAN paper
978-0-262-54392-7

History of Computing series

Constructing Science

Connecting Causal Reasoning to Scientific Thinking in Young Children

Deena Skolnick Weisberg and David M. Sobel

An examination of children's causal reasoning capacities and how those capacities serve as the foundation of their scientific thinking.

Young children have remarkable capacities for causal reasoning, which are part of the foundation of their scientific thinking abilities. In *Constructing Science*, Deena Weisberg and David Sobel trace the ways that young children's sophisticated causal reasoning abilities combine with other cognitive, metacognitive, and social factors to develop into a more mature set of scientific thinking abilities. Conceptualizing scientific thinking as the suite of skills that allows people to generate hypotheses, solve problems, and explain aspects of the world, Weisberg and Sobel argue that understanding how this capacity develops can offer insights into how we can become a more scientifically literate society.

Investigating the development of causal reasoning and how it sets the stage for scientific thinking in the elementary school years and beyond, Weisberg and Sobel outline a framework for understanding how children represent and learn causal knowledge and identify key variables that differ between causal reasoning and scientific thinking. They present empirical studies suggesting ways to bridge the gap between causal reasoning and scientific thinking, focusing on two factors: contextualization and metacognitive thinking abilities. Finally, they examine children's explicit understanding of such concepts as science, learning, play, and teaching.

Deena Skolnick Weisberg is Assistant Professor in the Department of Psychological and Brain Sciences at Villanova University, where she directs the Scientific Thinking and Representation (STAR) Laboratory. **David M. Sobel** is Professor in the Department of Cognitive, Linguistic, and Psychological Sciences at Brown University, where he directs the Causality and Mind Lab. He is coeditor of *Cognitive Development in Museum Settings: Relating Research to Practice*.

cognitive science | psychology

September | 6 x 9, 392 pp. | 25 illus.

US $55.00X/$73.00 CAN paper
978-0-262-04468-4

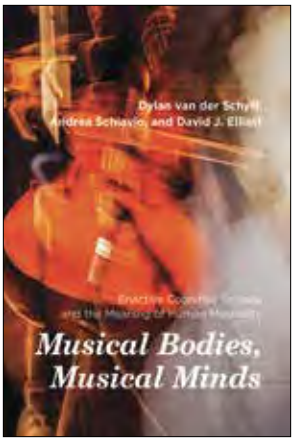
Musical Bodies, Musical Minds

Enactive Cognitive Science and the Meaning of Human Musicality

Dylan van der Schyff, Andrea Schiavio, and David J. Elliott

An enactive account of musicality that proposes new ways of thinking about musical experience, musical development in infancy, music and evolution, and more.

Musical Bodies, Musical Minds offers an innovative account of human musicality that draws on recent developments in embodied cognitive science. The authors explore musical cognition as a form of sense-making that unfolds across the embodied, environmentally embedded, and sociomaterially extended dimensions that compose the enactment of human worlds of meaning. This perspective enables new ways of understanding musical experience, the development of musicality in infancy and childhood, music's emergence in human evolution, and the nature of musical emotions, empathy, and creativity.



Developing their account, the authors link a diverse array of ideas from fields including neuroscience, theoretical biology, psychology, developmental studies, social cognition, and education. Drawing on these insights, they show how dynamic processes of adaptive body-brain-environment interactivity drive musical cognition across a range of contexts, extending it beyond the personal (inner) domain of musical agents and out into the material and social worlds they inhabit and influence. An enactive approach to musicality, they argue, can reveal important aspects of human being and knowing that are often lost or obscured in the modern technologically driven world.

Dylan van der Schyff is Senior Lecturer in Music at the Melbourne Conservatorium of Music at the University of Melbourne and a musician who has performed extensively throughout North America and Europe. **Andrea Schiavio** is Senior Postdoctoral Researcher at the Centre for Systematic Musicology of the University of Graz. **David J. Elliott** is Professor of Music and Music Education at New York University, coauthor of *Music Matters: A Philosophy of Music Education*, and an award-winning jazz composer and arranger.

cognitive science

August | 6 x 9, 322 pp. | 17 illus.

US $40.00X/$54.00 CAN paper
978-0-262-04522-3

Interdisciplinarity in the Making

Models and Methods in Frontier Science

Nancy J. Nersessian

A cognitive ethnography of how bioengineering scientists create innovative modeling methods.

In this first full-scale, long-term cognitive ethnography by a philosopher of science, Nancy J. Nersessian offers an account of how scientists at the interdisciplinary frontiers of bioengineering create novel problem-solving methods. Bioengineering scientists model complex dynamical biological systems using concepts, methods, materials, and other resources drawn primarily from engineering. They aim to understand these systems sufficiently to control or intervene in them. What Nersessian examines here is how cutting-edge bioengineering scientists integrate the cognitive, social, material, and cultural dimensions of practice. Her findings and conclusions have broad implications for researchers in philosophy, science studies, cognitive science, and interdisciplinary studies, as well as scientists, educators, policy makers, and funding agencies.

In studying the epistemic practices of scientists, Nersessian pushes the boundaries of the philosophy of science and cognitive science into areas not ventured before. She recounts a decades-long, wide-ranging, and richly detailed investigation of the innovative interdisciplinary modeling practices of bioengineering researchers in four university laboratories. She argues and demonstrates that the methods of cognitive ethnography and qualitative data analysis, placed in the framework of distributed cognition, provide the tools for a philosophical analysis of how scientific discoveries arise from complex systems in which the cognitive, social, material, and cultural dimensions of problem-solving are integrated into the epistemic practices of scientists. Specifically, she looks at how interdisciplinary environments shape problem-solving. Although Nersessian's case material is drawn from the bioengineering sciences, her analytic framework and methodological approach are directly applicable to scientific research in a broader, more general sense, as well.

Nancy J. Nersessian is Regents' Professor of Cognitive Science Emerita, Georgia Institute of Technology, and Research Associate in Psychology, Harvard University. She is the author of *Creating Scientific Concepts* (MIT Press).

cognitive science | philosophy

November | 6 x 9, 392 pp. | 16 color illus., 15 b&w illus.

US $60.00X/$79.00 CAN paper
978-0-262-54466-5

Shapes of Imagination

Calculating in Coleridge's Magical Realm

George Stiny

Visual calculating in shape grammars aligns with art and design, bridging the gap between seeing (Coleridge's "imagination") and combinatoric play (Coleridge's "fancy").

In *Shapes of Imagination*, George Stiny runs visual calculating in shape grammars through art and design—incorporating Samuel Taylor Coleridge's poetic imagination and Oscar Wilde's corollary to see things as they aren't. Many assume that calculating limits art and design to suit computers, but shape grammars rely on seeing to prove otherwise. Rules that change what they see extend calculating to overtake what computers can do, in logic and with data and learning. Shape grammars bridge the divide between seeing (Coleridge's "imagination, or esemplastic power") and combinatoric play (Coleridge's "fancy").

Stiny shows that calculating without seeing excludes art and design. Seeing is key for calculating to augment creative activity with aesthetic insight and value. Shape grammars go by appearances, in a full-fledged aesthetic enterprise for the inconstant eye; they answer the question of what calculating would be like if Turing and von Neumann were artists instead of logicians. Art and design are calculating in all their splendid detail.

George Stiny is Professor of Design and Computation at MIT. He first used shape grammars for painting and sculpture and is the author of *Pictorial and Formal Aspects of Shape and Shape Grammars*; *Algorithmic Aesthetics: Computer Models for Criticism and Design in the Arts* (with James Gips); and *Shape: Talking about Seeing and Doing* (MIT Press).

design

November | 7 x 9, 248 pp. | 302 b&w illus.

US $45.00X/$60.00 CAN paper
978-0-262-54413-9

Mussolini's Nature

An Environmental History of Italian Fascism

Marco Armiero, Roberta Biasillo, and Wilko Graf von Hardenberg

translated by James Sievert

This exploration of the environmental practices of Benito Mussolini's fascist regime invites readers to consider the ecological connections of all political projects.

"We might think we see a mountain while it was a war; a forest can actually be an engine; a monument to workers might reflect the violence of a colonial empire."
—extracted from *Mussolini's Nature*

In this first environmental history of Italian fascism, Marco Armiero, Roberta Biasillo, and Wilko Graf von Hardenberg reveal that nature and fascist rhetoric are inextricable. *Mussolini's Nature* explores fascist political ecologies, or rather the practices and narratives through which the regime constructed imaginary and material ecologies functional to its political project. The book does not pursue the ghost of a green Mussolini by counting how many national parks were created during the regime or how many trees were planted. Instead, the reader is trained to recognize fascist political ecology in Mussolini's speeches, reclaimed landscapes, policies of economic self-sufficiency, propaganda documentaries, reforested areas, and the environmental transformation of colonial holdings.

The authors conclude with an examination of the role of fascist landscapes in the country's postwar reconstruction: Mussolini's nature is still visible today through plaques, monuments, toponomy, and the shapes of landscapes. This original and surprisingly intimate environmental history is not merely a chronicle of conservation in fascist Italy but also an invitation to consider the socioecological connections of all political projects.

Marco Armiero is Research Director of the Institute for Studies on the Mediterranean, Naples, Italy, and Director of the Environmental Humanities Laboratory at the KTH Royal Institute of Technology, Stockholm. **Roberta Biasillo** is Assistant Professor of Contemporary Political History at Utrecht University. **Wilko Graf von Hardenberg** is Research Scholar and PI of the project "The Sound of Nature: Soundscapes and Environmental Awareness, 1750–1950" at Humboldt University in Berlin.

history | environment

December | 5 1/4 x 8, 208 pp. | 4 b&w illus.

US $30.00X/$40.00 CAN paper
978-0-262-54471-9

Seed Activism

Patent Politics and Litigation in the Global South

Karine E. Peschard

How lawsuits around intellectual property in Brazil and India are impacting the patentability of plants and seeds, farmers' rights, and the public interest.

Over the past decade, legal challenges have arisen in the Global South over patents on genetically modified crops. In this ethnographic study, Karine E. Peschard explores the effects of these disputes on people's lives, while uncovering the role of power—material, institutional, and discursive—in shaping laws and legal systems. The expansion of corporate intellectual property (IP), she shows, negatively impacts farmers' rights and, by extension, the right to food, since small farms produce the bulk of food for domestic consumption. Peschard sees emerging a new legal common sense concerning the patentability of plant-related inventions, as well as a balance among IP, farmers' rights, and the public interest.

Peschard examines the strengthening of IP regimes for plant varieties, the consolidation of the global biotech industry, the erosion of agrobiodiversity, and farmers' dispossession. She shows how litigants question the legality of patents and private IP systems implemented by Monsanto for royalties on three genetically modified crop varieties, Roundup Ready soybean in Brazil and Bt cotton and Bt eggplant in India. Peschard argues that these private IP systems have rendered moot domestic legislation on plant variety protection and farmers' rights. This unprecedented level of corporate concentration in such a vital sector raises concerns over the erosion of agricultural biodiversity, farmers' rights and livelihoods, food security, and, ultimately, the merits of extending IP rights to higher life forms such as plants.

Karine Peschard is Associate Research Fellow at the Geneva Academy of International Humanitarian Law and Human Rights, and Associate Researcher at the Albert Hirschman Centre on Democracy at the Graduate Institute of International and Development Studies.

law | environment

October | 6 x 9, 208 pp. | 7 b&w illus.

US $35.00X/$47.00 CAN paper
978-0-262-54464-1

Food, Health, and the Environment series

Wandering Games

Melissa Kagen

An analysis of wandering within different game worlds, viewed through the lenses of work, colonialism, gender, and death.

Wandering in games can be a theme, a formal mode, an aesthetic metaphor, or a player action. It can mean walking, escaping, traversing, meandering, or returning. In this book, game studies scholar Melissa Kagen introduces the concept of "wandering games," exploring the uses of wandering in a variety of game worlds. She shows how the much-derided Walking Simulator—a term that began as an insult, a denigration of games that are less violent, less task-oriented, or less difficult to complete—semi-accidentally tapped into something brilliant: the vast heritage and intellectual history of the concept of walking in fiction, philosophy, pilgrimage, performance, and protest.

Kagen examines wandering in a series of games that vary widely in terms of genre, mechanics, themes, player base, studio size, and funding, giving close readings to *Return of the Obra Dinn*, *Eastshade*, *Ritual of the Moon*, *80 Days*, *Heaven's Vault*, *Death Stranding*, and *The Last of Us Part II*. Exploring the connotations of wandering within these different game worlds, she considers how ideologies of work, gender, colonialism, and death inflect the ways we wander through digital spaces. Overlapping and intersecting, each provides a multifaceted lens through which to understand what wandering does, lacks, implies, and offers. Kagen's account will attune game designers, players, and scholars to the myriad possibilities of the wandering ludic body.

Melissa Kagen is Assistant Professor of Communication and Video Gaming Studies Concentration Advisor at Curry College in Milton, Massachusetts, and an Associate Editor of the *Journal of Gaming & Virtual Worlds*.

game studies

October | 6 x 9, 216 pp. | 11 b&w illus.

US $30.00X/$40.00 CAN paper
978-0-262-54424-5

Playing at a Distance

Borderlands of Video Game Aesthetic

Sonia Fizek

An essential exploration of video game aesthetic that decenters the human player and challenges what it means to play.

Do we play video games or do video games play us? Is nonhuman play a mere paradox or the future of gaming? And what do video games have to do with quantum theory? In *Playing at a Distance*, Sonia Fizek engages with these and many more daunting questions, forging new ways to think and talk about games and play that decenter the human player and explore a variety of play formats and practices that require surprisingly little human action. Idling in clicker games, wandering in walking simulators, automating gameplay with bots, or simply watching games rather than playing them—Fizek shows how these seemingly marginal cases are central to understanding how we play in the digital age.

Introducing the concept of distance, Fizek reorients our view of computer-mediated play. To "play at a distance," she says, is to delegate the immediate action to the machine and to become participants in an algorithmic spectacle. Distance as a media aesthetic framework enables the reader to come to terms with the ambiguity and aesthetic diversity of play.

Drawing on concepts from philosophy, media theory, and posthumanism, as well as cultural and film studies, *Playing at a Distance* invites a wider understanding of what digital games and gaming are in all their diverse experiences and forms. In challenging the common perception of video games as inherently interactive, the book contributes to our understanding of the computer's influence on practices of play—and prods us to think more broadly about what it means to play.

Sonia Fizek is an associate professor of games and media studies at the Cologne Game Lab at Technical University of Cologne, Germany.

game studies

November | 6 x 9, 192 pp. | 23 b&w illus.

US $35.00X/$47.00 CAN paper
978-0-262-54462-7

Copyright's Broken Promise

How to Restore the Law's Ability to Promote the Progress of Science

John Willinsky

A comprehensive proposal for reforming copyright law to ensure sustainable public access to research and scholarship.

Open access is widely supported by researchers, librarians, scholarly societies, and research funders, as well as large and small publishers. Yet despite this support—and the pandemic's demonstration of the importance of open access for scientific progress—the scholarly publishing market is failing to deliver open access quickly enough. In *Copyright's Broken Promise*, John Willinsky presents the case for reforming copyright law so that it supports, rather than impedes, public access to research and scholarship. He draws on the legal strategy of statutory licensing to set out the terms and structures by which the Copyright Act could ensure that publishers are fairly compensated for providing immediate open access.

What sets Willinsky's analysis apart is its focus on the current state of scholarly publishing. Because copyright offers so little legal support for moving publishing to open access, though it is best for science, he says it is time to stop regarding the Copyright Act as a law of nature that can only be circumvented, contravened, or temporarily set aside. Specifically, he proposes that the Copyright Act add a new category of work, called "research publications," which would be subject to statutory licensing. This would allow publishers to receive royalty payments from the principal institutional users (universities, industry R&D, research institutes, and so on) and sponsors of the work (foundations and government agencies), while providing immediate open access.

John Willinsky is the Khosla Family Professor of Education at Stanford University and founding director of the Public Knowledge Project. His books include *Empire of Words*, *Learning to Divide the World*, *The Access Principle* (MIT Press), and *The Intellectual Properties of Learning*.

law | technology

December | 6 x 9, 184 pp. | 5 b&w illus.

US $28.00X/$37.00 CAN paper
978-0-262-54441-2

Consequences of Language

From Primary to Enhanced Intersubjectivity

N. J. Enfield and Jack Sidnell

What is it about humans that makes language possible, and what is it about language that makes us human?

If you are reading this, you have done something that only our species has evolved to do. You have acquired a natural language. This book asks, How has this changed us?

Where scholars have long wondered what it is about humans that makes language possible, N. J. Enfield and Jack Sidnell ask instead, What is it about humans that is made possible by language? In *Consequences of Language* their objective is to understand what modern language really is and to identify its logical and conceptual consequences for social life. Central to this undertaking is the concept of intersubjectivity, the open sharing of subjective experience. There is, Enfield and Sidnell contend, a uniquely human form of intersubjectivity, and it is essentially intertwined with language in two ways: a primary form of intersubjectivity was necessary for language to have begun evolving in our species in the first place and then language, through its defining reflexive properties, transformed the nature of our intersubjectivity. In the authors' analysis, social accountability—the bedrock of society—is grounded in this linguistically transformed, enhanced kind of intersubjectivity.

The account of the language-mind-society connection put forward in *Consequences of Language* is one of unprecedented reach, suggesting new connections across disciplines centrally concerned with language—from anthropology and philosophy to sociology and cognitive science—and among those who would understand the foundational role of language in making us human.

N. J. Enfield is Professor of Linguistics at the University of Sydney and Director of the Sydney Centre for Language Research. He is the author of *The Anatomy of Meaning* and *Language Vs. Reality: Why Language Is Good for Lawyers and Bad for Scientists* (MIT Press). **Jack Sidnell** is Professor of Anthropology at the University of Toronto.

linguistics

November | 6 x 9, 256 pp. | 21 b&w illus.

US $45.00X/$60.00 CAN paper
978-0-262-54486-3

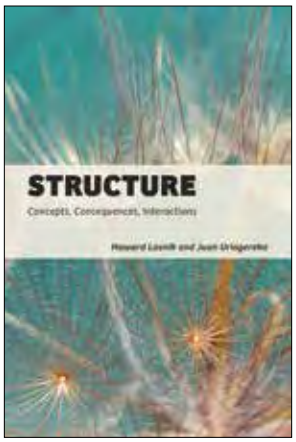
Structure

Concepts, Consequences, Interactions

Howard Lasnik and Juan Uriagereka

Natural phenomena, including human language, are not just series of events but are organized quasi-periodically; sentences have structure, and that structure matters.

Howard Lasnik and Juan Uriagereka "were there" when generative grammar was being developed into the Minimalist Program. In this presentation of the universal aspects of human language as a cognitive phenomenon, they rationally reconstruct syntactic structure. In the process, they touch upon structure dependency and its consequences for learnability, nuanced arguments (including global ones) for structure presupposed in standard linguistic analyses, and a formalism to capture long-range correlations. For practitioners, the authors assess whether "all we need is Merge," while for outsiders, they summarize what needs to be covered when attempting to have structure "emerge."



Reconstructing the essential history of what is at stake when arguing for sentence scaffolding, the authors cover a range of larger issues, from the traditional computational notion of structure (the strong generative capacity of a system) and how far down into words it reaches, to whether its variants, as evident across the world's languages, can arise from non-generative systems. While their perspective stems from Noam Chomsky's work, it does so critically, separating rhetoric from results. They consider what they do to be empirical, with the formalism being only a tool to guide their research (of course, they want sharp tools that can be falsified and have predictive power). Reaching out to sceptics, they invite potential collaborations that could arise from mutual examination of one another's work, as they attempt to establish a dialogue beyond generative grammar.

Howard Lasnik is Distinguished University Professor of Linguistics at the University of Maryland. **Juan Uriagereka** is Professor of Linguistics and Director of the School of Languages, Literatures, & Cultures at the University of Maryland.

linguistics

December | 6 x 9, 248 pp.

US $45.00X/$60.00 CAN paper
978-0-262-54454-2

Mathematical Tools for Real-World Applications

A Gentle Introduction for Students and Practitioners

Alexandr Draganov

Techniques for applying mathematical concepts in the real world: six rarely taught but crucial tools for analysis, research, and problem-solving.

Many young graduates leave school with a solid knowledge of mathematical concepts but struggle to apply these concepts in practice. Real scientific and engineering problems are different from those found in textbooks: they are messier, take longer to solve, and standard solution recipes might not apply. This book fills the gap between what is taught in the typical college curriculum and what a practicing engineer or scientist needs to know. It presents six powerful tools for analysis, research, and problem solving in the real world: dimensional analysis, limiting cases, symmetry, scaling, making order of magnitude estimates, and the method of successive approximations.

The book does not focus on formulaic manipulations of equations, but emphasizes analysis and explores connections between the equations and the application. Each chapter introduces a set of ideas and techniques and then shows how these techniques apply to a series of problems. (Knowledge of algebra and trigonometry, but not calculus, is required.) The final two chapters tie all six techniques together and apply them to two real-world problems: computing the probability of a rare, catastrophic event, and tracking a satellite with a GPS receiver. Readers will learn how to analyze, dissect, and gain insight into the results by using all the techniques presented in earlier chapters—and discover how analysis tools work on problems not concocted for a textbook. The appendix provides solutions to many of the problems found throughout the book.

Alexandr Draganov was born and raised in Kyiv, Ukraine; in light of the current war in Ukraine he will donate 100% of his royalties for the first year to support medical and humanitarian efforts there.

Alexandr Draganov has more than twenty-five years of experience doing research that spans space science (as a graduate student at Stanford) and navigation applications (as a Technical Fellow at Boeing).

mathematics

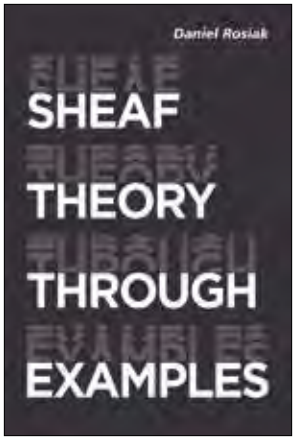
August | 7 x 9, 306 pp. | 90 b&w illus.

US $40.00X/$54.00 CAN paper
978-0-262-54396-5

Sheaf Theory through Examples

Daniel Rosiak

An approachable introduction to elementary sheaf theory and its applications beyond pure math.



Sheaves are mathematical constructions concerned with passages from local properties to global ones. They have played a fundamental role in the development of many areas of modern mathematics, yet the broad conceptual power of sheaf theory and its wide applicability to areas beyond pure math have only recently begun to be appreciated. Taking an applied category theory perspective, Sheaf Theory through Examples provides an approachable introduction to elementary sheaf theory and examines applications including n-colorings of graphs, satellite data, chess problems, Bayesian networks, self-similar groups, musical performance, complexes, and much more.

With an emphasis on developing the theory via a wealth of well-motivated and vividly illustrated examples, *Sheaf Theory through Examples* supplements the formal development of concepts with philosophical reflections on topology, category theory, and sheaf theory, alongside a selection of advanced topics and examples that illustrate ideas like cellular sheaf cohomology, toposes, and geometric morphisms.

Sheaf Theory through Examples seeks to bridge the powerful results of sheaf theory as used by mathematicians and real-world applications, while also supplementing the technical matters with a unique philosophical perspective attuned to the broader development of ideas.

Daniel Rosiak is a Research Associate at the Inamori International Center for Ethics and Excellence at Case Western Reserve University.

mathematics

October | 7 x 10, 432 pp. | 2 color illus., 75 b&w illus.

US $55.00X/$73.00 CAN paper
978-0-262-54215-9

Sound Actions

Conceptualizing Musical Instruments

Alexander Refsum Jensenius

A techno-cognitive look at how new technologies are shaping the future of musicking.

"Musicking" encapsulates both the making of and perception of music, so it includes both active and passive forms of musical engagement. But at its core, it is a relationship between actions and sounds, between human bodies and musical instruments. Viewing musicking through this lens and drawing on music cognition and music technology, *Sound Actions* proposes a model for understanding differences between traditional acoustic "sound makers" and new electro-acoustic "music makers."

What is a musical instrument? How do new technologies change how we perform and perceive music? What happens when composers build instruments, performers write code, perceivers become producers, and instruments play themselves? The answers to these pivotal questions entail a meeting point between interactive music technology and embodied music cognition, what author Alexander Refsum Jensenius calls "embodied music technology." Moving between objective description and subjective narrative of his own musical experiences, Jensenius explores why music makes people move, how the human body can be used in musical interaction, and how new technologies allow for active musical experiences. The development of new music technologies, he demonstrates, has fundamentally changed how music is performed and perceived.

Alexander Refsum Jensenius is Professor of Music Technology at the University of Oslo.

music | sound studies

December | 6 x 9, 312 pp. | 79 b&w illus.

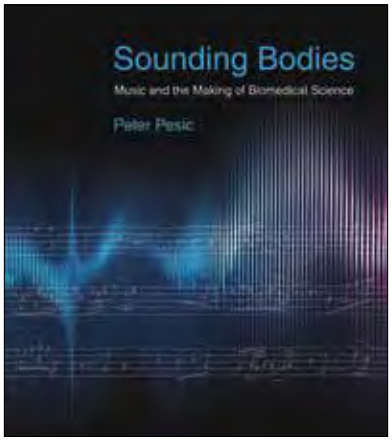
US $45.00X/$60.00 CAN paper
978-0-262-54463-4

Sounding Bodies

Music and the Making of Biomedical Science

Peter Pesic

The unfolding influence of music and sound on the fundamental structure of the biomedical sciences, from ancient times to the present.



Beginning in ancient Greece, Peter Pesic writes, music and sound significantly affected the development of the biomedical sciences. Physicians used rhythmical ratios to interpret the pulse, which inspired later efforts to record the pulse in musical notation. After 1700, biology and medicine took a "sonic turn," viewing the body as a musical instrument, the rhythms and vibrations of which could guide therapeutic insight. In *Sounding Bodies*, Pesic traces the unfolding influence of music and sound on the fundamental structure of the biomedical sciences.

Pesic explains that music and sound provided the life sciences important tools for hearing, understanding, and influencing the rhythms of life. As medicine sought to go beyond the visible manifestations of illness, sound offered ways to access the hidden interiority of body and mind. Sonic interventions addressed the search for a new typology of mental illness, and practitioners used musical instruments to induce hypnotic states meant to cure both psychic and physical ailments. The study of bat echolocation led to the manifold clinical applications of ultrasound; such sonic devices as telephones and tuning forks were used to explore the functioning of the nerves.

Sounding Bodies follows Pesic's *Music and the Making of Modern Science* and *Polyphonic Minds* to complete a trilogy on the influence of music on the sciences. Enhanced digital editions of the books in the trilogy offer playable music and sound examples.

Peter Pesic, writer, pianist, and scholar, is Director of the Science Institute, Musician-in-Residence, and Tutor Emeritus at St. John's College, Santa Fe. He is the author of *Labyrinth*, *Seeing Double*, *Abel's Proof*, *Sky in a Bottle*, *Music and the Making of Modern Science*, and *Polyphonic Minds*, all published by the MIT Press (see page 88).

science, technology, and society

September | 8 x 9, 408 pp. | 111 figures

US $55.00X/$73.00 CAN paper
978-0-262-04635-0

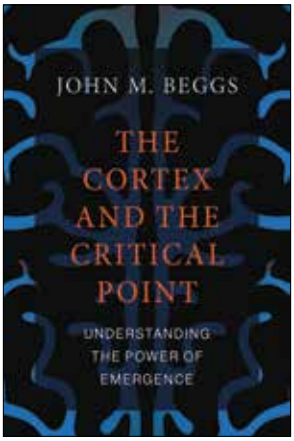
The Cortex and the Critical Point

Understanding the Power of Emergence

John M. Beggs

How the cerebral cortex operates near a critical phase transition point for optimum performance.

Individual neurons have limited computational powers, but when they work together, it is almost like magic.



Firing synchronously and then breaking off to improvise by themselves, they can be paradoxically both independent and interdependent. This happens near the *critical point*: when neurons are poised between a phase where activity is damped and a phase where it is amplified, where information processing is optimized, and complex emergent activity patterns arise. The claim that neurons in the cortex work best when they operate near the critical point is known as the *criticality hypothesis*. In this book John Beggs—one of the pioneers of this hypothesis—offers an introduction to the critical point and its relevance to the brain.

Drawing on recent experimental evidence, Beggs first explains the main ideas underlying the criticality hypotheses and emergent phenomena. He then discusses the critical point and its two main consequences—first, scale-free properties that confer optimum information processing; and second, universality, or the idea that complex emergent phenomena, like that seen near the critical point, can be explained by relatively simple models that are applicable across species and scale. Finally, Beggs considers future directions for the field, including research on homeostatic regulation, quasicriticality, and the expansion of the cortex and intelligence. An appendix provides technical material; many chapters include exercises that use freely available code and data sets.

John M. Beggs is Professor of Physics at Indiana University.

neuroscience

August | 7 x 10, 216 pp. | 114 illus.

US $50.00X/$66.00 CAN paper
978-0-262-54403-0

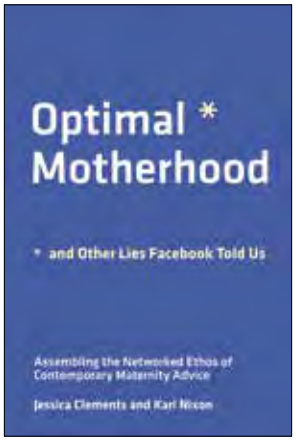
Optimal Motherhood and Other Lies Facebook Told Us

Assembling the Networked Ethos of Contemporary Maternity Advice

Jessica Clements and Kari Nixon

An exploration of social media–imposed pressure on new mothers: How the supposed safe havens of online mommy groups have become rife with aggression and groupthink.

Many mothers today turn to social media for parenting advice, joining online mothers' groups on Facebook and elsewhere. But the communities they find in these supposed safe havens can be rife with aggression, peer pressure, and groupthink—insisting that only certain practices are "best," "healthiest," "safest" (and mandatory). In this book, Jessica Clements and Kari Nixon debunk the myth of "optimal motherhood"—the idea that there is only one right answer to parenting dilemmas, and that optimal mothers must pursue perfection. In fact, Clements and Nixon write, parenting choices are not binaries, and the scientific findings touted by mommy groups are neither clear cut nor prescriptive.



Clements and Nixon trace contemporary ideas of optimal motherhood to the nineteenth-century "Cult of True Womanhood," which viewed women in terms of purity and dignity. Both mothers themselves, they joined a variety of Facebook mothers' groups to explore what goes on in online mommy wars. They examine debates within these groups over CDC recommendations about alcohol during pregnancy, birth plans that don't go according to plan, breastfeeding vs. formula, co-sleeping and "crying it out," and "tweaking" pregnancy test kits to discern pregnancy as early as possible. Clements and Nixon argue for an empowered motherhood, freed from the impossible standards of the optimal.

Jessica Clements is Assistant Professor of English and Composition Commons Director at Whitworth University in Spokane, Washington, and Managing Editor of *Present Tense: A Journal of Rhetoric in Society*. **Kari Nixon** is Assistant Professor of English at Whitworth University. She is the author of *Kept from All Contagion* and *Quarantine Life from Cholera to COVID-19*.

science, technology and society

November | 6 x 9, 240 pp. | 43 figures

US $35.00X/$47.00 CAN paper
978-0-262-54362-0

Vital Media

Making, Design, and Expression for Humans and Other Materials

Michael Nitsche

A proposal for a new media design to balance the contributions of humans and materials in the world they share.

How can media design support a balance between our needs for self-expression and the material needs of the world we are part of? What criteria define a sustainable media ecology? In *Vital Media*, Michael Nitsche argues that the current human-centric view is not sustainable and that media are best viewed as dynamic networks where cognitive and noncognitive participants co-create. What we need, according to Nitsche, is a media design that balances the needs of all partners involved: vital media.

Tracing this ideal through two domains of expression and making, performance and craft, Nitsche calls on us to embrace material co-existence and to design for self-expression as well as material evolution. We must recognize that the living body and its dependencies on the world around it are at the heart of what media are about. Vital media exist to not only help individuals fulfill their potential through expression but to also realize the agencies of materials in the equally active surrounding world. Throughout the book, Nitsche interweaves theory with close readings of actual artifacts that encompass predigital, nondigital, and hybrid examples. Nitsche's approach counters the current tendency to pit the virtual media world against the reality in which we live.

Michael Nitsche is Associate Professor of Digital Media at the Georgia Institute of Technology. He is the author *Video Game Spaces* (MIT Press).

design | media studies

December | 6 x 9, 232 pp. | 24 b&w illus.

US $35.00X/$47.00 CAN paper
978-0-262-54458-0

Touch Screen Theory

Digital Devices and Feelings

Michele White

Technology companies claim to connect people through touchscreens, but by conflating physical contact with emotional sentiments, they displace the constructed aspects of devices and women and other oppressed individuals' critiques of how such technologies function.

Technology companies and device designers correlate touchscreens and online sites with physical contact and emotional sentiments, promising unmediated experiences in which the screen falls away in favor of visceral materiality and connections. While touchscreens are key elements of most people's everyday lives, critical frameworks for understanding the embodied experiences of using them are wanting. In *Touch Screen Theory*, Michele White focuses on the relation between physically touching and emotionally feeling to recenter the bodies and identities that are empowered, produced, and displaced by these digital technologies and settings. Drawing on detailed cases and humanities methods, White shows how and why gender, race, and sexuality should be further analyzed in relation to touchscreen use and design.

White delves into such details as how women are informed that their bodies and fingernails are not a fit for iPhones, how cellphone surfaces are correlated with skin and understood as erotic, the ways social networks use heart buttons and icons to seem to physically and emotionally connect with individuals, how online references to feminine and queer feelings are resisted by many men, and how women producers of autonomous sensory meridian response (ASMR) videos use tactile strategies and touch screens to emotionally bond with viewers. Proposing critical methods for studying touchscreens and digital engagement, *Touch Screen Theory* expands a variety of research areas, including digital and internet cultures, hardware, interfaces, media and screens, and popular culture.

Michele White is Professor of Internet and New Media Studies at Tulane University. She is the author of numerous books, including *The Body and the Screen: Theories of Internet Spectatorship*.

technology | new media

October | 6 x 9, 290 pp. | 10 b&w illus.

US $35.00X/$47.00 CAN paper
978-0-262-54468-9

Grief Worlds

A Study of Emotional Experience

Matthew Ratcliffe

A wide-ranging philosophical exploration of what it is to experience grief and what this tells us about human emotional life.

Experiences of grief can be bewildering, disorientating, and isolating; everything seems somehow different, in ways that are difficult to comprehend and describe. Why does the world as a whole look distant, strange, and unfamiliar? How can we know that someone is dead, while at the same time find this utterly unfathomable, impossible? *Grief Worlds* explores a host of philosophical questions raised by grief, showing how philosophical inquiry can enhance our understanding of grief and vice versa.

Throughout the book, Matthew Ratcliffe focuses on the phenomenology of grief: what do experiences of grief consist of, how are they structured, and what can they tell us about the nature of human experience more generally? While acknowledging the diversity of grief, Ratcliffe sets out to identify its common features. Drawing extensively on first-person accounts, he proposes that grief is a process that involves experiencing, comprehending, and navigating a pervasive disturbance of one's experiential world. Its course over time depends on ways of experiencing and relating to other people, both the living and the dead. Along with its insights into the workings of grief, the book provides us with a broader philosophical perspective for thinking about human emotional experience.

Matthew Ratcliffe is Professor of Philosophy at the University of York, UK. Other books he has authored include *Real Hallucinations: Psychiatric Illness, Intentionality, and the Interpersonal World*, also from the MIT Press.

philosophy | psychology

January | 6 x 9, 296 pp.

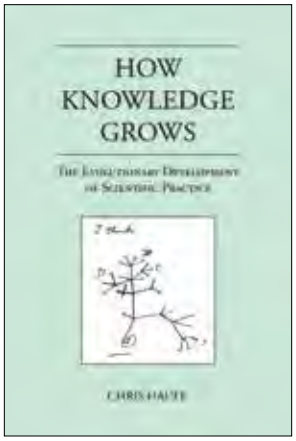
US $45.00X/$60.00 CAN paper
978-0-262-54480-1

How Knowledge Grows

The Evolutionary Development of Scientific Practice

Chris Haufe

An argument that the development of scientific practice and growth of scientific knowledge are governed by Darwin's evolutionary model of descent with modification.



Although scientific investigation is influenced by our cognitive and moral failings as well as all the factors impinging on human life, the historical development of scientific knowledge has trended toward an increasingly accurate picture of an increasing number of phenomena. Taking a fresh look at Thomas Kuhn's 1962 work, *The Structure of Scientific Revolutions*, in *How Knowledge Grows* Chris Haufe uses evolutionary theory to explain both why scientific practice develops the way it does and how scientific knowledge expands. This evolutionary model, claims Haufe, helps to explain what is epistemically special about scientific knowledge: its tendency to grow in both depth and breadth.

Kuhn showed how intellectual communities achieve consensus in part by discriminating against ideas that differ from their own and isolating themselves intellectually from other fields of inquiry and broader social concerns. These same characteristics, says Haufe, determine a biological population's degree of susceptibility to modification by natural selection. He argues that scientific knowledge grows, even across generations of variable groups of scientists, precisely because its development is governed by Darwinian evolution. Indeed, he supports the claim that this susceptibility to modification through natural selection helps to explain the epistemic power of certain branches of modern science. In updating and expanding the evolutionary approach to scientific knowledge, Haufe provides a model for thinking about science that acknowledges the historical contingency of scientific thought while showing why we nevertheless should trust the results of scientific research when it is the product of certain kinds of scientific communities.

Chris Haufe is Associate Professor of Philosophy at Case Western Reserve University.

philosophy | science

November | 6 x 9, 352 pp. | 19 illus.

US $50.00X/$66.00 CAN paper
978-0-262-54445-0

Universal Access and Its Asymmetries

The Untold Story of the Last 200 Years

Harmeet Sawhney and Hamid R. Ekbia

A framework for understanding the totality of costs and benefits of universal access that will foster honest appraisal and guide the development of good policies.

Universal access—the idea that certain technologies and services should be extended to all regardless of geography or ability to pay—evokes ideals of democracy and equality that must be reconciled with the realities on the ground. The COVID-19 pandemic raised awareness of the need for access to high-speed internet service in the United States, but this is just the latest in a long history of debates about what should be made available and to whom. Rural mail delivery, electrification, telephone service, public schooling, and library access each raised the same questions as today's debates about health care and broadband. What types of services should be universally available? Who benefits from extending these services? And who bears the cost?

Stepping beyond humanitarian arguments to conduct a clear-eyed, diagnostic analysis, this book offers some surprising conclusions. While the conventional approach to universal access looks primarily at the costs to the system and the benefits to individuals, Harmeet Sawhney and Hamid Ekbia provide a holistic perspective that also accounts for costs to individuals and benefits for systems. With a comparative approach across multiple cases, *Universal Access and Its Asymmetries* is an essential exploration of the history, costs, and benefits of providing universal access to technologies and services. With a fresh perspective, it overturns common assumptions and offers a foundation for making decisions about how to extend service—and how to pay for it.

Harmeet Sawhney is Professor, The Media School, Indiana University, Bloomington. He is Editor-in-Chief of *The Information Society*.
Hamid Ekbia is Professor, School of Informatics, Computing, and Engineering, Indiana University, Bloomington. He is the author of *Heteromation and Other Stories of Computing and Capitalism* (MIT Press) and *Artificial Dreams: The Quest for Non-Biological Intelligence* (Cambridge University Press).

political science | technology

December | 6 x 9, 240 pp. | 8 b&w illus., 8 tables

US $35.00X/$47.00 CAN paper
978-0-262-54455-9

Information Policy series

The Political Lives of Information

Information and the Production of Development in India

Janaki Srinivasan

How the definition, production, and leveraging of information are shaped by caste, class, and gender, and the implications for development.

Information, says Janaki Srinivasan, has fundamentally reshaped development discourse and practice. In this study, she examines the history of the idea of "information" and its political implications for poverty alleviation. She presents three cases in India—the circulation of price information in a fish market in Kerala, government information in information kiosks operated by a nonprofit in Puducherry, and a political campaign demanding a right to information in Rajasthan—to explore three uses of information to support goals of social change. Countering claims that information is naturally and universally empowering, Srinivasan shows how the definition, production, and leveraging of information are shaped by caste, class, and gender.

Srinivasan draws on archival and ethnographic research to challenge the idea of information as objective and factual. Using the concept of an "information order," she examines how the meaning and value of information reflect the social relations in which it is embedded. She asks why casting information as a tool of development and solution to poverty appeals to actors across the political spectrum. She also shows how the power to label some things information and others not is at least as significant as the capacity to subsequently produce, access, and leverage information. The more faith we place in what information can do, she cautions, the less attention we pay to its political lives and to the role of specific social structures, individual agency, and material form in the defining, production, and use of that information.

Janaki Srinivasan is Associate Professor at the International Institute of Information Technology, in Bangalore, India.

political science | media

October | 6 x 9, 276 pp. | 12 b&w photos, 4 b&w illus.

US $40.00X/$54.00 CAN paper
978-0-262-54404-7

Information Society series

The Power of Partnership in Open Government

Reconsidering Multistakeholder Governance Reform

Suzanne J. Piotrowski, Daniel Berliner, and Alex Ingrams

What the Open Government Partnership tells us about how international initiatives can and do shape domestic public sector reform.

At the 2011 meeting of the UN General Assembly, the governments of eight nations—Brazil, Indonesia, Mexico, Norway, Philippines, South Africa, United Kingdom, and the United States—launched the Open Government Partnership, a multilateral initiative aimed at promoting transparency, empowering citizens, fighting corruption, and harnessing new technologies to strengthen governance. At the time, many were concerned that the Open Government Partnership would end up toothless, offering only lip service to vague ideals and misguided cyber-optimism. *The Power of Partnership in Open Government* offers a close look, and a surprising affirmation, of the Open Government Partnership as an example of a successful transnational multi-stakeholder initiative that has indeed impacted policy and helped to produce progressive reform.

By 2019 the Open Government Partnership had grown to 78 member countries and 20 subnational governments. Through a variety of methods—document analysis, interviews, process tracing, and quantitative analysis of secondary data—Suzanne J. Piotrowski, Daniel Berliner, and Alex Ingrams chart the Open Government Partnership's effectiveness and evaluate what this reveals about the potential of international reform initiatives in general. Their work calls upon scholars and policymakers to reconsider the role of international institutions and, in doing so, to differentiate between direct and indirect pathways to transnational impact on domestic policy. The more nuanced and complex processes of the indirect pathway, they suggest, have considerable but often overlooked potential to shape policy norms and models, alter resources and opportunities, and forge new linkages and coalitions —in short, to drive the substantial changes that inspire initiatives like the Open Government Partnership.

Suzanne J. Piotrowski is Professor of Public Affairs and Administration at Rutgers University–Newark and Director of the Transparency and Governance Center. **Daniel Berliner** is Associate Professor of Political Science and Public Policy in the Department of Government at the London School of Economics. **Alex Ingrams** is Assistant Professor in the Institute of Public Administration, Leiden University, the Netherlands.

political science

December | 6 x 9, 304 pp. | 6 b&w illus.

US $35.00X/$47.00 CAN paper
978-0-262-54459-7

Information Policy series

Mental Patient

Psychiatric Ethics from a Patient's Perspective

Abigail Gosselin

A philosopher who has experienced psychosis argues that recovery requires regaining agency and autonomy within a therapeutic relationship based on mutual trust.

In *Mental Patient*, philosopher Abigail Gosselin uses her personal experiences with psychosis and the process of recovery to explore often overlooked psychiatric ethics. For many people who struggle with psychosis, she argues, psychosis impairs agency and autonomy. She shows how clinicians can help psychiatric patients regain agency and autonomy through a positive therapeutic relationship characterized by mutual trust. Patients, she says, need to take an active role in regaining their agency and autonomy—specifically, by giving testimony, constructing a narrative of their experience to instill meaning, making choices about treatment, and deciding to show up and participate in life activities.

Gosselin examines how psychotic experience is medicalized and describes what it is like to be a patient receiving mental health care treatment. In addition to mutual trust, she says, a productive therapeutic relationship requires the clinician's empathetic understanding of the patient's experiences and perspective. She also explains why psychotic patients sometimes feel ambivalent about recovery and struggle to stay committed to it. The psychiatric ethics issues she examines include the development of epistemic agency and credibility, epistemic justice, the use of coercion, therapeutic alliance, the significance of choice, and the taking of responsibility. *Mental Patient* differs from straightforward memoirs of psychiatric illness in that it analyses philosophic issues related to psychosis and recovery, and it differs from other books on psychiatric ethics in that its analyses are drawn from the author's first-person experiences as a mental patient.

Abigail Gosselin is a Professor of Philosophy at Regis University in Denver, Colorado.

psychology | philosophy

December | 6 x 9, 308 pp.

US $45.00X/$60.00 CAN paper
978-0-262-54431-3

Basic Bioethics series

Visual Plague

The Emergence of Epidemic Photography

Christos Lynteris

How epidemic photography during a global pandemic of bubonic plague contributed to the development of modern epidemiology and our concept of the "pandemic."

In *Visual Plague*, Christos Lynteris examines the emergence of epidemic photography during the third plague pandemic (1894–1959), a global pandemic of bubonic plague that led to over twelve million deaths. Unlike medical photography, epidemic photography was not exclusively, or even primarily, concerned with exposing the patient's body or medical examinations and operations. Instead, it played a key role in reconceptualizing infectious diseases by visualizing the "pandemic" as a new concept and structure of experience—one that frames and responds to the smallest local outbreak of an infectious disease as an event of global importance and consequence.

As the third plague pandemic struck more and more countries, the international circulation of plague photographs in the press generated an unprecedented spectacle of imminent global threat. Nothing contributed to this sense of global interconnectedness, anticipation, and fear more than photography. Exploring the impact of epidemic photography at the time of its emergence, Lynteris highlights its entanglement with colonial politics, epistemologies, and aesthetics, as well as with major shifts in epidemiological thinking and public health practice. He explores the characteristics, uses, and impact of epidemic photography and how it differs from the general corpus of medical photography. The new photography was used not simply to visualize or illustrate a pandemic, but to articulate, respond to, and unsettle key questions of epidemiology and epidemic control, as well as to foster the notion of the "pandemic," which continues to affect our lives today.

Christos Lynteris is Professor of Medical Anthropology in the Department of Social Anthropology at the University of St Andrews and coauthor of *Sulphuric Utopias* (MIT Press).

social science | public health

October | 6 x 9, 322 pp. | 44 figures

US $45.00X/$60.00 CAN paper
978-0-262-54422-1

Uneven Futures

Strategies for Community Survival from Speculative Fiction

edited by Ida Yoshinaga, Sean Guynes, and Gerry Canavan

Essays on speculative/science fiction explore the futures that feed our most cherished fantasies and terrifying nightmares, while helping diverse communities devise new survival strategies for a tough millennium.

The explosion in speculative/science fiction (SF) across different media from the late twentieth century to the present has compelled those in the field of SF studies to rethink the community's identity, orientation, and stakes. In this edited collection, more than forty writers, critics, game designers, scholars, and activists explore core SF texts, with an eye toward a future in which corporations dominate both the means of production and the means of distribution and governments rely on powerful surveillance and carceral technologies.

The essays, international in scope, demonstrate the diversity of SF through a balance of popular mass-market novels, comics, films, games, TV shows, creepypastas, and more niche works. SF works explored range from *Riot Baby* by Tochi Onyebuchi, *2084: The End of the World* by Boualem Sansal, *Terra Nullius* by Claire Coleman, *Watchmen* and X-Men comics, and the Marvel film *Captain America: The Winter Soldier*, to the MaddAddam trilogy by Margaret Atwood, The *Dispossessed* by Ursula K. Le Guin, *The Wandering Earth* by Liu Cixin, and the Wormwood trilogy by Tade Thompson. In an era in which ecological disaster and global pandemics regularly expose and intensify deep political-economic inequalities, what futures has SF anticipated? What survival strategies has it provided us? Can it help us to deal with, and grow beyond, the inequalities and injustices of our times?

Unlike other books of speculative/science fiction criticism, *Uneven Futures* uses a think piece format to make its critical insights engaging to a wide audience. The essays inspire visions of better possible futures—drawing on feminist, queer, and global speculative engagements with Indigenous, Latinx, and Afro- and African futurisms—while imparting important lessons for political organizing in the present.

Ida Yoshinaga is Assistant Professor of Science Fiction Film at the Georgia Institute of Technology. **Sean Guynes** is Acquiring Editor, Lever Press. **Gerry Canavan** is Associate Professor of English at Marquette University. He is the author of *Octavia E. Butler*.

literary criticism | science fiction

December | 6 x 9, 360 pp. | 4 b&w illus.

US $30.00X/$40.00 CAN paper
978-0-262-54394-1

Resistance to the Current

The Dialectics of Hacking

Johan Söderberg and Maxigas

foreword by Richard Barbrook

How hacking cultures drive contemporary capitalism and the future of innovation.

In *Resistance to the Current*, Johan Söderberg and Maxigas examine four historical case studies of hacker movements and their role in shaping the twenty-first-century's network society. Based on decades of field work and analysis, this intervention into current debates situates an exploding variety of hacking practices within the contradictions of capitalism. Depoliticized accounts of computing cultures and collaborative production miss their core driver, write Söderberg and Maxigas: the articulation of critique and its recuperation into innovations.

Drawing on accounts of building, developing, and running community wireless networks, 3D printers, hackerspaces, and chat protocols, the authors develop a theoretical framework of critique and recuperation to examine how hackers—who have long held a reputation for being underground rebels—transform their outputs from communal, underground experiments to commercial products that benefit the state and capital. This framework allows a dialectical understanding of contemporary social conflicts around technology and innovation. Hackers' critiques of contemporary norms spur innovation, while recuperation turns these innovations into commodified products and services. Recuperation threatens the autonomy of hacker collectives, harnessing their outputs for the benefit of a capitalist system.

With significant practical implications, this sophisticated multidisciplinary account of technology-oriented movements that seek to challenge capitalism will appeal to science and technology readers interested in innovation studies, user studies, cultural studies, and media and communications.

Johan Söderberg is Associate Professor in the Department of Philosophy, Linguistics and Theory of Science at the University of Göteborg and Associate Editor of Science as Culture. He researches the development of alternative addiction treatments and the hacking of medicine. **Maxigas** (aka Peter Dunajcsik) is Senior Lecturer in the Department of Media at the University of Amsterdam. His research on hacking, cybernetics, and old social media has been published in academic journals including the *Social Studies of Science* and the *Internet Policy Review*.

technology

November | 6 x 9, 240 pp. | 2 b&w illus.

US $35.00X/$47.00 CAN paper
978-0-262-54456-6

Information Policy series

Live Coding

A User's Manual

Alan F. Blackwell, Emma Cocker, Geoff Cox, Alex McLean, and Thor Magnusson

The first comprehensive introduction to the origins, aspirations, and evolution of live coding.

Performative, improvised, on the fly: live coding is about how people interact with the world and each other via code. In the last few decades, live coding has emerged as a dynamic creative practice gaining attention across cultural and technical fields—from music and the visual arts through to computer science. *Live Coding: A User's Manual* is the first comprehensive introduction to the practice and a broader cultural commentary on the potential for live coding to open up deeper questions about contemporary cultural production and computational culture. This multi-authored book—by artists and musicians, software designers, and researchers—provides a practice-focused account of the origins, aspirations, and evolution of live coding, including expositions from a wide range of live coding practitioners. In a more conceptual register, the authors consider liveness, temporality, and knowledge in relation to live coding, alongside speculating on the practice's future forms.

Alan Blackwell is Professor of Interdisciplinary Design at the University of Cambridge. **Emma Cocker** is a writer-artist and Associate Professor in Fine Art at Nottingham Trent University. **Geoff Cox** is Associate Professor and Codirector of the Centre for the Study of the Networked Image at London South Bank University. **Alex McLean** is Research Fellow of the Then Try This independent research studio and instigator of the TidalCycles software and Algorave movement. **Thor Magnusson** is Professor in Future Music at the University of Sussex and Research Professor at the Iceland University of the Arts.

new media | performing arts

November | 7 x 9, 344 pp. | 87 b&w illus.

US $35.00X/$47.00 CAN paper
978-0-262-54481-8

Software Studies series

Digital Oil

Machineries of Knowing

Eric Monteiro

How is digitalization of the offshore oil industry fundamentally changing how we understand work and ways of knowing?

Digitalization sits at the forefront of public and academic conversation today, calling into question how we work and how we know. In *Digital Oil*, Eric Monteiro uses the Norwegian offshore oil and gas industry as a lens to investigate the effects of digitalization on embodied labor, and in doing so shows how our use of new digital technology transforms work and knowing.

For years, roughnecks have performed the dangerous and unwieldy work of extracting the oil that lies three miles below the seabed along the Norwegian Continental Shelf. Today, the Norwegian oil industry is largely digital, operated by sensors and driven by data. Digital representations of physical processes inform work practices and decision-making with remotely operated, unmanned deep-sea facilities. Drawing on two decades of in-depth interviews, observations, news clips, and studies of this industry, Eric Monteiro dismantles the divide between the virtual and the physical in *Digital Oil*.

What is gained or lost when objects and processes become algorithmic phenomena with the digital inferred from the physical? How can data-driven work practices and operational decision-making approximate qualitative interpretation, professional judgement, and evaluation? How are emergent digital platforms and infrastructures, as machineries of knowing, enabling digitalization? In answering these questions Monteiro offers a novel analysis of digitalization as an effort to press the limits of quantification of the qualitative.

Eric Monteiro is Professor of Information Systems at the Norwegian University of Science and Technology. His research focuses on the process of digitalization in public and corporate organizations and in large-scale infrastructural projects.

technology | data science

November | 6 x 9, 216 pp. | 16 color illus., 6 b&w illus.

US $35.00X/$47.00 CAN paper
978-0-262-54467-2

Infrastructures series

Co-Cities

Innovative Transitions toward Just and Self-Sustaining Communities

Sheila R. Foster and Christian Iaione

A new model of urban governance, mapping the route to a more equitable management of a city's infrastructure and services.

The majority of the world's inhabitants live in cities, but even with the vast wealth and resources these cities generate, their most vulnerable populations live without adequate or affordable housing, safe water, healthy food, and other essentials. And yet, cities also often harbor the solutions to the inequalities they create, as this book makes clear. With examples drawn from cities worldwide, *Co-Cities* outlines practices, laws, and policies that are presently fostering innovation in the provision of urban services, spurring collaborative economies as a driver of local sustainable development, and promoting inclusive and equitable regeneration of blighted urban areas.

Identifying core elements of these diverse efforts, Sheila R. Foster and Christian Iaione develop a framework for understanding how certain initiatives position local communities as key actors in the production, delivery, and management of urban assets or local resources. Within this framework, they explain the forms such initiatives increasingly take, like community land trusts, new kinds of co-housing, neighborhood cooperatives, community-shared broadband and energy networks, and new local offices focused on citizen science and civic imagination.

The "Co-City" framework is uniquely rooted in the authors' own decades-long research and first-hand experience working in cities around the world. Foster and Iaione offer their observations as "design principles"—adaptable to local context—to help guide further experimentation in building just and self-sustaining urban communities.

Sheila R. Foster is the Scott K. Ginsburg Professor of Urban Law and Policy at Georgetown University, where she holds a joint appointment with the Georgetown Law Center and the McCourt School of Public Policy. She is also Codirector of LabGov.City. **Christian Iaione** is Professor of Urban Law and Policy and Law and Policy of Innovation and Sustainability at Luiss University in Rome, Italy, Codirector of LabGov.City, and Affiliated Fellow of the Urban Law Center at Fordham University.

political science | urban studies

December | 6 x 9, 280 pp.

US $40.00X/$54.00 CAN paper
978-0-262-53998-2

Urban and Industrial Environments series

Just Urban Design

The Struggle for a Public City

edited by Kian Goh, Anastasia Loukaitou-Sideris, and Vinit Mukhija

foreword by Lawrence J. Vale

Contributions by urban planners, sociologists, anthropologists, architects, and landscape architects on the role and scope of urban design in creating more just and inclusive cities.

Scholars who write about justice and the city rarely consider the practices and processes of urban design, while discourses on urban design often neglect concerns about justice. The editors of *Just Urban Design* take the position that urban design interventions have direct and important implications for justice in the city. The contributions in this volume contextualize the state of knowledge about urban design for justice, stress inclusivity as the key to justice in the city, affirm community participation and organizing as cornerstones of greater equity, and assert that a just urban design must center and privilege our most marginalized individuals and communities.

Approaching spatial and social justice in the city through the lens of urban design, the contributors explore the possibility of envisioning and delivering social, spatial, and environmental justice in cities through urban design and the material reality of built environment interventions. The editors' combined expertise includes urban politics and climate change, public space, mobility justice, community development, housing, and informality, and the contributors include researchers and practitioners from urban planning, sociology, anthropology, architecture, and landscape architecture.

Kian Goh is Assistant Professor of Urban Planning at UCLA. She is the author of *Form and Flow: The Spatial Politics of Urban Resilience and Climate Justice* (MIT Press). **Anastasia Loukaitou-Sideris** is Distinguished Professor of Urban Planning at UCLA. She is the author of ten books, including *The Informal American City: Beyond Taco Trucks and Day Labor* (MIT Press). **Vinit Mukhija** is Professor of Urban Planning at UCLA. He is the author of *Remaking the American Dream: The Informal and Formal Transformation of Single-Family Housing Cities* from the MIT Press (see page 141).

architecture | urban studies

November | 6 x 9, 368 pp. | 52 b&w illus.

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