



Zoolog. Museum Berlin.
Macandrewia
cranium Müll.
Trondhjem
771 Larsen

Zoolog. Museum Berlin.
Macandrewia
cranium Müll.
Alvenströmen
1885

Zoolog. Museum Berlin.
Macandrewia
cranium Müll.
Alvenströmen
1885

Zoolog. Museum Berlin.
Macandrewia
cranium Müll.
Muffjord
n. 54 790

Zoolog. Museum Berlin.
Macandrewia
cranium Müll.
Norwegen 791

Zoolog. Museum Berlin.
Macandrewia
cranium Müll.
bockingen
n. 1887 789

Zoolog. Museum Berlin.
Macandrewia
cranium Müll.
n. 54 802

Zoolog. Museum Berlin.
Macandrewia
cranium Müll.
Davidstrasse
824 Wessel

Zoolog. Museum Berlin.
Macandrewia
cranium Müll.
Norwegen Dunker
801

1569 2153
Waldheimia
cranium Müll. juv.
No 6
Larsen

96 W 1570
CRANIUM
Davidstr. v. Müll. 1863

41 W 1538
Waldheimia
cranium Müll.
Finmarken Løwen
1846

3761 Wald
cranium
Porsanger

The MIT Press
Frankfurt Book Fair
2017

12159
Waldheimia
cranium Müll.
n. 6 (Norwegen)

1334

130
Waldheimia
cranium Müll.
n. 6 (Norwegen)
Bergen.

1581
Waldheimia
cranium Müll.
Norwegen

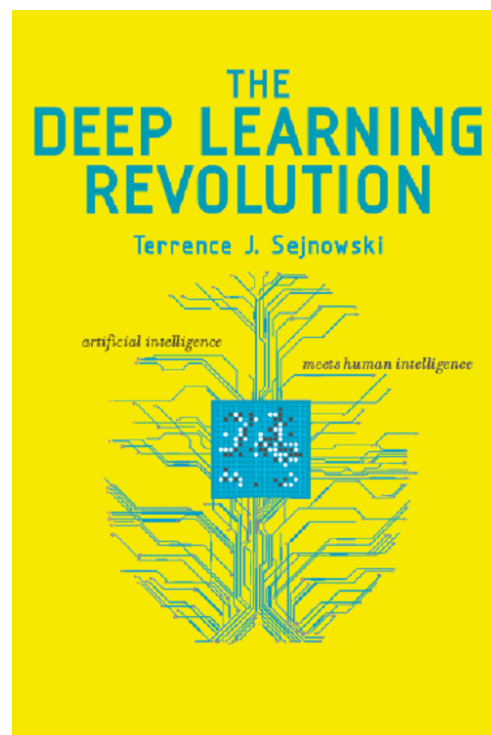
The Deep Learning Revolution

Terrence J. Sejnowski

The deep learning revolution has brought us driverless cars, the greatly improved Google Translate, fluent conversations with Siri and Alexa, and enormous profits from automated trading on the New York Stock Exchange. Deep learning networks can play poker better than professional poker players and defeat a world champion at Go. In this book, Terry Sejnowski explains how deep learning went from being an arcane academic field to a disruptive technology in the information economy.

Sejnowski played an important role in the founding of deep learning, as one of a small group of researchers in the 1980s who challenged the prevailing logic-and-symbol based version of AI. The new version of AI Sejnowski and others developed, which became deep learning, is fueled instead by data. Deep networks learn from data in the same way that babies experience the world, starting with fresh eyes and gradually acquiring the skills needed to navigate novel environments. Learning algorithms extract information from raw data; information can be used to create knowledge; knowledge underlies understanding; understanding leads to wisdom. Someday a driverless car will know the road better than you do and drive with more skill; a deep learning network will diagnose your illness; a personal cognitive assistant will augment your puny human brain. It took nature many millions of years to evolve human intelligence; AI is on a trajectory measured in decades. Sejnowski prepares us for a deep learning future.

Terrence J. Sejnowski holds the Francis Crick Chair at the Salk Institute for Biological Studies and is a Distinguished Professor at the University of California, San Diego. He was a member of the advisory committee for the Obama administration's BRAIN initiative and is President of the Neural Information Processing (NIPS) Foundation. He has published twelve books, including (with Patricia Churchland) *The Computational Brain* (25th Anniversary Edition, MIT Press).



How deep learning—from Google Translate to driverless cars to personal cognitive assistants—is changing our lives and transforming every sector of the economy.

June
6 x 9, 256 pp.
134 illus.

\$29.95T/£24.95 cloth
978-0-262-03803-4



Imagining a future in which humans fundamentally reshape the natural world using nanotechnology, synthetic biology, de-extinction, and climate engineering.

March
6 x 9, 208 pp.

\$25.95T/£20.95 cloth
978-0-262-03761-7

science

The Synthetic Age

Outdesigning Evolution, Resurrecting Species, and Reengineering Our World

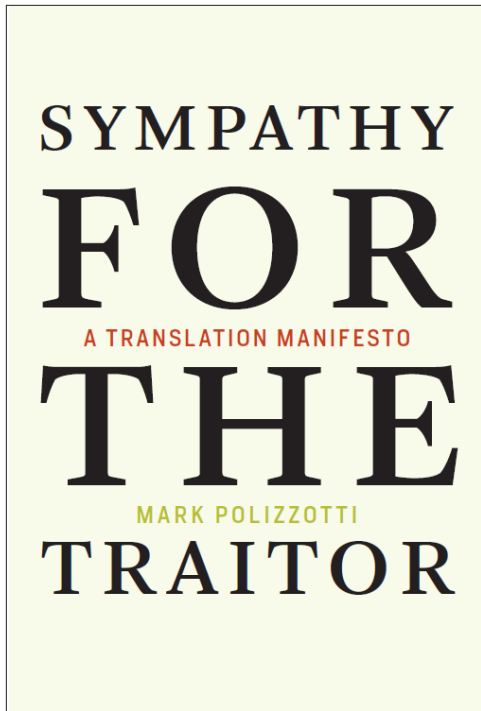
Christopher J. Preston

We have all heard that there are no longer any places left on Earth untouched by humans. The significance of this goes beyond statistics documenting melting glaciers and shrinking species counts. It signals a new geological epoch. In *The Synthetic Age*, Christopher Preston argues that what is most startling about this coming epoch is not only how much impact humans have had but, more important, how much deliberate shaping they will start to do. Emerging technologies promise to give us the power to take over some of Nature's most basic operations. It is not just that we are exiting the Holocene and entering the Anthropocene; it is that we are leaving behind the time in which planetary change is just the unintended consequence of unbridled industrialism. A world designed by engineers and technicians means the birth of the planet's first Synthetic Age.

Preston describes a range of technologies that will reconfigure Earth's very metabolism: nanotechnologies that can restructure natural forms of matter; "molecular manufacturing" that offers unlimited repurposing; synthetic biology's potential to build, not just read, a genome; "biological mini-machines" that can outdesign evolution; the relocation and resurrection of species; and climate engineering attempts to manage solar radiation by synthesizing a volcanic haze, cool surface temperatures by increasing the brightness of clouds, and remove carbon from the atmosphere with artificial trees that capture carbon from the breeze.

What does it mean when humans shift from being caretakers of the Earth to being shapers of it? And whom should we trust to decide the contours of our synthetic future? It may be too important to be left to the engineers.

Christopher J. Preston is Professor of Philosophy and a Research Fellow in the Mansfield Center's Program on Ethics and Public Affairs at the University of Montana.



An engaging and unabashedly opinionated examination of what translation is and isn't.

April
5 3/8 x 8, 232 pp.

\$22.95T/£18.95 cloth
978-0-262-03799-0

Sympathy for the Traitor

A Translation Manifesto

Mark Polizzotti

For some, translation is the poor cousin of literature, a necessary evil if not an outright travesty—summed up by the old Italian play on words, *traduttore, traditore* (translator, traitor). For others, translation is the royal road to cross-cultural understanding and literary enrichment. In this nuanced and provocative study, Mark Polizzotti attempts to reframe the debate along more fruitful lines. Eschewing both these easy polarities and the increasingly abstract discourse of translation theory, he brings the main questions into clearer focus: What is the ultimate goal of a translation? What does it mean to label a rendering “faithful”? (Faithful to what?) Is something inevitably lost in translation, and can something also be gained? Does translation matter, and if so, why? Unashamedly opinionated, both a manual and a manifesto, his book invites us to sympathize with the translator not as a “traitor” but as the author’s creative partner.

Polizzotti, himself a translator of authors from Patrick Modiano to Gustave Flaubert, explores what translation is and what it isn’t, and how it does or doesn’t work. Translation, he writes, “skirts the boundaries between art and craft, originality and replication, altruism and commerce, genius and hack work.” In *Sympathy for the Traitor*, he shows us how to read not only translations but also the act of translation itself, treating it not as a problem to be solved but as an achievement to be celebrated—something, as Goethe put it, “impossible, necessary, and important.”

Mark Polizzotti has translated more than fifty books, including works by Patrick Modiano, Gustave Flaubert, Raymond Roussel, Marguerite Duras, and Paul Virilio. Publisher and Editor-in-Chief at the Metropolitan Museum of Art, he is also the author of *Revolution of the Mind: The Life of André Breton* and other books.

digital culture

Artificial Unintelligence

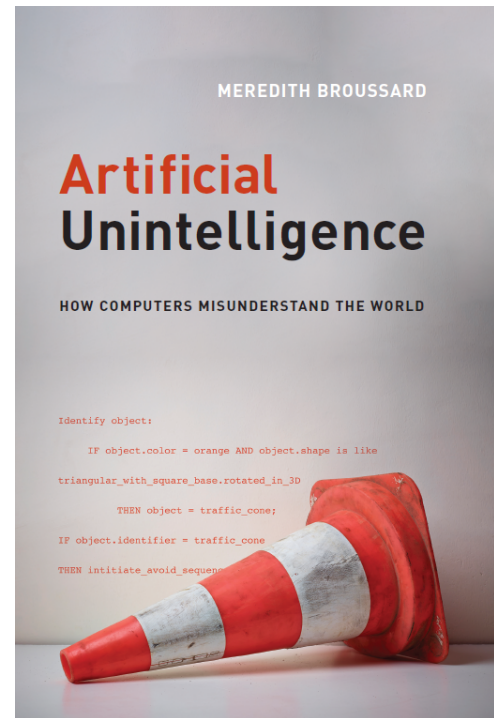
How Computers Misunderstand the World

Meredith Broussard

In *Artificial Unintelligence*, Meredith Broussard argues that our collective enthusiasm for applying computer technology to every aspect of life has resulted in a tremendous amount of poorly designed systems. We are so eager to do everything digitally—hiring, driving, paying bills, even choosing romantic partners—that we have stopped demanding that our technology actually work. Broussard, a software developer and journalist, reminds us that there are fundamental limits to what we can (and should) do with technology. With this book, she offers a guide to understanding the inner workings and outer limits of technology—and issues a warning that we should never assume that computers always get things right.

Making a case against technochauvinism—the belief that technology is always the solution—Broussard argues that it’s just not true that social problems would inevitably retreat before a digitally enabled Utopia. To prove her point, she undertakes a series of adventures in computer programming. She goes for an alarming ride in a driverless car, concluding “the cyborg future is not coming any time soon”; uses artificial intelligence to investigate why students can’t pass standardized tests; deploys machine learning to predict which passengers survived the Titanic disaster; and attempts to repair the U.S. campaign finance system by building AI software. If we understand the limits of what we *can* do with technology, Broussard tells us, we can make better choices about what we *should* do with it to make the world better for everyone.

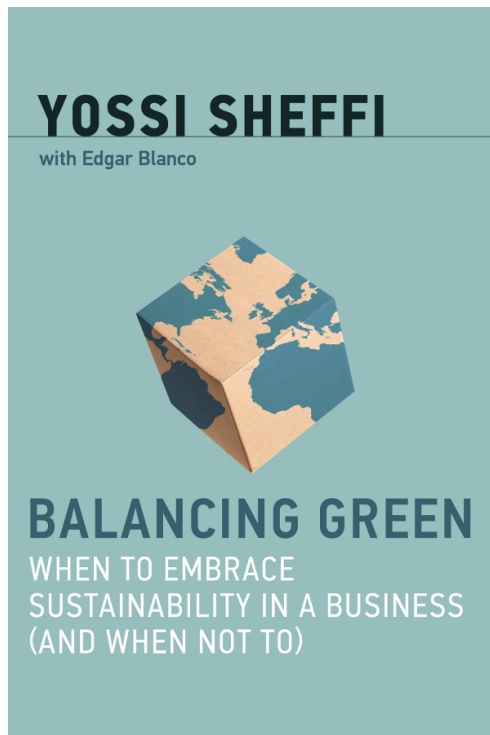
Meredith Broussard is an Assistant Professor in the Arthur L. Carter Journalism Institute at New York University. A former features editor at the *Philadelphia Inquirer* and software developer at AT&T Bell Labs and the MIT Media Lab, she has written articles and essays for the *Atlantic*, *Harper’s*, *Slate*, the *Washington Post*, and other publications.



A guide to understanding the inner workings and outer limits of technology and why we should never assume that computers always get it right.

May
6 x 9, 192 pp.
11 illus.

\$24.95T/£19.95 cloth
978-0-262-03800-3



An expert on business strategy offers a pragmatic take on how businesses of all sizes balance the competing demands of profitability and employment with sustainability.

March
528 pp. 23 illus.

How Green Should Your Business Be?

When to Embrace Sustainability (and When Not To)

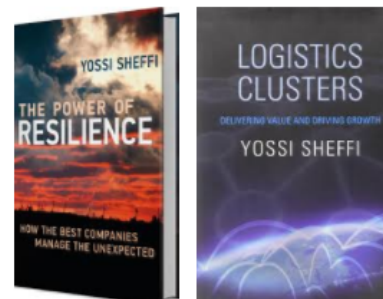
Yossi Sheffi
with Edgar Blanco

The demands and stress on companies only grow as executives face a multitude of competing business goals. Their stakeholders are interested in corporate profits, jobs, business growth, *and* environmental sustainability. In this book, business strategy expert Yossi Sheffi offers a pragmatic take on how businesses of all sizes—from Coca Cola and Siemens to Dr. Bronner’s Magical Soaps and Patagonia—navigate these competing goals. Drawing on extensive interviews with more than 250 executives, Sheffi examines the challenges, solutions, and implications of balancing traditional business goals with sustainability.

Sheffi, author of the widely read *The Resilient Enterprise*, argues that business executives’ personal opinions on environmental sustainability are irrelevant. The business merits of environmental sustainability are based on the fact that even the most ardent climate change skeptics in the C-suite face natural resource costs, public relations problems, regulatory burdens, and a green consumer segment. Sheffi presents three basic business rationales for corporate sustainability efforts: cutting costs, reducing risk, and achieving growth.

For companies, sustainability is not a simple case of “profits versus planet” but is instead a more subtle issue of (some) people versus (other) people—those looking for jobs and inexpensive goods versus others who seek a pristine environment. This book aims to help companies satisfy these conflicting motivations for both economic growth and environmental sustainability.

Yossi Sheffi is Elisha Gray II Professor of Engineering Systems at MIT and Director of the MIT Center for Transportation and Logistics. He has worked with leading manufacturers and logistics service providers around the world on operations and strategy issues and is the author of three award-winning books: *The Resilient Enterprise: Overcoming Vulnerability for Competitive Advantage*, *Logistics Clusters: Delivering Value and Driving Growth*, and *The Power of Resilience: How the Best Companies Manage the Unexpected*, all published by the MIT Press.





A frontline account and primer on how to fight corruption from Nigeria's former finance minister Ngozi Okonjo-Iweala.

April
6 x 9, 228 pp.

\$29.95T/£24.95 cloth
978-0-262-03801-0

Fighting Corruption Is Dangerous

The Story Behind the Headlines

Ngozi Okonjo-Iweala

In *Fighting Corruption Is Dangerous*, Ngozi Okonjo-Iweala has written a primer for those working to root out corruption and disrupt vested interests. Drawing on her experience as Nigeria's finance minister and that of her team, she describes dangers, pitfalls, and successes in fighting corruption. She provides practical lessons learned and tells how anti-corruption advocates need to equip themselves. Okonjo-Iweala details the numerous ways in which corruption can divert resources away from development, rewarding the unscrupulous and depriving poor people of services.

Okonjo-Iweala discovered just how dangerous fighting corruption could be when her 83-year-old mother was kidnapped in 2012 by forces who objected to some of Okonjo-Iweala's efforts at reform—in particular a crackdown on fraudulent claims for oil subsidy payments, a huge drain on the country's finances. The kidnappers' first demand was that Okonjo-Iweala resign from her position on live television and leave the country. Okonjo-Iweala did not resign, her mother escaped, and the program of economic reforms continued. "Telling my story is risky," Okonjo-Iweala writes. "But not telling it is also dangerous." Her book ultimately leaves us with hope, showing that victories are possible in the fight against corruption.

Ngozi Okonjo-Iweala was Nigeria's Minister of Finance from 2003 to 2006 and from 2011 to 2015, and Foreign Minister in 2006. She was Managing Director of the World Bank from 2007 to 2011, overseeing South Asia, Europe, Central Asia, and Africa, and is currently Senior Adviser at Lazard and Board Chair of Gavi, the Vaccine Alliance. She is the author of *Reforming the Unreformable: Lessons from Nigeria* (MIT Press).

Big Is Beautiful

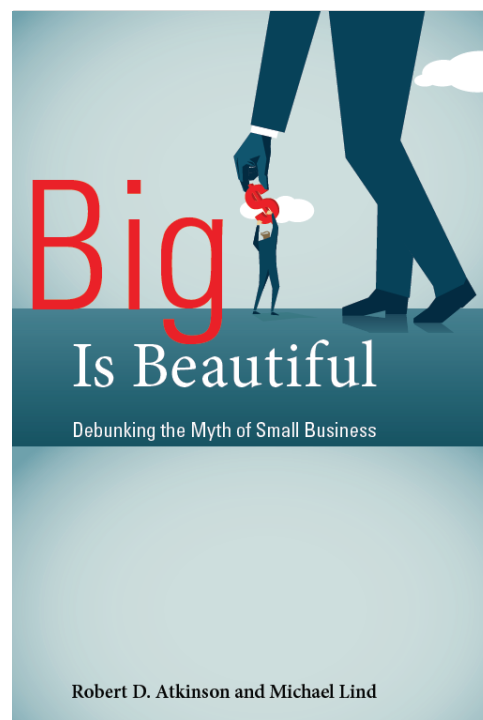
Debunking the Myth of Small Business

Robert D. Atkinson and Michael Lind

In this provocative book, Robert Atkinson and Michael Lind argue that small business is not, as is widely claimed, the basis of American prosperity. Small business is not responsible for most of the country's job creation and innovation. American democracy does not depend on the existence of brave bands of self-employed citizens. Small businesses are not systematically discriminated against by government policy makers. Rather, Atkinson and Lind argue, small businesses are not the font of jobs, because most small businesses fail. The only kind of small firm that contributes to technological innovation is the technological start-up, and its success depends on scaling up. The idea that self-employed citizens are the foundation of democracy is a relic of Jeffersonian dreams of an agrarian society. And governments, motivated by a confused mix of populist and free market ideology, in fact goes out of their way to promote small business. Every modern president has sung the praises of small business, and every modern president, according to Atkinson and Lind, has been wrong.

Pointing to the advantages of scale for job creation, productivity, innovation, and virtually all other economic benefits, Atkinson and Lind argue for a "size neutral" policy approach in both the United States and around the world that would encourage growth rather than enshrine an anachronism. If we overthrow the "small is beautiful" ideology, we will be able to recognize large firms as the engines of progress and prosperity that they are.

Robert D. Atkinson is Founder and President of the Information Technology and Innovation Foundation, a Washington, D.C. think tank, and coauthor of *Innovation Economic Economics: The Race for Global Advantage*. **Michael Lind** is a Visiting Professor at the Lyndon B. Johnson School of Public Affairs of the University of Texas. He is the author of numerous books on politics and public policy, including *Land of Promise: An Economic History of the United States*. He is a columnist for *Salon* and writes frequently for the *New York Times* and the *Financial Times*.



Why small business is not the basis of American prosperity, not the foundation of American democracy, and not the champion of job creation.

April
6 x 9, 320 pp.
9 illus.

\$29.95T/£24.95 cloth
978-0-262-03770-9

art

Chaos and Awe

Painting for the 21st Century

edited by **Mark W. Scala**

foreword by Susan H. Edwards

essays by Media Farzin, Simon Morley,
and Matthew Ritchie

In an age of global instability, the threat of chaos looms. Or is the threat more spectral than real? The fear of chaos may simply be our response to living in a world controlled by powerful forces beyond our understanding. *Chaos and Awe* demonstrates the aptness and relevance of painting as a medium for expressing the uncertainty of our era. It presents more than fifty paintings, by an international array of contemporary artists, that induce sensations of disturbance, curiosity, and expansiveness—the new sublime, derived not from the unfathomable mystery of nature but from the hidden and often insidious forces of culture. Essays by art historians and “painters who write” offer context and illumination.

Chaos and Awe, which accompanies a major exhibition at the Frist Center for the Visual Arts in Nashville, shows that painting’s capacity to represent the liminal space between the real and the virtual allows it to portray the shifting ground of today’s social imaginary. With suggestions of fragmentation, instability, and murkiness, these paintings enclose what seems to be (as Simon Morley writes in his essay) “wholly unenclosable.” The paintings presented offer visions of interconnected forces invisibly shaping contemporary global experience; portray the intractability of veiled racial animus and the phantoms of the past that continue to haunt the present; suggest, through semi-abstract languages, long-term conflicts played out through nationalism and extremism; depict the conjunction of cultures not as flashpoints but in terms of cross-fertilization and a new hybridity; convey the role of digital technology in intertwining knowledge and doubt; express the elusive nature of perception through floating forms, liquid, gas, flame, and light; and cast instability and chaos as opportunities to expand our perceptions of the connectedness of knowledge, intuition, and spirituality.

Mark W. Scala is Chief Curator at the Frist Center for the Visual Arts in Nashville.

Painters

Franz Ackermann, Ahmed Alsoudani, Ghada Amer, Korakrit Arunanondchai, Radcliffe Bailey, Ali Banisadr, Pedro Barbeito, Jeremy Blake, Matti Braun, Dean Byington, Hamlett Dobbins, Nogah Engler, Anoka Faruqee, Barnaby Furnas, Ellen Gallagher, Adrian Ghenie, Wayne Gonzales, Wade Guyton, Rokni Haerizadeh, Peter Halley, Eddy Kamuanga Ilunga, Rashid Johnson, Guillermo Kuitca, Heather Gwen Martin, Julie Mehretu, Jiha Moon, Wangechi Mutu, James Perrin, Neo Rauch, Matthew Ritchie, Rachel Rossin, Pat Steir, Barbara Takenaga, Dannielle Tegeder, Kazuki Umezawa, Charline von Heyl, Sarah Walker, Corinne Wasmuht, Sue Williams



EDITED BY
MARK W. SCALA

CHAOS AND AWE
PAINTING FOR THE 21ST CENTURY

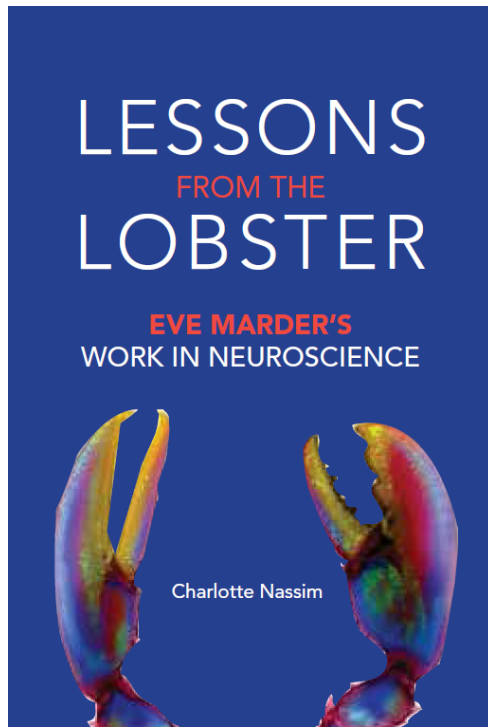
Fifty paintings, reproduced in color, by an international array of contemporary artists, show the aptness and relevance of painting in an era of uncertainty.

March
8 x 10, 160 pp.
76 color illus.

\$30.00T/£24.95 paper
978-0-262-53497-0

EXHIBITION

Frist Center for the Visual Arts,
Nashville, Tennessee
June 22–September 16, 2018



How forty years of research on thirty neurons in the stomach of a lobster has yielded valuable insights for the study of the human brain.

May
6 x 9, 280 pp.
12 color plates, 29 b&w illus.,

\$27.95T/£22.95 cloth
978-0-262-03778-5

Lessons from the Lobster

Eve Marder's Work in Neuroscience

Charlotte Nassim

Neuroscientist Eve Marder has spent forty years studying thirty neurons in the stomach of a lobster. Her focus on this tiny network of cells has yielded valuable insights into the much more complex workings of the human brain; she has become a leading voice in neuroscience. In *Lessons from the Lobster*, Charlotte Nassim describes Marder's work and its significance accessibly and engagingly, tracing the evolution of a supremely gifted scientist's ideas.

From the lobster's digestion to human thought is very big leap indeed. Our brains selectively recruit networks from about ninety *billion* available neurons; the connections are extremely complex. Nevertheless, as Nassim explains, Marder's study of a microscopic knot of stomatogastric neurons in lobsters and crabs, a small network with a countable number of neurons, has laid vital foundations for current brain research projects.

Marder's approach is as intuitive as it is analytic, but always firmly anchored to data. Every scrap of information is a pointer for Marder; her discoveries depend on her own creative thinking as much as her laboratory's findings. Nassim describes Marder's important findings on neuromodulation, the secrets of neuronal networks, and homeostasis. Her recognition of the importance of animal-to-animal variability has influenced research methods everywhere.

Marder has run her laboratory at Brandeis University since 1978. She was President of the Society for Neuroscience in 2008 and she is the recipient of numerous awards, including the 2016 Kavli Award in Neuroscience and the 2013 Gruber Prize in Neuroscience. Research that reaches the headlines often depends on technical fireworks, and especially on spectacular images. Marder's work seldom fits that pattern, but this book demonstrates that a brilliant scientist working carefully and thoughtfully can produce groundbreaking results.

Charlotte Nassim is an independent scholar and writer based in London.

Translating Happiness

A Cross-Cultural Lexicon of Well-being

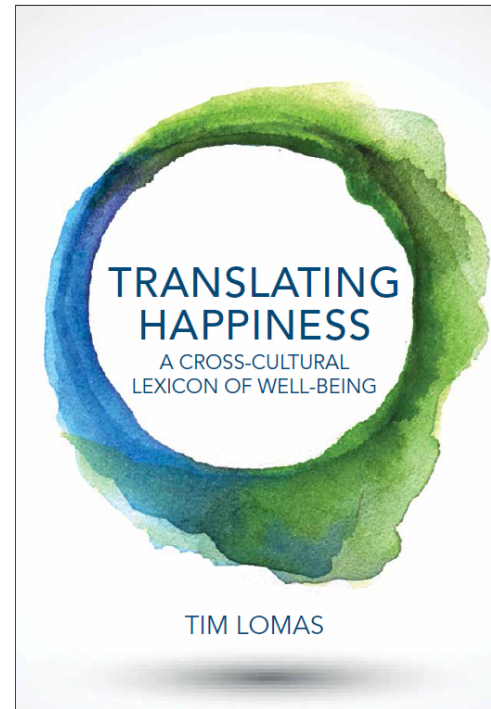
Tim Lomas

Western psychology is rooted in the philosophies and epistemologies of Western culture. But what of concepts and insights from outside this frame of reference? Certain terms not easily translatable into English—for example, *nirvāṇa* (from Sanskrit), or *agápē* (from Classical Greek), or *turangawaewae* (from Māori)—are rich with meaning but largely unavailable to English-speaking students and seekers of wellbeing. In this book, Tim Lomas argues that engaging with “untranslatable” terms related to well-being can enrich not only our understanding but also our experience. We can use these words, Lomas suggests, to understand and express feelings and experiences that were previously inexpressible.

Lomas examines 400 words from 80 languages, arranges them thematically, and develops a theoretical framework that highlights the varied dimensions of wellbeing and traces the connections between them. He identifies three basic dimensions of well-being—feelings, relationships, and personal development—and then explores each in turn through untranslatable words. *Ānanda*, for example, usually translated as *bliss*, can have spiritual associations in Buddhist and Hindu contexts; *kefi* in Greek expresses an intense emotional state—often made more intense by alcohol. The Japanese concept of *koi no yokan* means a premonition or presentiment of love, capturing the elusive and vertiginous feeling of being *about* to fall for someone, imbued with melancholy and uncertainty; the Yiddish term *mensch* has been borrowed from its Judaic and religious connotations to describe an all-around good human being; and Finnish offers *sisu*—inner determination in the face of adversity.

Expanding the lexicon of well-being in this way showcases the richness of cultural diversity while reminding us powerfully of our common humanity. Lomas’s website, www.drtemplomas.com/lexicography, allows interested readers to contribute their own words and interpretations.

Tim Lomas is a Lecturer in Positive Psychology in the School of Psychology at the University of East London.



How embracing untranslatable terms for well-being—from the Finnish *sisu* to the Yiddish *mensch*—can enrich our emotional understanding and experience.

April
6 x 9, 320 pp.
11 illus.

\$29.95T/£24.95 cloth
978-0-262-03748-8

We Now Disrupt This Broadcast

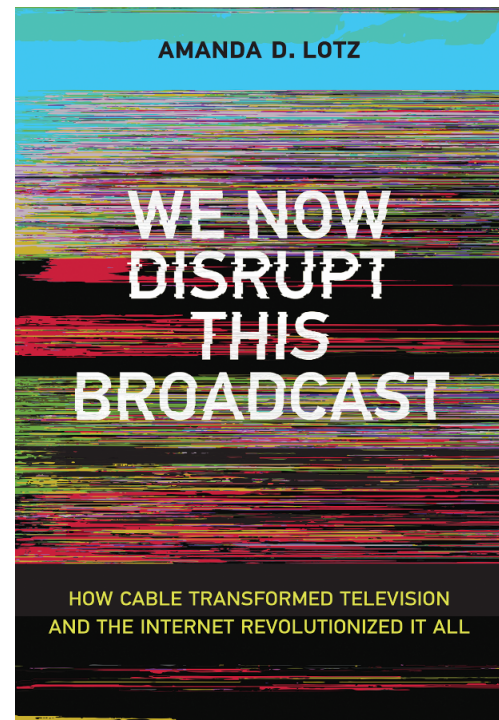
How Cable Transformed Television and the Internet Revolutionized It All

Amanda D. Lotz

Cable television channels were once the backwater of American television, programming recent and not-so-recent movies and reruns of network shows. Then came *La Femme Nikita*, *OZ*, *The Sopranos*, *Mad Men*, *Game of Thrones*, and *The Walking Dead*. And then, just as “prestige cable” became a category, came *House of Cards* and Netflix, Hulu, Amazon Video, and other Internet distributors of television content. What happened? In *We Now Disrupt This Broadcast*, Amanda Lotz chronicles the collision of new technologies, changing business strategies, and innovative storytelling that produced an era termed “peak TV.”

Lotz explains that changes in the business of television expanded the creative possibilities of television. She describes the costly infrastructure rebuilding undertaken by cable service providers in the late 1990s and the struggles of cable channels to produce (and pay for) original, scripted programming in order to stand out from the competition. These new programs defied television conventions and made viewers adjust their expectations of what television could be. *Le Femme Nikita* offered cable’s first antihero, *Mad Men* cost more than advertisers paid, *The Walking Dead* became the first mass cable hit, and *Game of Thrones* the first global television blockbuster. Internet streaming didn’t kill cable, Lotz tells us. Rather, they revolutionized how we watch television. Cable and network television quickly established their own streaming portals. Meanwhile, cable service providers had quietly transformed themselves into Internet providers, letting them profit from both prestige cable and use of streaming services. Far from being dead, television continues to transform.

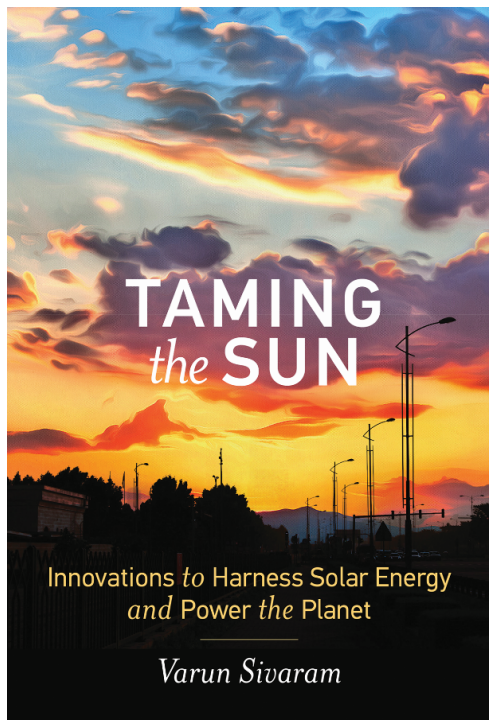
Amanda D. Lotz is Professor of Media Studies at the University of Michigan and a Fellow at the Peabody Media Center.



The collision of new technologies, changing business strategies, and innovative storytelling that produced a new golden age of TV.

April
6 x 9, 272 pp.
5 illus.

\$27.95T / £22.95 cloth
978-0-262-03767-9



How solar could anchor a clean-energy transition through transformative innovation—creative financing, revolutionary technologies, and flexible energy systems.

March
6 x 9, 336 pp.
46 illus.

\$29.95T/£24.95 cloth
978-0-262-03768-6

energy

Taming the Sun

Innovations to Harness Solar Energy and Power the Planet

Varun Sivaram

Solar energy, once a niche application for a limited market, has become the cheapest and fastest-growing power source on earth. What's more, its potential is nearly limitless—every hour the sun beams down more energy than the world uses in a year. But in *Taming the Sun*, energy expert Varun Sivaram warns that the world is not yet quipped to harness erratic sunshine to meet most of its energy needs. And if solar's current surge peters out, prospects for replacing fossil fuels and averting catastrophic climate change will dim.

Innovation can brighten those prospects, Sivaram tells us. Financial innovation is already enticing deep-pocketed investors to fund solar projects around the world, from the sunniest deserts to the poorest villages. Technological innovation could replace today's solar panels with coatings as cheap as paint and employ artificial photosynthesis to store intermittent sunshine as convenient fuels. And systemic innovation could add flexibility to the world's power grids and other energy systems so they can dependably channel the sun's unreliable energy dependably.

Unleashing all this innovation will require visionary public policy: funding researchers developing next-generation solar technologies, refashioning energy systems and economic markets, and putting together a diverse clean energy portfolio. Although solar can't power the planet by itself, it can be the centerpiece of a global clean energy revolution.

Varun Sivaram is the Philip D. Reed Fellow for Science and Technology at the Council on Foreign Relations. He teaches "Clean Energy Innovation" at Georgetown University, is a Fellow at Columbia University's Center for Global Energy Policy, and serves on Stanford University's energy and environment boards. He has advised both the mayor of Los Angeles and the governor of New York on energy. He holds a PhD in condensed matter physics from Oxford University, where he was a Rhodes Scholar.

The Book

Amaranth Borsuk

What is the book in a digital age? Is it a physical object containing pages encased in covers? Is it a portable device that gives us access to entire libraries? The *codex*, the book as bound paper sheets, emerged around 150 CE. It was preceded by clay tablets and papyrus scrolls. Are those books? In this volume in the MIT Press Essential Knowledge series, Amaranth Borsuk considers the history of the book, the future of the book, and the idea of the book. Tracing the interrelationship of form and content in the book's development, she bridges book history, book arts, and electronic literature to expand our definition of an object we thought we knew intimately.

Contrary to the many reports of its death (which has been blamed at various times on newspapers, television, and e-readers), the book is alive. Despite nostalgic paeans to the codex and its printed pages, Borsuk reminds us, the term “book” commonly refers to both medium and content. And the medium has proved to be malleable. Rather than pinning our notion of the book to a single form, Borsuk argues, we should remember its long history of transformation. Considering the book as object, content, idea, and interface, she shows that the physical form of the book has always been the site of experimentation and play. Rather than creating a false dichotomy between print and digital media, we should appreciate their continuities.

Amaranth Borsuk is Assistant Professor in the School of Interdisciplinary Arts and Sciences at the University of Washington Bothell, where she also teaches in the MFA in Creative Writing and Poetics. She is the author of *Between Page and Screen*, a digital pop-up book of poetry, and other hybrid print/digital books.



**The book as object,
as content, as idea,
as interface.**

April
5 x 7, 336 pp.
21 illus.

\$15.95T/£13.95 paper
978-0-262-53541-0

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philosophy | current events

How we arrived in a post-truth era, when “alternative facts” replace actual facts, and feelings have more weight than evidence.

March
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Knowledge series**

Post-Truth

Lee C. McIntyre

We are living in a post-truth world, where “alternative facts” replace actual facts, and feelings have more weight than evidence. How did we get here? In this volume in the MIT Press Essential Knowledge series, Lee McIntyre traces the development of the post-truth phenomenon from science denial through the rise of social media and the public’s retreat to “information silos.”

What, exactly, is post-truth? Is it wishful thinking, political spin, mass delusion, bold-faced lie? McIntyre analyzes recent post-truths—claims about inauguration crowd size, crime statistics, and the popular vote—and finds that post-truth is an assertion of ideological supremacy by which its practitioners try to compel someone to believe something regardless of the evidence. Post-truth didn’t begin with the Trump presidency, however; the denial of scientific facts about smoking, evolution, vaccines, and climate change offered a road map for more widespread fact denial. Add to that our wired-in cognitive biases, psychological blind spots that make us feel that our conclusions are based on good reasoning even when they are not; the decline of traditional media and the rise of social media; and the emergence of fake news as a political tool. McIntyre also argues provocatively that the right wing borrowed from postmodernism—specifically, the idea that there is no such thing as objective truth—in its attacks on science and facts.

McIntyre argues that we can fight post-truth, and that the first step in fighting post-truth is to understand it. This book helps us do so.

Lee C. McIntyre is a Research Fellow at the Center for Philosophy and History of Science at Boston University and an Instructor in Ethics at Harvard Extension School. He is the author of *Dark Ages: The Case for a Science of Human Behavior* (MIT Press).

neuroscience

Synesthesia

Richard E. Cytowic

One in twenty-three people carry the genes for the synesthesia. Not a disorder but a neurological trait—like perfect pitch—synesthesia creates vividly felt cross-sensory couplings. A synesthete might hear a voice and at the same time see it as a color or shape, taste its distinctive flavor, or feel it as a physical touch. In this volume in the MIT Press Essential Knowledge series, Richard Cytowic, the expert who returned synesthesia to mainstream science after decades of oblivion, offers a concise, accessible primer on this fascinating human experience.

Cytowic explains that synesthesia's most frequent manifestation is seeing days of the week as colored, followed by sensing letters, numerals, and punctuation marks in different hues even when printed in black. Other manifestations include tasting food in shapes, seeing music in moving colors, and mapping numbers and other sequences spatially. One synesthete declares, "Chocolate smells pink and sparkly"; another invents a dish (chicken, vanilla ice cream, and orange juice concentrate) that tastes intensely blue. Cytowic, who in the 1980s revived scientific interest in synesthesia, sees it now understood as a spectrum, an umbrella term that covers five clusters of outwardly felt couplings that can occur via several pathways. Yet synesthetic or not, each brain uniquely filters what it perceives. Cytowic reminds us that each individual's perspective on the world is thoroughly subjective.

Richard E. Cytowic, M.D., MFA, a pioneering researcher in synesthesia, is Professor of Neurology at George Washington University. He is the author of *Synesthesia: A Union of the Senses*, *The Man Who Tasted Shapes*, *The Neurological Side of Neuropsychology* and (with David M. Eagleman) the Montaigne Medal-winner *Wednesday Is Indigo Blue: Discovering the Brain of Synesthesia*, all published by the MIT Press.



An accessible, concise primer on the neurological trait of synesthesia—vividly felt sensory couplings—by a founder of the field.

March
5 X 7, 216 pp.
14 color illus., 21 b&w illus.

\$15.95T/£13.95 paper
978-0-262-53509-0

The MIT Press Essential Knowledge series

computer science

Data Science

John D. Kelleher and Brendan Tierney

The goal of data science is to improve decision making through the analysis of data. Today data science determines the ads we see online, the books and movies that are recommended to us online, which emails are filtered into our spam folders, and even how much we pay for health insurance. This volume in the MIT Press Essential Knowledge series offers a concise introduction to the emerging field of data science, explaining its evolution, current uses, data infrastructure issues, and ethical challenges.

It has never been easier for organizations to gather, store, and process data. Use of data science is driven by the rise of big data and social media, the development of high-performance computing, and the emergence of such powerful methods for data analysis and modeling as deep learning. Data science encompasses a set of principles, problem definitions, algorithms, and processes for extracting non-obvious and useful patterns from large datasets. It is closely related to the fields of data mining and machine learning, but broader in scope. This book offers a brief history of the field, introduces fundamental data concepts, and describes the stages in a data science project. It considers data infrastructure and the challenges posed by integrating data from multiple sources, introduces the basics of machine learning, and discusses how to link machine learning expertise with real-world problems. The book also reviews ethical and legal issues, developments in data regulation, and computational approaches to preserving privacy. Finally, it considers the future impact of data science and offers principles for success in data science projects.

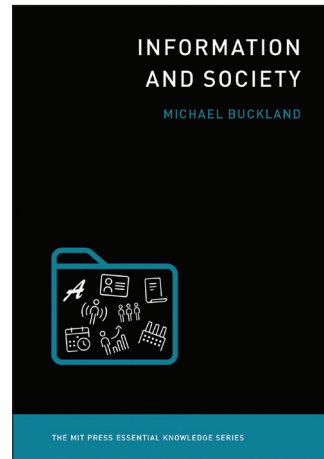
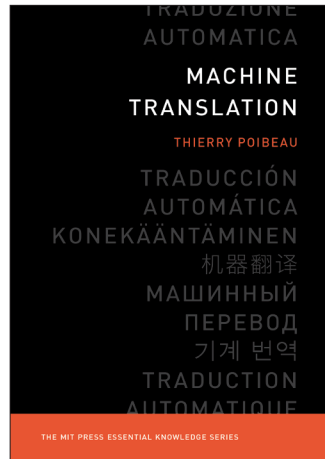
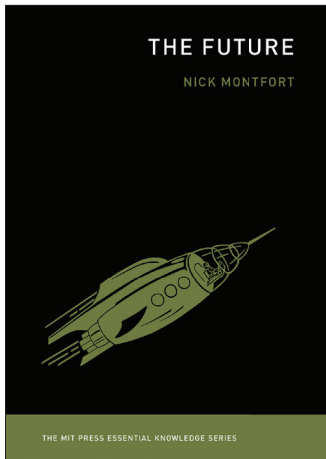
John D. Kelleher is a Professor of Computer Science and the Academic Leader of the Information, Communication, and Entertainment Research Institute at the Dublin Institute of Technology. **Brendan Tierney** is a Lecturer in the School of Computing at the Dublin Institute of Technology.

A concise introduction to the emerging field of data science, explaining its evolution, relation to machine learning, current uses, data infrastructure issues, and ethical challenges.

May
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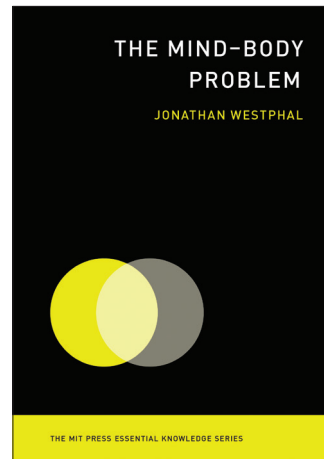
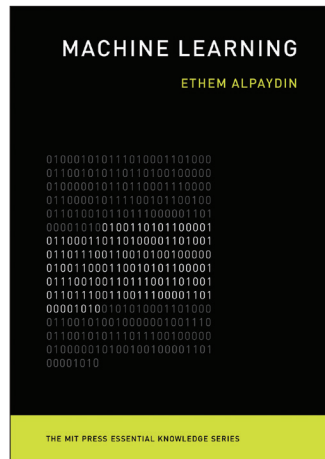
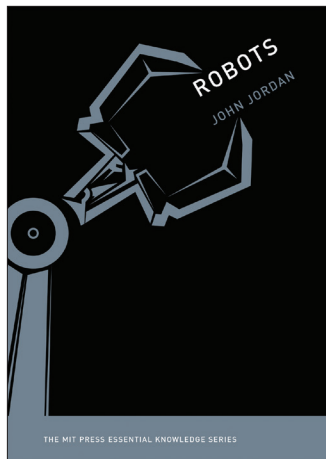
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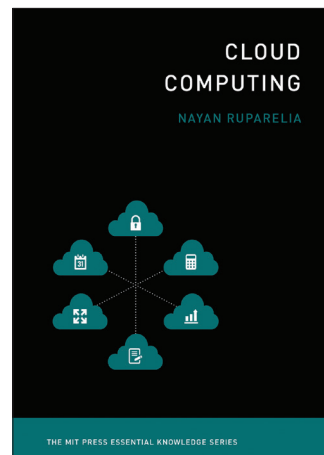
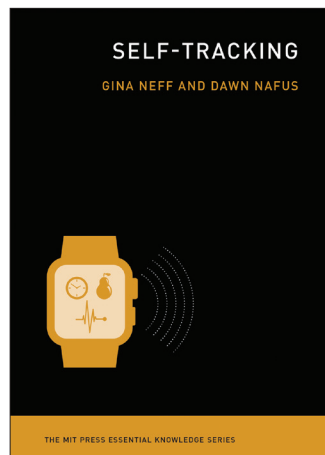
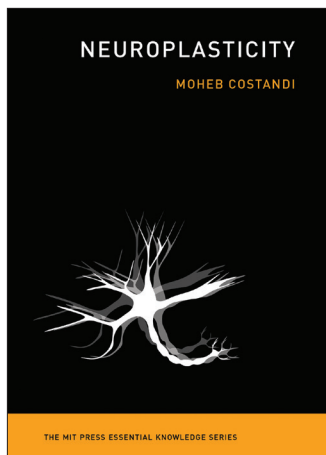
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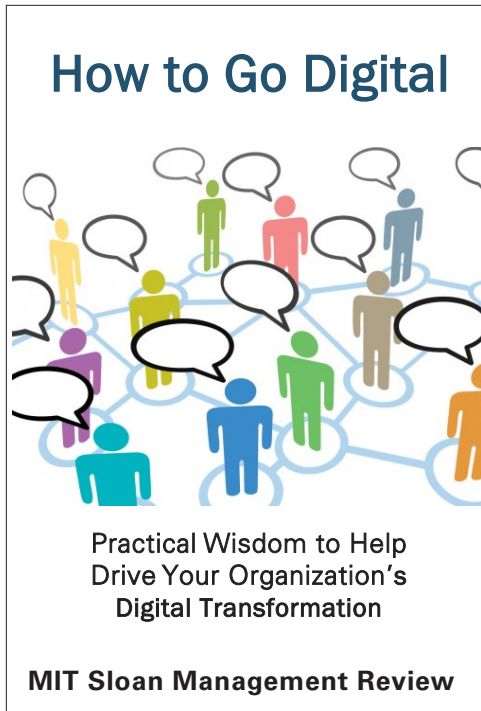
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March
5 3/8 x 8, 224 pp.
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**The Digital Future
of Management series**



How to Go Digital

Practical Wisdom to Help Drive Your Organization's Digital Transformation

MIT Sloan Management Review

The most important skills a leader needs to succeed in a digital environment are not technical in nature but managerial—strategic vision, forward-looking perspective, change-oriented mindset. A company's digital transformation does not involve abandoning widget-making for app developing or pursuing “disruption” at the cost of stability. Rather, it is about adopting business processes and practices that position organizations to compete effectively in the digital environment. More important than technology implementation are strategy, talent management, organizational structure, and leadership aligned for the digital world. *Going Digital* offers advice from management experts on how to steer your company into the digital future.

The book will put you on the right strategic path, with articles from *MIT Sloan Management Review* on developing a digital strategy, reframing growth for a digital world, monetizing data, and generating sustainable value from social media. Talent acquisition and retention are addressed, with articles on HR analytics, data translators, and enabling employees to become brand ambassadors outside of the office. Operational makeovers are discussed in terms of sales, services, new technologies, and innovation.

Contributors

Stephen J. Andriole, Bart Baesens, Gloria Barczak, Cynthia M. Beath, Alpheus Bingham, Didier Bonnet, Chris Brady, Joseph Byrum, Marina Candi, Manuel Cebrian, Marie-Cécile Cervellon, Simon Chadwick, Sophie De Winne, Mike Forde, Gerald C. Kane, Rahul Kapoor, Thomas Klueter, Mary C. Lacity, Rikard Lindgren, Pamela Lirio, Paul Michelman, Tucker J. Marion, Lars Mathiassen, Pete Maulik, Narendra Mulani, Pierre Nanterme, Alex “Sandy” Pentland, Frank T. Piller, Iyad Rahwan, Deborah L. Roberts, Jeanne W. Ross, Ina M. Sebastian, Luc Sels, James E. Short, Fredrik Svahn, Steve Todd, Leslie P. Willcocks, H. James Wilson, Barbara H. Wixom

business | technology

What the Digital Future Holds

20 Groundbreaking Essays on How Technology
Is Reshaping the Practice of Management

MIT Sloan Management Review

Digital technology has profoundly affected the ways that businesses design and produce goods, manage internal communication, and connect with customers. But the next phase of the digital revolution raises a new set of questions about the relationship between technology and the practice of management. Managers in the digital era must consider how big data can inform hiring decisions, whether new communication technologies are empowering workers or unleashing organizational chaos, what role algorithms will play in corporate strategy, and even how to give performance feedback to a robot. This collection of short, pithy essays from *MIT Sloan Management Review*, written by both practitioners and academic experts, explores technology's foundational impact on management.

Much of the conversation around these topics centers on the evolving relationship between humans and cognitive technologies, and the essays reflect this—considering, for example, not only how to manage a bot but how cognitive systems will enhance business decision making, how AI delivers value, and the ethics of algorithms.

Contributors

Ajay Agrawal, Robert D. Austin, David H. Autor, Andrew Burgert, Paul R. Daugherty, Thomas H. Davenport, R. Edward Freeman, Joshua S. Gans, Avi Goldfarb, Lynda Gratton, Reid Hoffman, Bala Iyer, Gerald C. Kane, Frieda Klotz, Rita Gunther McGrath, Paul Michelman, Andrew W. Moore, Nicola Morini-Bianzino, Tim O'Reilly, Bidhan L. Parmar, Bernd Schmitt, Alex Tapscott, Don Tapscott, Monideepa Tarafdar, Catherine J. Turco, Ginni Rometty, George Westerman, H. James Wilson, Andrew Winston

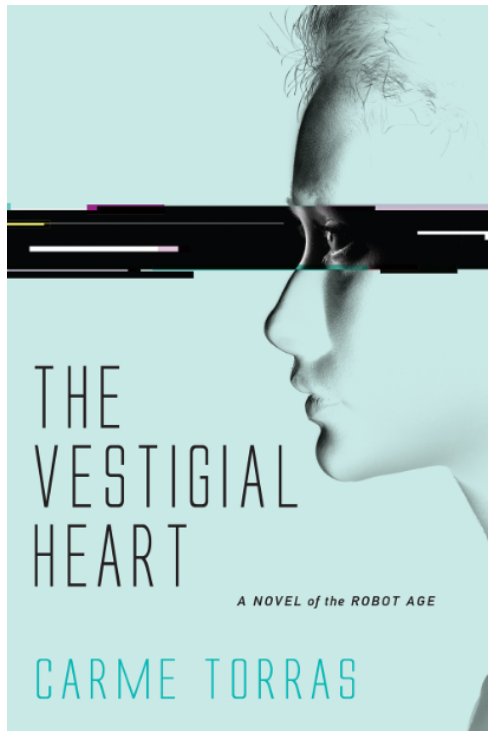


**The relationship between
management and digital
technology: experts present a
new agenda for the practice
of management.**

March
5 3/8 x 8, 144 pp.
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science fiction

A thirteen-year-old girl wakes up in a future where human emotions are extinct and people rely on personal-assistant robots to navigate daily life.

April
6 x 9, 248 pp.

\$19.95T/£14.95 paper
978-0-262-03777-8

The Vestigial Heart

A Novel

Carme Torras

translated by Josephine Swarbrick

Imagine a future in which many human emotions are extinct, and “emotional masseuses” try to help people recover those lost sensations. Individuals rely on personal-assistant robots to navigate daily life. Students are taught not to think but to employ search programs. Companies protect their intellectual property by erasing the memory of their employees. And then imagine what it would feel like to be a sweet, smart thirteen-year-old girl from the twenty-first century who wakes from a cryogenically induced sleep into this strange world. This is the compelling story told by Carme Torras in this prize-winning science fiction novel. We meet Celia, brought back to life when a cure is found for her formerly terminal disease, and Lu, Celia’s adoptive mother, protective but mystified by her new daughter. There is Leo, a bioengineer, who is developing a “creativity prosthesis” to augment humans’ atrophied capacities, and the eccentric robotics mogul Dr. Craft. And there is Silvana, an emotional masseuse who reads old books to research the power of emotion. Silvana sees Celia as a living, breathing example of the emotions and feelings that are now out of reach for most people.

Torras, a prominent roboticist, weaves provocative ethical issues into her story. What kind of robots do we want when robot companions become as common as personal computers are now? Is it the responsibility of researchers to design robots that make the human mind evolve in a certain way? An appendix provides readers with a list of ethics questions raised by the book.

Carme Torras, a leading researcher in robotics and artificial intelligence, is Research Professor at the Institut de Robòtica i Informàtica Industrial (CSIC-UPC) in Barcelona and editor of *IEEE Transactions on Robotics*. A member of the Catalan Society for Science Fiction and Fantasy, she is the author of four novels.

architecture

Drawing on Architecture

The Object of Lines, 1970–1990

Jordan Kauffman

Prior to the 1970s, buildings were commonly understood to be the goal of architectural practice; architectural drawings were seen simply as a means to an end. But, just as the boundaries of architecture itself were shifting at the end of the twentieth century, the perception of architectural drawings was also shifting; they began to be seen as autonomous objects outside the process of building. In *Drawing on Architecture*, Jordan Kauffman offers an account of how architectural drawings—promoted by a network of galleries and collectors, exhibitions and events—emerged as aesthetic objects and ultimately attained status as important cultural and historical artifacts, and how this was both emblematic of changes in architecture and a catalyst for these changes.

Kauffman traces moments of critical importance to the evolution of the perception of architectural drawings, beginning with exhibitions that featured architectural drawings displayed in ways that did not elucidate buildings but treated them as meaningful objects in their own right. When architectural drawings were seen as having intrinsic value, they became collectible, and Kauffman chronicles early collectors, galleries, and sales. He discusses three key exhibitions at the Leo Castelli Gallery in New York; other galleries around the world that specialized in architectural drawings; the founding of architecture museums that understood and collected drawings as important cultural and historical artifacts; and the effect of the new significance of architectural drawings on architecture and architectural history.

Drawing on interviews with forty-five people directly involved with the events described and on extensive archival research, Kauffman shows how architectural drawings became the driving force in architectural debate in an era of change.

Jordan Kauffman is a Professor of Architectural History and a Research Affiliate at MIT. He has taught at MIT, Tufts University, Brandeis University, and the Architectural Association, London.



How architectural drawings emerged as aesthetic objects, promoted by a network of galleries, collectors, and institutions, and how this changed the understanding of architecture.

April
7 x 9, 336 pp.
57 color illus., 44 b&w illus.

\$34.95T/£27.95 cloth
978-0-262-03737-2

Deaccessioning and Its Discontents

A Critical History

Martin Gammon

Museums often stir controversy when they deaccession works—formally remove objects from permanent collections—with some critics accusing them of betraying civic virtue and the public trust. In fact, Martin Gammon argues in *Deaccessioning and Its Discontents*, deaccession has been an essential component of the museum experiment for centuries. Gammon offers the first critical history of deaccessioning by museums from the seventeenth to the twenty-first century, and exposes the hyperbolic extremes of “deaccession denial”—the assumption that deaccession is always wrong—and “deaccession apology”—when museums attempt to blame the object for its removal—as symptoms of the same misunderstanding of the role of deaccessions to proper museum practice. He chronicles a series of deaccession events in Britain and the United States that range from the disastrous to the beneficial, and proposes a typology of principles to guide future deaccessions.

Gammon describes the liquidation of the British Royal Collections after Charles I’s execution—when masterworks were used as barter to pay the king’s unpaid bills—as establishing a precedent for future deaccessions. He recounts, among other episodes, U.S. Civil War veterans who tried to reclaim their severed limbs from museum displays; the 1972 “Hoving affair,” when the Metropolitan Museum of Art sold a number of works to pay for a Velázquez portrait; and Brandeis University’s decision (later reversed) to close its Rose Art Museum and sell its entire collection of contemporary art. An epilogue provides the first extensive listing of notable deaccessions since the seventeenth century. Gammon ultimately argues that vibrant museums must evolve, embracing change, loss, and reinvention.

Martin Gammon, formerly Managing Director of Museum Services in North America for Bonhams Auctioneers, is a founder of the Pergamon Art Group, which advises museums and private collections on bequests and collection management. He appears regularly as an appraiser on the PBS series *Antiques Roadshow*.



The first history of the deaccession of objects from museum collections that defends deaccession as an essential component of museum practice.

May
7 x 10, 480 pp.
56 color illus., 8 b&w illus.

\$44.95T/£37.95 cloth
978-0-262-03758-7

philosophy

The Dash—The Other Side of Absolute Knowing

Rebecca Comay and Frank Ruda

This book sets out from a counterintuitive premise: the “mystical shell” of Hegel’s system proves to be its most “rational kernel.” Hegel’s radicalism is located precisely at the point where his thought seems to regress most. Most current readings try to update Hegel’s thought by pruning back his grandiose claims to “absolute knowing.” Comay and Ruda invert this deflationary gesture by inflating what seems to be most trivial: the absolute is grasped only in the minutiae of its most mundane appearances. Reading Hegel without presupposition, without eliminating anything in advance or making any decision about what is essential and what is inessential, what is living and what is dead, they explore his presentation of the absolute to the letter.

The Dash is organized around a pair of seemingly innocuous details. Hegel punctuates strangely. He ends the *Phenomenology of Spirit* with a dash, and he begins the *Science of Logic* with a dash. This distinctive punctuation reveals an ambiguity at the heart of absolute knowing. The dash combines hesitation and acceleration. Its orientation is simultaneously retrospective and prospective. It both holds back and propels. It severs and connects. It demurs and insists. It interrupts and prolongs. It generates nonsequiturs and produces explanations. It leads in all directions: continuation, deviation, meaningless termination. This challenges every cliché about the Hegelian dialectic as a machine of uninterrupted teleological progress. The dialectical movement is, rather, structured by intermittency, interruption, hesitation, blockage, abruptness, and random, unpredictable change—a rhythm that displays all the vicissitudes of the Freudian drive.

Rebecca Comay is Professor of Philosophy and Comparative Literature at the University of Toronto. **Frank Ruda** is Senior Lecturer in Philosophy at the University of Dundee.

Both together are conceptually grasped history; they form the recollection and the Golgotha of absolute spirit, the actuality, the truth, the certainty of its throne, without which it would be lifeless and alone; only—

THE OTHER SIDE OF ABSOLUTE KNOWING
REBECCA COMAY AND FRANK RUDA

Being, pure being, —

Short Circuits series

An argument that what is usually dismissed as the “mystical shell” of Hegel’s thought—the concept of absolute knowledge—is actually its most “rational kernel.”

May
6 x 9, 200 pp.

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**Short Circuits series, edited by
Mladen Dolar, Alenka Zupančič,
and Slavoj Žižek**

Global Dystopias

edited by Junot Díaz

As the recent success of Margaret Atwood's novel-turned-television hit *Handmaid's Tale* shows us, dystopia is more than minatory fantasy; it offers a critical lens upon the present. "It is not only a kind of vocabulary and idiom," says bestselling author and volume editor Junot Díaz. "It is a useful arena in which to begin to think about who we are becoming."

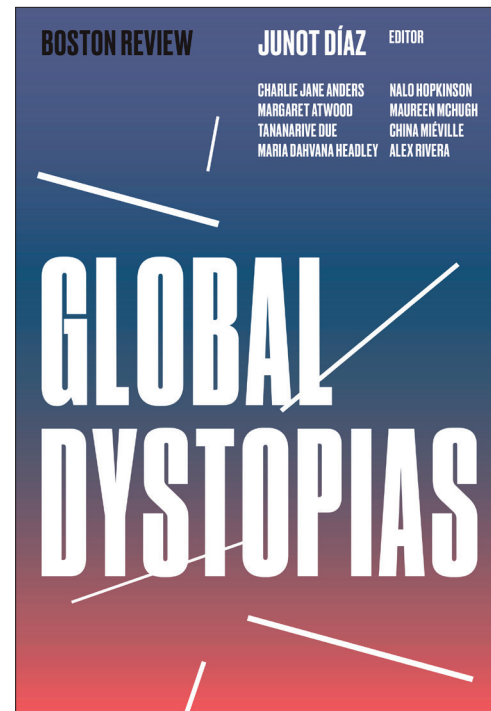
Bringing together some of the most prominent writers of science fiction and introducing fresh talent, this collection of stories, essays, and interviews explores global dystopias in apocalyptic landscapes and tech futures, in robot sentience and forever war. *Global Dystopias* engages the familiar horrors of George Orwell's *1984* alongside new work by China Miéville, Tananarive Due, and Maria Dahvana Headley. In "Don't Press Charges, and I Won't Sue," award-winning writer Charlie Jane Anders uses popularized stigmas toward transgender people to create a not-so-distant future in which conversion therapy is not only normalized, but funded by the government. Henry Farrell surveys the work of dystopian forebear Philip K. Dick and argues that distinctions between the present and the possible future aren't always that clear. Contributors also include Margaret Atwood, filmmaker Alex Rivera, and award-winning speculative writer, Nalo Hopkinson.

In the era of Trump, resurgent populism, and climate denial, this collection poses vital questions about politics and civic responsibility and subjectivity itself. If we have, as Díaz says, reached peak dystopia, then *Global Dystopias* might just be the handbook we need to survive it.

Junot Díaz is the author of the Pulitzer Prize-winning novel *The Brief and Wondrous Life of Oscar Wao* and the short story collections *Drown* and *This Is How You Lose Her*. Associate Professor in the Writing and Humanistic Studies Program at MIT, he is fiction editor of *Boston Review*.

Contributors

Charlie Jane Anders, Margaret Atwood, Tananarive Due, Maria Dahvana Headley, Nalo Hopkinson, Maureen McHugh, China Miéville, Alex Rivera, Jordy Rosenberg



Stories, essays, and interviews explore dystopias that may offer lessons for the present.

October
X x X, 208 pp.

\$.0/£.0 paper
978-1-946511-04-1

Distributed for Boston Review



A thirty-year quest, from genes to pain-signaling neurons to people with a rare genetic disorder that makes them feel they are on fire.

March
7 x 9, 392 pp.
59 color illus., 20 b&w illus.

\$45.00X/£37.95 cloth
978-0-262-03740-2

Chasing Men on Fire

The Story of the Search for a Pain Gene

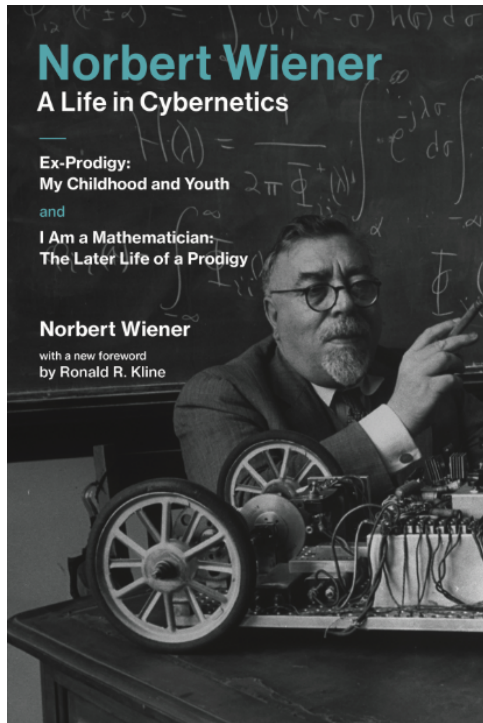
Stephen G. Waxman

foreword by James E. Rothman, 2013 Nobel Laureate
in Physiology or Medicine

Two soldiers, both with wounds injuring the same nerve, show very different responses: one is disabled by neuropathic pain, unable to touch the injured limb because even the lightest contact triggers excruciating discomfort; the other notices numbness but no pain at all. Could the difference lie in their genes? In this book, described in the foreword by Nobel Laureate James Rothman as “so well written that it reads like a detective novel,” Stephen Waxman recounts the search for a gene that controls pain—a search spanning more than thirty years and three continents.

The story moves from genes to pain-signaling neurons that scream when they should be silent to people with a rare genetic disorder who feel they are on fire. Waxman explains that if pain-signaling neurons are injured by trauma or disease, they can become hyperactive and send pain signals to the brain even without external stimulus. Studying the hyperactive mutant pain gene in man on fire syndrome has pointed the way to molecules that produce pain more broadly within the general population, in the rest of us. Waxman’s account of the many steps that led to discovery of the pain gene tells the story behind the science, of how science happens.

Stephen G. Waxman is Bridget Flaherty Professor of Neurology, Neuroscience, and Pharmacology at Yale University, where he is also Director of the Center for Neuroscience and Regeneration Research. He is the author of *Form and Function in the Brain and Spinal Cord* (MIT Press) and other books.



Norbert Wiener's celebrated autobiography, available for the first time in one volume.

March
6 x 9, 592 pp.

\$50.00S/£41.95 paper
978-0-262-53544-1

Norbert Wiener—A Life in Cybernetics

Ex-Prodigy: My Childhood and Youth and
I Am a Mathematician: The Later Life of a Prodigy

Norbert Wiener

foreword by Ronald H. Kline

Norbert Wiener—A Life in Cybernetics combines for the first time the two volumes of Norbert Wiener's celebrated autobiography. Published at the height of public enthusiasm for cybernetics—when it was taken up by scientists, engineers, science fiction writers, artists, and musicians—*Ex-Prodigy* (1953) and *I Am a Mathematician* (1956) received attention from both scholarly and mainstream publications, garnering reviews and publicity in outlets that ranged from the *New York Times* and *New York Post* to the *Virginia Quarterly Review*.

Norbert Wiener was a mathematician with extraordinarily broad interests. The son of a Harvard professor of Slavic languages, Wiener was reading Dante and Darwin at seven, graduated from Tufts at fourteen, and received a PhD from Harvard at eighteen. He joined MIT's Department of Mathematics in 1919, where he remained until his death in 1964 at sixty-nine. In *Ex-Prodigy*, Wiener offers an emotionally raw account of being raised as a child prodigy by an overbearing father. In *I Am a Mathematician*, Wiener describes his research at MIT and how he established the foundations for the multidisciplinary field of cybernetics and the theory of feedback systems. This volume makes available the essence of Wiener's life and thought to a new generation of readers.

Norbert Wiener (1894–1964) served on the faculty in the Department of Mathematics at MIT from 1919 until his death. In 1963, he was awarded the National Medal of Science for his contributions to mathematics, engineering, and biological science. He was the author of many books, with *Cybernetics: On Control and Communication in the Animal and the Machine* and *God and Golem: A Comment on Certain Points Where Cybernetics Impinges on Religion* among the most well-known.

psychology

The Essential Tversky

Amos Tversky

edited and with an introduction by Eldar Shafir

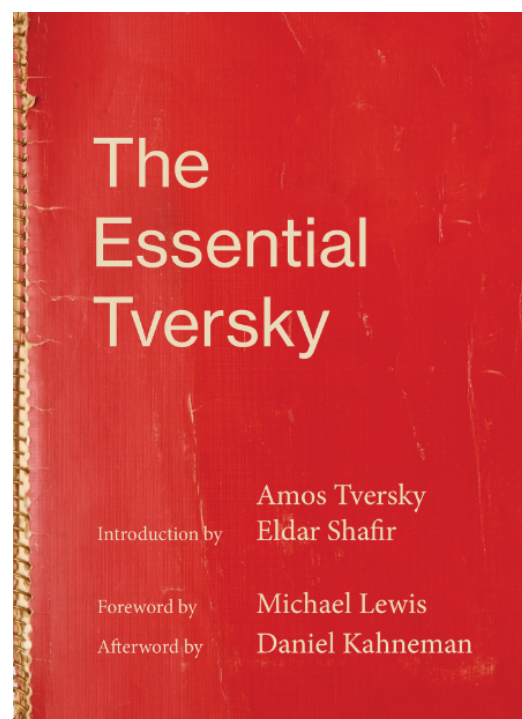
foreword by Michael Lewis

afterword by Daniel Kahneman

Amos Tversky (1937–1996) was a towering figure in the cognitive and decision sciences. His work was ingenious, exciting, and influential, spanning topics from intuition to statistics to behavioral economics. His long and extraordinarily productive collaboration with his friend and colleague Daniel Kahneman was the subject of Michael Lewis’s best-selling book, *The Undoing Project: A Friendship That Changed Our Minds*. *The Essential Tversky* offers a selection of Tversky’s best, most influential and accessible papers, “classics” chosen to capture the essence of Tversky’s thought.

The impact of Tversky’s work is far reaching and long-lasting. In 2002, Kahneman, who drew on their joint work in his much-praised 2013 book, *Thinking, Fast and Slow* (and who contributes an afterword to this collection), was awarded the Nobel Prize in Economics for work done with Tversky. In *The Undoing Project*, Lewis (who contributes a foreword to this collection) describes his discovery that Tversky and Kahneman’s thinking laid the foundation for *Moneyball*, his own ode to number-crunching. The papers collected in *The Essential Tversky* cover topics that include cognitive and perceptual bias, misguided beliefs, inconsistent preferences, risky choice and loss aversion decisions, and psychological common sense. Together, they offer nonspecialist readers an introduction to one of the most brilliant social science thinkers of the twentieth century.

Amos Tversky (1937–1996) was a mathematical psychologist whose research in the cognitive and decision sciences has been enormously influential. From 1978 to 1996, Tversky taught at Stanford University, where he was the inaugural David-Brack Professor of Behavioral Sciences and Principal Investigator at the Stanford Center on Conflict and Negotiation. **Eldar Shafir**, a student, close friend, and collaborator of Tversky’s, is Class of 1987 Professor of Behavioral Science and Public Policy at Princeton University.



Some of the best and most influential papers by Amos Tversky, one of the most brilliant social science thinkers of the twentieth century.

July
7 x 9, 368 pp.
47 illus.

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How Americans adapted European royal illuminations for patriotic celebrations, spectacular expositions, and intensely bright commercial lighting to create the world's most dazzling and glamorous cities.

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American Illuminations

Urban Lighting, 1800–1920

David E. Nye

Illuminated fêtes and civic celebrations began in Renaissance Italy and spread through the courts of Europe. Their fireworks, torches, lamps, and special effects glorified the monarch, marked the birth of a prince, or celebrated military victory. Nineteenth-century Americans rejected such monarchical pomp and adapted spectacular lighting to their democratic, commercial culture. In *American Illuminations*, David Nye explains how they experimented with gas and electric light to create illuminated cityscapes far brighter and more dynamic than those of Europe, and how these illuminations became symbols of modernity and the conquest of nature.

Americans used gaslight and electricity in parades, expositions, advertising, elections, and political spectacles. In the 1880s, cities erected powerful arc lights on towers to create artificial moonlight. By the 1890s they adopted more intensive, commercial lighting that defined distinct zones of light and glamorized the city's White Ways, skyscrapers, bridges, department stores, theaters, and dance halls. Poor and blighted areas disappeared into the shadows. American illuminations also became integral parts of national political campaigns, presidential inaugurations, and victory celebrations after the Spanish-American War and World War I.

David E. Nye, who was knighted by the Danish Queen in 2013, is Senior Research Fellow at the Charles Babbage Institute and the History of Science and Technology program at the University of Minnesota and Professor of American Studies in Denmark. His eight other books published by the MIT Press include *Electrifying America* and *When the Lights Went Out: A History of American Blackouts*. His awards include the Leonardo da Vinci Medal (2005).

science

Rock, Bone, and Ruin

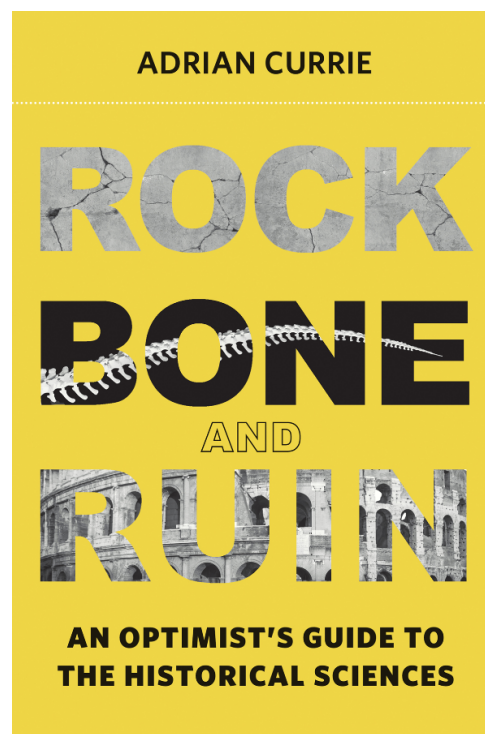
An Optimist's Guide to the Historical Sciences

Adrian Currie

The “historical sciences”—geology, paleontology, and archaeology—have made extraordinary progress in advancing our understanding of the deep past. How has this been possible, given that the evidence they have to work with offers mere traces of the past? In *Rock, Bone, and Ruin*, Adrian Currie explains that these scientists are “methodological omnivores,” with a variety of strategies and techniques at their disposal, and that this gives us every reason to be optimistic about their capacity to uncover truths about prehistory. Creative and opportunistic paleontologists, for example, discovered and described a new species of prehistoric duck-billed platypus from a single fossilized tooth. Examining the complex reasoning processes of historical science, Currie also considers philosophical and scientific reflection on the relationship between past and present, the nature of evidence, contingency, and scientific progress.

Currie draws on varied examples from across the historical sciences, from Mayan ritual sacrifice to giant Mesozoic fleas to Mars's mysterious watery past, to develop an account of the nature of, and resources available to, historical science. He presents two major case studies: the emerging explanation of sauropod size, and the “snowball earth” hypothesis that accounts for signs of glaciation in Neoproterozoic tropics. He develops the Ripple Model of Evidence to analyze “unlucky circumstances” in scientific investigation; examines and refutes arguments for pessimism about the capacity of the historical sciences, defending the role of analogy and arguing that simulations have an experiment-like function. Currie argues for a creative, open-ended approach, “empirically grounded” speculation.

Adrian Currie is a Postdoctoral Associate at the Centre for the Study of Existential Risk at Cambridge University.

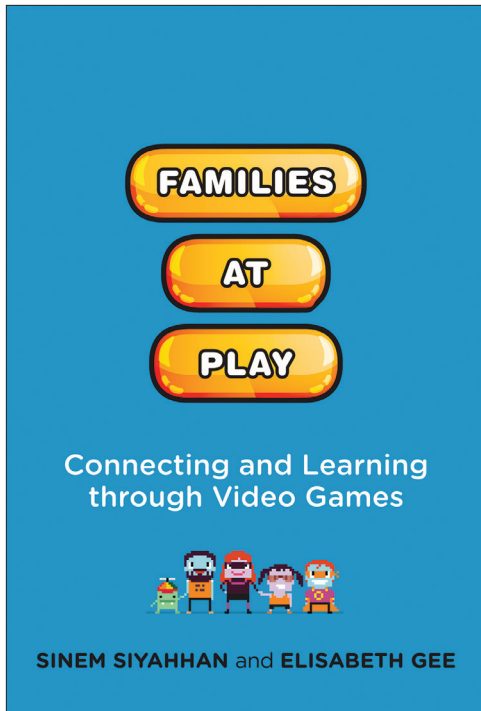


An argument that we should be optimistic about the capacity of “methodologically omnivorous” geologists, paleontologists, and archaeologists to uncover truths about the deep past.

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Life and Mind series



How family video game play promotes intergenerational communication, connection, and learning.

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Families at Play

Connecting and Learning through Video Games

Sinem Siyahhan and Elisabeth Gee

Video games have a bad reputation in the mainstream media. They are blamed for encouraging social isolation, promoting violence, and creating tensions between parents and children. In this book, Sinem Siyahhan and Elisabeth Gee offer another view. They show that video games can be a tool for connection, not isolation, creating opportunities for families to communicate and learn together.

Like smartphones, Skype, and social media, games help families stay connected. Siyahhan and Gee offer examples: One family treats video game playing as a regular and valued activity, and bonds over *Halo*. A father tries to pass on his enthusiasm for *Star Wars* by playing *Lego Star Wars* with his young son. Families express their feelings and share their experiences and understanding of the world through playing video games like *The Sims*, *Civilization*, and *Minecraft*. Some video games are designed specifically to support family conversations around such real-world issues and sensitive topics as bullying and peer pressure.

Siyahhan and Gee draw on a decade of research to look at how learning and teaching take place when families play video games together. With video games, they argue, the parents are not necessarily the teachers and experts; all family members can be both teachers and learners. They suggest video games can help families form, develop, and sustain their learning culture as well as develop skills that are valued in the twenty-first century workplace. Educators and game designers should take note.

Sinem Siyahhan is Assistant Professor of Educational Technology in the School of Education at California State University, San Marcos, and Founding Director of Play2Connect. **Elisabeth Gee** is Delbert and Jewell Lewis Chair in Reading and Literacy and Professor in the Mary Lou Fulton Teachers College at Arizona State University.



How sharing the mundane details of daily life did not start with Facebook, Twitter, and YouTube but with pocket diaries, photo albums, and baby books.

March
6 x 9, 176 pp.
5 illus.

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The Qualified Self

Social Media and the Accounting of Everyday Life

Lee Humphreys

Social critiques argue that social media have made us narcissistic, that Facebook, Twitter, Instagram, and YouTube are all vehicles for me-promotion. In *The Qualified Self*, Lee Humphreys offers a different view. She shows that sharing the mundane details of our lives—what we ate for lunch, where we went on vacation, who dropped in for a visit—didn't begin with mobile devices and social media. People have used media to catalog and share their lives for several centuries. Pocket diaries, photo albums, and baby books are the predigital precursors of today's digital and mobile platforms for posting text and images. The ability to take selfies has not turned us into needy narcissists; it's part of a longer story about how people account for everyday life.

Humphreys refers to diaries in which eighteenth-century daily life is documented with the brevity and precision of a tweet, and cites a nineteenth-century travel diary in which a young woman complains that her breakfast didn't agree with her. Diaries, Humphreys explains, were often written to be shared with family and friends. Pocket diaries were as mobile as smartphones, allowing the diarist to record life in real time. Humphreys calls this chronicling, in both digital and nondigital forms, media accounting. The sense of self that emerges from *media accounting* is not the purely statistics-driven “quantified self,” but the more well-rounded *qualified self*. We come to understand ourselves in a new way through the representations of ourselves that we create to be consumed.

Lee Humphreys is Associate Professor in the Department of Communication at Cornell University.

Choosing Down Syndrome

Ethics and New Prenatal Testing Technologies

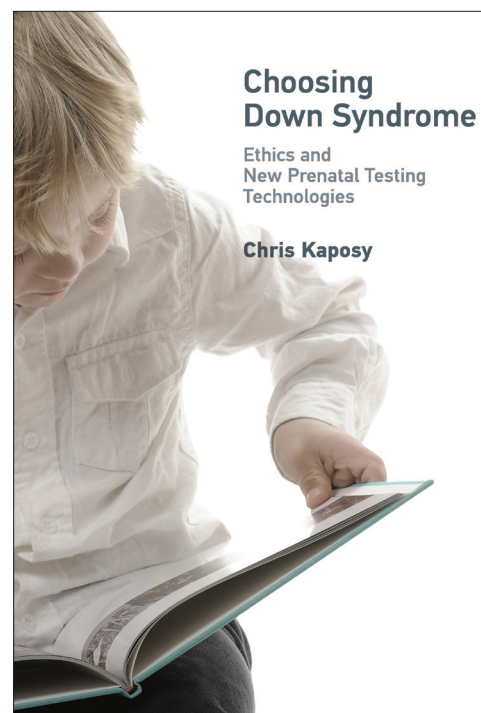
Chris Kaposy

The rate at which parents choose to terminate a pregnancy when prenatal tests indicate that the fetus has Down syndrome is between 60 and 90 percent. In *Choosing Down Syndrome*, Chris Kaposy offers a carefully reasoned ethical argument in favor of choosing to have such a child. Arguing from a pro-choice, disability-positive perspective, Kaposy makes that case that there is a common social bias against cognitive disability that influences decisions about prenatal testing and terminating pregnancies, and that more people should resist this bias by having children with Down syndrome.

Drawing on accounts by parents of children with Down syndrome, and arguing for their objectivity, Kaposy finds that these parents see themselves and their families as having benefitted from having a child with Down syndrome. To counter those who might characterize these accounts as based on self-deception or expressing adaptive preference, Kaposy cites supporting evidence, including divorce rates and observational studies showing that families including children with Down syndrome typically function well. Himself the father of a child with Down syndrome, Kaposy argues that cognitive disability associated with Down syndrome does not lead to diminished well-being. He argues further that parental expectations are influenced by neoliberal ideologies that unduly focus on the supposed diminished economic potential of a person with Down syndrome.

Kaposy does not advocate restricting access to abortion or prenatal testing for Down syndrome, and he does not argue that it is ethically mandatory in all cases to give birth to a child with Down syndrome. People should be free to make important decisions based on their values. Kaposy's argument shows that it may be consistent with their values to welcome a child with Down syndrome into the family.

Chris Kaposy is Associate Professor of Bioethics in the Faculty of Medicine at Memorial University, Newfoundland.

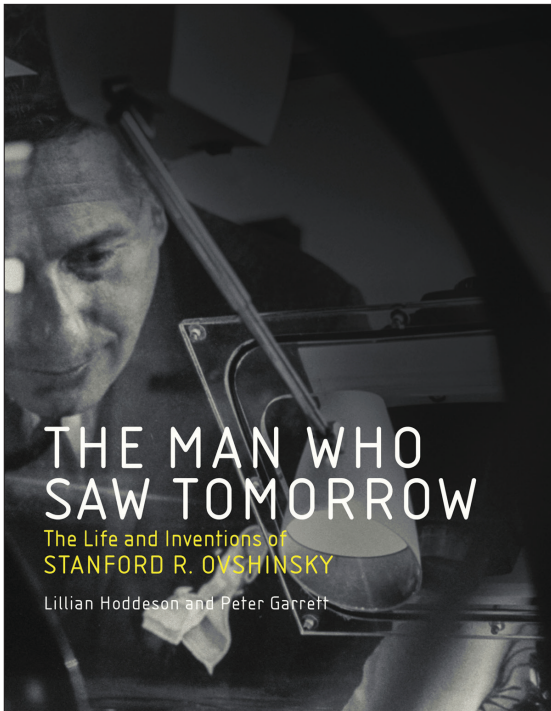


An argument that more people should have children with Down syndrome, written from a pro-choice, disability-positive perspective.

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The Man Who Saw Tomorrow

The Life and Inventions of Stanford R. Ovshinsky

Lillian Hoddeson and Peter Garrett

The Economist called Stanford R. Ovshinsky (1922–2012) “the Edison of our age,” but this apt comparison doesn’t capture the full range of his achievements. As an independent, self-educated inventor, Ovshinsky not only created many important devices but made fundamental discoveries in materials science. This book offers the first full-length biography of a visionary whose energy and information innovations continue to fuel our post-industrial economy.

In *The Man Who Saw Tomorrow*, Lillian Hoddeson and Peter Garrett tell the story of an unconventional genius with no formal education beyond high school who invented, among other things, the rechargeable nickel metal hydride batteries that have powered everything from portable electronics to hybrid cars, a system for mass-producing affordable thin-film solar panels, and rewritable CDs and DVDs. His most important discovery, the Ovshinsky effect, led to a paradigm shift in condensed matter physics and yielded phase-change memory, which is now enabling new advances in microelectronics. A son of the working class who began as a machinist and toolmaker, Ovshinsky focused his work on finding solutions to urgent social problems, and to pursue those goals, he founded Energy Conversion Devices, a unique research and development lab. At the end of his life, battered by personal and professional losses, Ovshinsky nevertheless kept working to combat global warming by making solar energy “cheaper than coal”—another of his many visions of a better tomorrow.

Lillian Hoddeson is Professor of History Emerita and Thomas Siebel Chair in the History of Science Emerita at the University of Illinois at Urbana–Champaign. She is the coauthor of *True Genius: The Life and Science of John Bardeen* and other books. **Peter Garrett** is Professor of English Emeritus and former Director of the Unit for Criticism and Theory at the University of Illinois at Urbana–Champaign. He is the author of *Gothic Reflections* and other books.



A new approach to interaction design that moves beyond representation and metaphor to focus on the material manifestations of interaction.

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6 x 9, 200 pp.
32 illus.

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The Materiality of Interaction

Notes on the Materials of Interaction Design

Mikael Wiberg

Smart watches, smart cars, the Internet of things, 3D printing: all signal a trend toward combining digital and analog materials in design. Interaction with these new hybrid forms is increasingly mediated through physical materials, and therefore interaction design is increasingly a material concern. In this book, Mikael Wiberg describes the shift in interaction design toward material interactions. He argues that the “material turn” in human-computer interaction has moved beyond a representation-driven paradigm, and he proposes “material-centered interaction design” as a new approach to interaction design and its materials. He calls for interaction design to abandon its narrow focus on what the computer can do and embrace a broader view of interaction design as a practice of imagining and designing interaction through material manifestations. A material-centered approach to interaction design enables a fundamental design method for working across digital, physical, and even immaterial materials in interaction design projects.

Wiberg looks at the history of material configurations in computing and traces the shift from metaphors in the design of graphical user interfaces to materiality in tangible user interfaces. He examines interaction through a material lens; suggests a new method and foundation for interaction design that accepts the digital as a design material and focuses on interaction itself as the form being designed; considers design across substrates; introduces the idea of “interactive compositions”; and argues that the focus on materiality transcends any distinction between the physical and digital.

Mikael Wiberg is Professor of Informatics and Associate Dean of the Faculty of Social Sciences at Umeå University, Sweden.

architecture | urbanism

Site Planning

International Practice

Gary Hack

Cities are built site by site. Site planning—the art and science of designing settlements on the land—encompasses a range of activities undertaken by architects, planners, urban designers, landscape architects, and engineers. This book offers a comprehensive, up-to-date guide to site planning that is global in scope. It covers planning processes and standards, new technologies, sustainability, and cultural context, addressing the roles of all participants and stakeholders and offering extensive treatment of practices in rapidly urbanizing countries. Kevin Lynch and Gary Hack wrote the classic text on the subject, and this book takes up where the earlier book left off. It can be used as a textbook and will be an essential reference for practitioners.

Site Planning consists of forty self-contained modules, organized into five parts: The Art of Site Planning, which presents site planning as a shared enterprise; Understanding Sites, covering the components of site analysis; Planning Sites, covering the processes involved; Site Infrastructure, from transit to waste systems; and Site Prototypes, including housing, recreation, and mixed use. Each module offers a brief introduction, covers standards or approaches, provides examples, and presents innovative practices in sidebars. The book is lavishly illustrated with 1350 photographs, diagrams, and examples of practice.

Gary Hack has studied, taught, and practiced site planning for more than forty years in the United States, Canada, and other countries. He is Professor Emeritus of Urban Design at MIT, where he headed the Department of Urban Studies and Planning, Professor Emeritus and former Dean of the School of Design at the University of Pennsylvania, and Visiting Professor at Tsinghua and Chongqing Universities.



A comprehensive, state-of-the-art guide to site planning, covering planning processes, new technologies, and sustainability, with extensive treatment of practices in rapidly urbanizing countries.

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