

Crowdsourcing The Mit Press Essential Knowledge Series

A concise overview of carbon dioxide capture and storage (CCS), a promising but overlooked climate change mitigation pathway. The burning of fossil fuels releases carbon dioxide (CO₂), and these CO₂ emissions are a major driver of climate change. Carbon capture offers a path to climate change mitigation that has received relatively little attention. In this volume in the MIT Press Essential Knowledge series, Howard Herzog offers a concise guide to carbon capture, covering basic information as well as the larger context of climate technology and policy. Carbon capture, or carbon dioxide capture and storage (CCS), refers to a suite of technologies that reduce CO₂ emissions by “capturing” CO₂ before it is released into the atmosphere and then transporting it to where it will be stored or used. It is the only climate change mitigation technique that deals directly with fossil fuels rather than providing alternatives to them. Herzog, a pioneer in carbon capture research, begins by discussing the fundamentals of climate change and how carbon capture can be one of the solutions. He explains capture and storage technologies, including chemical scrubbing and the injection of CO₂ deep underground. He reports on current efforts to deploy CCS at factories and power plants and attempts to capture CO₂ from the air itself. Finally, he explores the policies and politics in play around CCS and argues for elevating carbon capture in the policy agenda.

The use of machines has changed the workplaces of today. While machinery is still not able to perform certain jobs that require creative or non-routine functions, their continuous advancements have shifted the dynamic between organizations and manual laborers. *Strategic Imperatives and Core Competencies in the Era of Robotics and Artificial Intelligence* focuses on contemporary organizations and their use of new competencies. Featuring coverage on new skill identification and best practices for management, this book is essential for professionals, administrators, researchers, and students seeking current research on the latest developments in technological applications in the workplace. This book consists of peer-reviewed papers, presented at the International Conference on Sustainable Design and Manufacturing (SDM 2020). Leading-edge research into sustainable design and manufacturing aims to enable the manufacturing industry to grow by adopting more advanced technologies and at the same time improve its sustainability by reducing its environmental impact. Relevant themes and topics include sustainable design, innovation and services; sustainable manufacturing processes and technology; sustainable manufacturing systems and enterprises; and decision support for sustainability. Application areas are wide and varied. The book provides an excellent overview of the latest developments in the sustainable design and manufacturing areas.

The *Routledge Companion to Digital Journalism Studies* offers an unprecedented collection of essays addressing the key issues and debates shaping the field of Digital Journalism Studies today. Across the last decade, journalism has undergone many changes, which have driven scholars to reassess its most fundamental questions, and in the face of digital change, to ask again: ‘Who is a journalist?’ and ‘What is journalism?’. This companion explores a developing scholarly agenda committed to understanding digital journalism and brings together the work of key scholars seeking to address key theoretical concerns and solve unique methodological riddles. Compiled of 58 original essays from distinguished academics across the globe, this Companion draws together the work of those making sense of this fundamental reconceptualization of journalism, and assesses its impacts on journalism’s products, its practices, resources, and its relationship with audiences. It also outlines the challenge presented by studying digital journalism and, more importantly, offers a first set of answers. This collection is the very first of its kind to attempt to distinguish this emerging field as a unique area of academic inquiry. Through identifying its

core questions and presenting its fundamental debates, this Companion sets the agenda for years to come in defining this new field of study as Digital Journalism Studies, making it an essential point of reference for students and scholars of journalism.

An accessible introduction to a concept often considered impossibly abstruse, demonstrating its power as a conceptual tool in the twenty-first century. This volume in the MIT Press Essential Knowledge series offers a clear and concise introduction to a topic often considered difficult and abstruse: deconstruction. David Gunkel sorts out the concept, terminology, and practices of deconstruction, not to defend academic orthodoxy, or to disseminate the thought of Jacques Derrida--the fabricator of the neologism and progenitor of the concept--but to provide readers with a powerful conceptual tool for the twenty-first century. Gunkel explains that deconstruction is not simply the opposite of construction--the "deconstructed" jacket hanging in your closet is not, strictly speaking, accurately named--or synonymous with destruction. It is a way to think beyond the construction/destruction dichotomy and all other conceptual dichotomies and logical oppositions. After describing what deconstruction is not, and developing an abstract and schematic characterization derived from Derrida, Gunkel offers examples in (rather than of) deconstruction, including logocentrism (the speech/writing dichotomy) and virtuality (the ruling philosophical binary of real/appearance), remix (the original/copy distinction), and the posthuman figure of the cyborg (the human/machine conceptual pairing). Finally, Gunkel discusses the costs and benefits of deconstruction, considering the many things deconstruction is good for and identifying potential problems, including Eurocentrism, relativism, difficulties in communicating the concept, and reappropriation.

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

A philosopher considers whether the scientific and philosophical arguments against free will are reason enough to give up our belief in it. In our daily life, it really seems as though we have free will, that what we do from moment to moment is determined by conscious decisions that we freely make. You get up from the couch, you go for a walk, you eat chocolate ice cream. It seems that we're in control of actions like these; if we are, then we have free will. But in recent years, some have argued that free will is an illusion. The neuroscientist (and best-selling author) Sam Harris and the late Harvard psychologist Daniel Wegner, for example, claim that certain scientific findings disprove free will. In this engaging and accessible volume in the Essential Knowledge series, the philosopher Mark Balaguer examines the various arguments and experiments that have been cited to support the claim that human beings don't have free will. He finds them to be overstated and misguided. Balaguer discusses determinism, the view that every physical event is predetermined, or completely caused by prior events. He describes

several philosophical and scientific arguments against free will, including one based on Benjamin Libet's famous neuroscientific experiments, which allegedly show that our conscious decisions are caused by neural events that occur before we choose. He considers various religious and philosophical views, including the philosophical pro-free-will view known as compatibilism. Balaguer concludes that the anti-free-will arguments put forward by philosophers, psychologists, and neuroscientists simply don't work. They don't provide any good reason to doubt the existence of free will. But, he cautions, this doesn't necessarily mean that we have free will. The question of whether we have free will remains an open one; we simply don't know enough about the brain to answer it definitively.

A concise history of GPS, from its military origins to its commercial applications and ubiquity in everyday life. GPS is ubiquitous in everyday life. GPS mapping is standard equipment in many new cars and geolocation services are embedded in smart phones. GPS makes Uber and Lyft possible; driverless cars won't be able to drive without it. In this volume in the MIT Press Essential Knowledge series, Paul Ceruzzi offers a concise history of GPS, explaining how a once-obscure space technology became an invisible piece of our infrastructure, as essential to modern life as electric power or clean water. GPS relays precise time and positioning information from orbiting satellites to receivers on the ground, at sea, and in the air. It operates worldwide, and its basic signals are free, although private companies can commodify the data provided. Ceruzzi recounts the origins of GPS and its predecessor technologies, including early aircraft navigation systems and satellites. He describes the invention of GPS as a space technology in the post-Apollo, pre-Space Shuttle years and its first military and commercial uses. Ceruzzi explains how the convergence of three major technological developments—the microprocessor, the Internet, and cellular telephony—enabled the development and application of GPS technology. Recognizing the importance of satellite positioning systems in a shifting geopolitical landscape—and perhaps doubting U.S. assurances of perpetual GPS availability—other countries are now building or have already developed their own systems, and Ceruzzi reports on these efforts in the European Union, Russia, India, China, and Japan.

In case of medical emergency situations, a Volunteer Notification System aims to alarm potential helpers who can arrive at the victim fast enough to provide cardiopulmonary resuscitation until the professional EMS arrive on scene. A simplistic solution for selecting the corresponding volunteers is described by a so called notification radius, i.e., alarming any volunteer with a geographic location that is within a maximum distance from the victim. Whilst the actual geographical distance is an important parameter to be considered, this work will illustrate that various additional decision parameters are of importance, and elaborate an AI-driven volunteer selection system to increase the reliability and efficiency of occurring notifications.

An accessible introduction to 3D printing that outlines the additive manufacturing process, industrial and household markets, and emerging uses. The use of 3D printing—digitally controlled additive manufacturing—is growing rapidly. Consumer models of 3D printers allow people to fabricate small plastic objects, from cabinet knobs to wedding cake toppers. Industrial uses are becoming widespread, as businesses use the technology to fabricate prototypes, spare parts, custom-fitted prosthetics, and other plastic or metal items, often at lower cost and with greater efficiency than standard manufacturing. In this volume in the MIT Press Essential Knowledge series, John Jordan offers an accessible introduction to 3D printing, describing the printing process, industrial and household markets, and emerging uses. Jordan outlines the stages of 3D printing, from idea to software model to a printable file that slices the planned object into printable layers to the finished object itself. He describes additive technologies, consumer 3D printing in homes and schools, mass customization (which can create tens of millions of unique items), and industrial uses. Jordan explains that although 3D printers have not become the ubiquitous home appliance once predicted, they are making inroads into mass markets; and he discusses the business factors that may hinder industry adoption of 3D printing

technologies. He considers the possible unintended consequences of 3D printing on jobs, as companies scramble to find employees with an uncommon skill set; on business models and supply chains, as manufacturing is decentralized; and on patent law, as machines can be programmed to copy protected property. Finally, Jordan looks at new and emerging uses, including bioprinting, building construction, and micromachines.

Open innovation, crowd sourcing, democratised innovation, vernacular design and brand fanaticism are amongst a handful of new approaches to design and innovation that have generated discussion and media coverage in recent years. In practice, these ideas are often inspiring propositions rather than providing pragmatic strategies. Open Design and Innovation develops the argument for a more nuanced acknowledgement and facilitation of 'non-professional' forms of creativity; drawing on lessons from commercial design practice; theoretical analysis and a wider understanding of innovation. Specifically this book examines: innovation and design, the reality and myth of mass creativity and the future of the design profession, through a series of case studies of new approaches to open design practices. The text draws on academic research, practical experience of the author in delivering open design projects and first hand interviews with leaders in the fields. The author challenges the notion of the designer as 'fountain-head' of innovation and, equally, the idea of 'user creativity' as a replacement for traditional design and innovation. The book offers a critique of the hype surrounding some of the emerging phenomena and a framework to help understand the emerging relationship between citizens and designers. It goes on to propose a roadmap for the development of the design profession, welcoming and facilitating new modes of design activity where designers facilitate creative collaborations.

This book brings together ideas from experts in cognitive science, mathematics, and mathematics education to discuss these issues and to present research on how mathematics and its learning and teaching are evolving in the Information Age. Given the ever-broadening trends in Artificial Intelligence and the processing of information generally, the aim is to assess their implications for how math is evolving and how math should now be taught to a generation that has been reared in the Information Age. It will also look at the ever-spreading assumption that human intelligence may not be unique—an idea that dovetails with current philosophies of mind such as posthumanism and transhumanism. The role of technology in human evolution has become critical in the contemporary world. Therefore, a subgoal of this book is to illuminate how humans now use their sophisticated technologies to chart cognitive and social progress. Given the interdisciplinary nature of the chapters, this will be of interest to all kinds of readers, from mathematicians themselves working increasingly with computer scientists, to cognitive scientists who carry out research on mathematics cognition and teachers of mathematics in a classroom.

Here is the first book to specifically and comprehensively address the rapid changes and advances in technology in the planning, management, and marketing of meetings and events. The multigenerational trio of authors, including Joe Goldblatt and two of his former students, Seungwon "Shawn" Lee and Dessislava Boshnakova, cover the most important aspects of using technology for today's meetings and events, such as How to harness the power of social media How to use crowdsourcing effectively How to choose appropriate room layout design software How to manage and use guest-generated content How to measure and evaluate your success How to choose meeting registration software How to promote your meeting with blogs, websites, podcasts, and more How to hold virtual meetings and events How to use search engine optimization to advantage The area of meeting and event technology is a fast-growing component of the meetings, incentives, conventions and exhibition (MICE) industry. With a foreword by Corbin Ball, an internationally renowned speaker, consultant and writer in the meetings and events technology field, *The 21st Century Meeting and Event Technologies* will be an essential resource for

hospitality students and business professionals. Faculty may request an examination copy from info@appleacademicpress.com. Please provide your name and title, course title, course start date, current text, number of students, and your institution address.

Creativity influences each of our lives and is essential for the advancement of society. The first edition of the successful Encyclopedia of Creativity helped establish the study of creativity as a field of research in itself. The second edition, published in 2011, was named a 2012 Outstanding Academic Title by the American Library Association's Choice publication. Featuring 232 chapters, across 2 volumes, the third edition of this important work provides updated information on the full range of creativity research. There has been an enormous increase in research on the topic throughout the world in many different disciplines. Some areas covered in this edition include the arts and humanities, business, education, mental and physical health, neuroscience, psychology, the creative process and technology. Fundamental subjects are discussed such as the definition of creativity, the development and expression of creativity across the lifespan, the environmental conditions that encourage or discourage creativity, the relationship of creativity to mental health, intelligence and learning styles, and the process of being creative. Creativity is discussed within specific disciplines including acting, architecture, art, dance, film, government, interior design, magic, mathematics, medicine, photography, science, sports, tourism and writing. A wide range of topics are covered. Here is a partial overview by topic: Business and organizational creativity: Advertising, Creative Economies, Creativity Consulting and Coaching, Corporate Creativity, Creativity Exercises, Entrepreneurship, Group Dynamics, Innovation, Leadership, Management of Creative People, Patents, Teams, and Training. The Cognitive Aspects of Creativity: Altered and Transitional States, Analogies, Attention, Breadth of Attention, Cognitive Style, Divergent Thinking, Flow and Optimal Experience, Knowledge, Logic and Reasoning, Metacognition, Mental Models, Memory, Metaphors, Mind Wandering, Mindfulness, Problem-Finding, Problem-Solving, and Remote Associates. The Creative Process: Attribution, Constraints, Discovery, Insight, Inspiration, Intentionality, Motivation, Risk-Taking, and Tolerance for Ambiguity. Education: Children's Creativity, , Education, Intelligence, Knowledge, Metacognition, Play, Prodigies, Programs And Courses, Talent And Teaching Creativity. Neuroscience Research: Cellular Matter, Grey Matter, Cellular Density; EEG, Functional Magnetic Resonance Imaging (Fmri), Music and The Brain, Pupillometry, Systems, The Cerebellum and Transcranial Electrical Stimulation. Psychology: The Big 5 Personality Characteristics, Bipolar Mood Disorders, Childhood Trauma, Depression, Deviance, Dreams, Emotions, Expressive Arts, Grit, Introversion, Jungian Theory, Mad Genius Controversy, Openness, Schizotypy, Suicide, Therapy and Counseling Trauma and Transcendence and Transforming Illness and Visual Art. Social Aspects of Creativity: Awards, Birth Order, Criticism, Consensual Assessment, Diversity, Eminence, Families, Friendships and Social Networks, Geeks, Mentors, Millennials, Networking, Rewards, And Sociology. Society and Creativity: Awards, Climate For Creativity, Cross-Cultural Creativity, Destruction Of Creativity, Law And Society, Social Psychology, Social Transformation, Voting, War, and Zeitgeist. Technology: Chats, Computational Creativity, Computerized Text Analysis, Gaming, Memes, Networks and Maps, and Virtual Reality.

An examination of the contemporary medicalization of death and dying that calls us to acknowledge instead death's existential and emotional realities. Death is a natural, inevitable, and deeply human process, and yet Western medicine tends to view it as a medical failure. In their zeal to prevent death, physicians and hospitals often set patients and their families on a seemingly unstoppable trajectory toward medical interventions that may actually increase suffering at the end of life. This volume in the MIT Press Essential Knowledge series examines the medicalization of death and dying and proposes a different approach--one that acknowledges death's existential and emotional realities. The authors--one an academic who teaches and studies end-of-life care, and the other a physician trained in hospice and palliative care--offer an

account of Western-style death and dying that is informed by both research and personal experience. They examine the medical profession's attitude toward death as a biological dysfunction that needs fixing; describe the hospice movement, as well as movements for palliative care and aid in dying, and why they failed to influence mainstream medicine; consider our reluctance to have end-of-life conversations; and investigate the commodification of medicine and the business of dying. To help patients die in accordance with their values, they say, those who care for the dying should focus less on delaying death by any means possible and more on being present with the dying on their journey. Modern technology has enhanced many aspects of life, including classroom education. By offering virtual learning experiences, educational systems can become more efficient and effective at teaching the student population. *Multilingual Writing and Pedagogical Cooperation in Virtual Learning Environments* is a critical scholarly resource that examines experiences with virtual networks and their advantages for universities and students in the domains of writing, translation, and usability testing. Featuring coverage on a broad range of topics such as collaborative writing, project-based learning, and writing and translation practices, this book is geared towards administrators, teachers, professors, academicians, practitioners, and researchers seeking current research on multilingual writing and pedagogical cooperation in virtual learning environments.

The idea of technological singularity, and what it would mean if ordinary human intelligence were enhanced or overtaken by artificial intelligence. The idea that human history is approaching a “singularity”—that ordinary humans will someday be overtaken by artificially intelligent machines or cognitively enhanced biological intelligence, or both—has moved from the realm of science fiction to serious debate. Some singularity theorists predict that if the field of artificial intelligence (AI) continues to develop at its current dizzying rate, the singularity could come about in the middle of the present century. Murray Shanahan offers an introduction to the idea of the singularity and considers the ramifications of such a potentially seismic event. Shanahan's aim is not to make predictions but rather to investigate a range of scenarios. Whether we believe that singularity is near or far, likely or impossible, apocalypse or utopia, the very idea raises crucial philosophical and pragmatic questions, forcing us to think seriously about what we want as a species. Shanahan describes technological advances in AI, both biologically inspired and engineered from scratch. Once human-level AI—theoretically possible, but difficult to accomplish—has been achieved, he explains, the transition to superintelligent AI could be very rapid. Shanahan considers what the existence of superintelligent machines could mean for such matters as personhood, responsibility, rights, and identity. Some superhuman AI agents might be created to benefit humankind; some might go rogue. (Is Siri the template, or HAL?) The singularity presents both an existential threat to humanity and an existential opportunity for humanity to transcend its limitations. Shanahan makes it clear that we need to imagine both possibilities if we want to bring about the better outcome.

An introduction to the mind–body problem, covering all the proposed solutions and offering a powerful new one. Philosophers from Descartes to Kripke have struggled with the glittering prize of modern and contemporary philosophy: the mind-body problem. The brain is physical. If the mind is physical, we cannot see how. If we cannot see how the mind is physical, we cannot see how it can interact with the body. And if the mind is not physical, it cannot interact with the body. Or so it seems. In this book the philosopher Jonathan Westphal examines the mind-body problem in detail, laying out the reasoning behind the solutions that have been offered in the past and presenting his own proposal. The sharp focus on the mind-body problem, a problem that is not about the self, or consciousness, or the soul, or anything other than the mind and the body, helps clarify both problem and solutions. Westphal outlines the history of the mind-body problem, beginning with Descartes. He describes mind-body dualism, which claims that the mind and the body are two different and separate things, nonphysical and physical, and

he also examines physicalist theories of mind; antimaterialism, which proposes limits to physicalism and introduces the idea of qualia; and scientific theories of consciousness. Finally, Westphal examines the largely forgotten neutral monist theories of mind and body, held by Ernst Mach, William James, and Bertrand Russell, which attempt neither to extract mind from matter nor to dissolve matter into mind. Westphal proposes his own version of neutral monism. This version is unique among neutral monist theories in offering an account of mind-body interaction.

Smart Cities and the UN's SDGs explores how smart cities initiatives intersect with the global goal of making urbanization inclusive, resilient, and sustainable. Topics explored include digital governance, e-democracy, health care access, public-private partnerships, well-being, and more. Examining smart cities concepts, tools, strategies, and obstacles and their applicability to sustainability, the book exposes key structural problems that cities face and how the imperative of sustainability can bypass them. It shows how smart city technological innovation can boost citizens' well-being, serving as a key reference for those seeking to make sense of the issues and challenges of smart cities and SDGs. Includes numerous case studies from around the world Features interdisciplinary insights from academic and practitioner experts Offers an extensive literature review

How auctions work, in theory and practice, with clear explanations and real-world examples that range from government procurement to eBay. Although it is among the oldest of market institutions, the auction is ubiquitous in today's economy, used for everything from government procurement to selling advertising on the Internet to course assignment at MIT's Sloan School. And yet beyond the small number of economists who specialize in the subject, few people understand how auctions really work. This concise, accessible, and engaging book explains both the theory and the practice of auctions. It describes the main auction formats and pricing rules, develops a simple model to explain bidder behavior, and provides a range of real-world examples. The authors explain what constitutes an auction and how auctions can be modeled as games of asymmetric information—that is, games in which some players know something that other players do not. They characterize behavior in these strategic situations and maintain a focus on the real world by illustrating their discussions with examples that include not just auctions held by eBay and Sotheby's, but those used by Google, the U.S. Treasury, TaskRabbit, and charities. Readers will begin to understand how economists model auctions and how the rules of the auction shape bidder incentives. They will appreciate the role auctions play in our modern economy and understand why these selling mechanisms are so resilient.

What extremism is, how extremist ideologies are constructed, and why extremism can escalate into violence. A rising tide of extremist movements threaten to destabilize civil societies around the globe. It has never been more important to understand extremism, yet the dictionary definition—a logical starting point in a search for understanding—tells us only that

extremism is “the quality or state of being extreme.” In this volume in the MIT Press Essential Knowledge series, J. M. Berger offers a nuanced introduction to extremist movements, explaining what extremism is, how extremist ideologies are constructed, and why extremism can escalate into violence. Berger shows that although the ideological content of extremist movements varies widely, there are common structural elements. Berger, an expert on extremist movements and terrorism, explains that extremism arises from a perception of “us versus them,” intensified by the conviction that the success of “us” is inseparable from hostile acts against “them.” Extremism differs from ordinary unpleasantness—run-of-the-mill hatred and racism—by its sweeping rationalization of an insistence on violence. Berger illustrates his argument with case studies and examples from around the world and throughout history, from the destruction of Carthage by the Romans—often called “the first genocide”—to the apocalyptic jihadism of Al Qaeda, America's new “alt-right,” and the anti-Semitic conspiracy tract *The Protocols of the Elders of Zion*. He describes the evolution of identity movements, individual and group radicalization, and more. If we understand the causes of extremism, and the common elements of extremist movements, Berger says, we will be more effective in countering it.

In this updated second edition, Jason Farman offers a groundbreaking look at how location-aware mobile technologies are radically shifting our sense of identity, community, and place-making practices. *Mobile Interface Theory* is a foundational book in mobile media studies, with the first edition winning the Book of the Year Award from the Association of Internet Researchers. It explores a range of mobile media practices from interface design to maps, AR/VR, mobile games, performances that use mobile devices, and mobile storytelling projects. Throughout, Farman provides readers with a rich theoretical framework to understand the ever-transforming landscape of mobile media and how they shape our bodily practices in the spaces we move through. This fully updated second edition features updated examples throughout, reflecting the shifts in mobile technology. This is the ideal text for those studying mobile media, social media, digital media, and mobile storytelling.

Taking “Gangnam Style” seriously: what Internet memes can tell us about digital culture. In December 2012, the exuberant video “Gangnam Style” became the first YouTube clip to be viewed more than one billion times. Thousands of its viewers responded by creating and posting their own variations of the video—“Mitt Romney Style,” “NASA Johnson Style,” “Egyptian Style,” and many others. “Gangnam Style” (and its attendant parodies, imitations, and derivations) is one of the most famous examples of an Internet meme: a piece of digital content that spreads quickly around the web in various iterations and becomes a shared cultural experience. In this book, Limor Shifman investigates Internet memes and what they tell us about digital culture. Shifman discusses a series of well-known Internet memes—including “Leave Britney Alone,” the pepper-spraying cop, LOLCats, Scumbag Steve, and Occupy Wall Street's “We Are the 99 Percent.”

She offers a novel definition of Internet memes: digital content units with common characteristics, created with awareness of each other, and circulated, imitated, and transformed via the Internet by many users. She differentiates memes from virals; analyzes what makes memes and virals successful; describes popular meme genres; discusses memes as new modes of political participation in democratic and nondemocratic regimes; and examines memes as agents of globalization. Memes, Shifman argues, encapsulate some of the most fundamental aspects of the Internet in general and of the participatory Web 2.0 culture in particular. Internet memes may be entertaining, but in this book Limor Shifman makes a compelling argument for taking them seriously.

An accessible introduction to the basics of macroeconomics and how it affects the local and global economies.

Macroeconomics takes a broad perspective on the economy of a country or region; it studies economic changes in the aggregate, collecting data on production, unemployment, inflation, consumption, investment, trade, and other aspects of national and international economic life. Policymakers depend on macroeconomists' knowledge when making decisions about such issues as taxes and the public budget, monetary and exchange rate policies, and trade policies—all of which, in turn, affect decisions made by individuals and businesses. This volume in the MIT Press Essential Knowledge series offers an introduction to the basics of macroeconomics accessible to the noneconomist. Readers will gain the tools to interpret such economic events as the 2008 financial meltdown, the subsequent euro crisis, and the current protectionist dynamics seen in some developed countries. The author, an academic economist and two-time Chilean Finance Minister, devotes a substantial part of his analysis to economic development, explaining why some countries achieve continuing economic growth while others become stagnant. He discusses the links between economic activity and employment; employment and unemployment rates; factors behind economic growth; money, inflation, and exchange rate systems; fiscal deficits; balance of payment crises; consumption and savings; investment decisions; fiscal policy; and the process of globalization and its macroeconomic implications.

This book challenges neurocentrism by advocating a systemic view of cognition based on investigating how action shapes the experience of thinking, placing interactivity at its heart. This systemic viewpoint makes three main claims. First, that many elaborate cognitive skills like language, problem solving and human-computer interaction (HCI) are based in sense-saturated coordination or interactivity. Second, interactivity produces a tightly woven scaffold of resources, some internal to the agent and others external, that elevates and transforms thinking. Third, human agents entwine brains, bodies and their surroundings as they manage multi-scalar dynamics. This new edition continues to demonstrate how a systemic perspective casts a productive light on thinking in applied domains such as crime scene analysis, the use of information technology in construction, and computer-meditated trusts and presents new studies on

the cognitive ecology of the web, multi-scalar temporal and organisational cognition and the importance of interactive material engagement in digital architecture. Authors use various scales of the systemic viewpoint to illustrate how bodies and artefacts shape thinking, but in all cases the experience of materiality is meshed with activity that involves the world beyond the body. *Cognition Beyond the Brain* is a valuable reference for researchers, practitioners and graduate students within the fields of Computer Science, Psychology, Linguistics and Cognitive Sciences.

Whether you're the project manager for your company's rebrand, or you need to educate your staff or your students about brand fundamentals, *Designing Brand Identity* is the quintessential resource. From research to brand strategy to design execution, launch, and governance, *Designing Brand Identity* is a compendium of tools for branding success and best practices for inspiration. 3 sections: brand fundamentals, process basics, and case studies. Over 100 branding subjects, checklists, tools, and diagrams. 50 case studies that describe goals, process, strategy, solution, and results. Over 700 illustrations of brand touchpoints. More than 400 quotes from branding experts, CEOs, and design gurus. "Designing Brand Identity is a comprehensive, pragmatic, and easy-to-understand resource for all brand builders—global and local. It's an essential reference for implementing an entire brand system." - Carlos Martinez Onaindia, Global Brand Studio Leader, Deloitte "Alina Wheeler explains better than anyone else what identity design is and how it functions. There's a reason this is the 5th edition of this classic." - Paula Scher, Partner, Pentagram "Designing Brand Identity is the book that first taught me how to build brands. For the past decade, it's been my blueprint for using design to impact people, culture, and business." - Alex Center, Design Director, The Coca-Cola Company "Alina Wheeler's book has helped so many people face the daunting challenge of defining their brand." - Andrew Ceccon, Executive Director, Marketing, FS Investments "If branding was a religion, Alina Wheeler would be its goddess, and *Designing Brand Identity* its bible." - Olka Kazmierczak, Founder, Pop Up Grupa "The 5th edition of *Designing Brand Identity* is the Holy Grail. This book is the professional gift you have always wanted." - Jennifer Francis, Director of Marketing, Communications, and Visitor Experience, Louvre Abu Dhabi

An accessible introduction to the history, fundamental concepts, challenges, and controversies of the fMRI by one of the pioneers in the field. The discovery of functional MRI (fMRI) methodology in 1991 was a breakthrough in neuroscience research. This non-invasive, relatively high-speed, and high sensitivity method of mapping human brain activity enabled observation of subtle localized changes in blood flow associated with brain activity. Thousands of scientists around the world have not only embraced fMRI as a new and powerful method that complemented their ongoing studies but have also gone on to redirect their research around this revolutionary technique. This volume in the MIT Press Essential Knowledge series offers an accessible introduction to the history, fundamental concepts, challenges, and controversies

of fMRI, written by one of the pioneers in the field. Peter Bandettini covers the essentials of fMRI, providing insight and perspective from his nearly three decades of research. He describes other brain imaging and assessment methods; the sources of fMRI contrasts; the basic methodology, from hardware to pulse sequences; brain activation experiment design strategies; and data and image processing. A unique, standalone chapter addresses major controversies in the field, outlining twenty-six challenges that have helped shape fMRI research. Finally, Bandettini lays out the four essential pillars of fMRI: technology, methodology, interpretation, and applications. The book can serve as a guide for the curious nonexpert and a reference for both veteran and novice fMRI scientists.

Encyclopedia of Information Science and Technology, Fourth Edition IGI Global

??This book attempts to link some of the recent advances in crowdsourcing with advances in innovation and management. It contributes to the literature in several ways. First, it provides a global definition, insights and examples of this managerial perspective resulting in a theoretical framework. Second, it explores the relationship between crowdsourcing and technological innovation, the development of social networks and new behaviors of Internet users. Third, it explores different crowdsourcing applications in various sectors such as medicine, tourism, information and communication technology (ICT), and marketing. Fourth, it observes the ways in which crowdsourcing can improve production, finance, management and overall managerial performance. Crowdsourcing, also known as “massive outsourcing” or “voluntary outsourcing,” is the act of taking a job or a specific task usually performed by an employee of a company or contractors, and outsourcing it to a large group of people or a community (crowd or mass) via the Internet, through an open call. The term was coined by Jeff Howe in a 2006 issue of Wired magazine. It is being developed in different sciences (i.e., medicine, engineering, ICT, management) and is used in the most successful companies of the modern era (i.e., Apple, Facebook, Inditex, Starbucks). The developments in crowdsourcing has theoretical and practical implications, which will be explored in this book. Including contributions from international academics, scholars and professionals within the field, this book provides a global, multidimensional perspective on crowdsourcing.?

What happens when people turn their everyday experience into data: an introduction to the essential ideas and key challenges of self-tracking. People keep track. In the eighteenth century, Benjamin Franklin kept charts of time spent and virtues lived up to. Today, people use technology to self-track: hours slept, steps taken, calories consumed, medications administered. Ninety million wearable sensors were shipped in 2014 to help us gather data about our lives. This book examines how people record, analyze, and reflect on this data, looking at the tools they use and the communities they become part of. Gina Neff and Dawn Nafus describe what happens when people turn their everyday experience—in particular, health and wellness-related experience—into data, and offer an introduction to the essential ideas and key challenges of using these technologies. They consider self-tracking as a social and cultural phenomenon, describing not only the use of data as a kind of mirror of the self but also how this enables people to connect to, and learn from, others. Neff and Nafus consider what's at stake: who wants our data and why; the practices

of serious self-tracking enthusiasts; the design of commercial self-tracking technology; and how self-tracking can fill gaps in the healthcare system. Today, no one can lead an entirely untracked life. Neff and Nafus show us how to use data in a way that empowers and educates.

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. 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.

Workspaces and their design have a vast impact on the comfort and productivity of employees. Therefore, the structure of a workspace can be used to determine the socio-economic characteristics and elements that will appear in the employees that utilize them. *Co-Manufacturing and New Economic Paradigms* provides innovative insights into shared workspaces as independent socio-economic environments. The content within this publication explores the ideas of knowledge sharing, work culture, and economic planning. It is a vital reference source for entrepreneurs, business professionals, and researchers, and it covers topics centered on the importance of workspace design and organization.

An examination of the meaning of meaninglessness: why it matters that nothing matters. When someone is labeled a nihilist, it's not usually meant as a compliment. Most of us associate nihilism with destructiveness and violence. Nihilism means, literally, "an ideology of nothing." Is nihilism, then, believing in nothing? Or is it the belief that life is nothing? Or the belief that the beliefs we have amount to nothing? If we can learn to recognize the many varieties of nihilism, Nolen Gertz writes, then we can learn to distinguish what is meaningful from what is meaningless. In this addition to the MIT Press Essential Knowledge series, Gertz traces the history of nihilism in Western philosophy from Socrates through Hannah Arendt and Jean-Paul Sartre. Although the term "nihilism" was first used by Friedrich Jacobi to criticize the philosophy of Immanuel Kant, Gertz shows that the concept can

illuminate the thinking of Socrates, Descartes, and others. It is Nietzsche, however, who is most associated with nihilism, and Gertz focuses on Nietzsche's thought. Gertz goes on to consider what is not nihilism—pessimism, cynicism, and apathy—and why; he explores theories of nihilism, including those associated with Existentialism and Postmodernism; he considers nihilism as a way of understanding aspects of everyday life, calling on Adorno, Arendt, Marx, and prestige television, among other sources; and he reflects on the future of nihilism. We need to understand nihilism not only from an individual perspective, Gertz tells us, but also from a political one.

A concise introduction to crowdsourcing that goes beyond social media buzzwords to explain what crowdsourcing really is and how it works. Ever since the term “crowdsourcing” was coined in 2006 by Wired writer Jeff Howe, group activities ranging from the creation of the Oxford English Dictionary to the choosing of new colors for M&Ms have been labeled with this most buzz-generating of media buzzwords. In this accessible but authoritative account, grounded in the empirical literature, Daren Brabham explains what crowdsourcing is, what it is not, and how it works. Crowdsourcing, Brabham tells us, is an online, distributed problem solving and production model that leverages the collective intelligence of online communities for specific purposes set forth by a crowdsourcing organization—corporate, government, or volunteer. Uniquely, it combines a bottom-up, open, creative process with top-down organizational goals. Crowdsourcing is not open source production, which lacks the top-down component; it is not a market research survey that offers participants a short list of choices; and it is qualitatively different from predigital open innovation and collaborative production processes, which lacked the speed, reach, rich capability, and lowered barriers to entry enabled by the Internet. Brabham describes the intellectual roots of the idea of crowdsourcing in such concepts as collective intelligence, the wisdom of crowds, and distributed computing. He surveys the major issues in crowdsourcing, including crowd motivation, the misconception of the amateur participant, crowdfunding, and the danger of “crowdsplotation” of volunteer labor, citing real-world examples from Threadless, InnoCentive, and other organizations. And he considers the future of crowdsourcing in both theory and practice, describing its possible roles in journalism, governance, national security, and science and health. How we arrived in a post-truth era, when “alternative facts” replace actual facts, and feelings have more weight than evidence. Are we 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 “fake news,” from our psychological blind spots to the public's retreat into “information silos.” What, exactly, is post-truth? Is it wishful thinking, political spin, mass delusion, bold-faced lying? McIntyre analyzes recent examples—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. Yet post-truth didn't begin with the 2016 election; the denial of scientific facts about smoking, evolution, vaccines, and climate change offers a road map for more widespread fact denial. Add to this the wired-in cognitive biases 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, and we have the ideal conditions for post-truth. 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.

How companies like Amazon and Netflix know what “you might also like”: the history, technology, business, and social impact of online recommendation engines. Increasingly, our technologies are giving us better, faster, smarter, and more personal advice than our own families and best friends. Amazon already knows what kind of books and household goods you like and is more than eager to recommend more; YouTube and TikTok always have another video lined up to show you; Netflix has crunched the numbers of your viewing habits to suggest whole genres that you would enjoy. In this volume in the MIT Press's Essential Knowledge series, innovation expert Michael Schrage explains the origins, technologies, business applications, and increasing societal impact of recommendation engines, the systems that allow companies worldwide to know what products, services, and experiences “you might also like.” Schrage offers a history of recommendation that reaches back to antiquity's oracles and astrologers; recounts the academic origins and commercial evolution of recommendation engines; explains how these systems work, discussing key mathematical insights, including the impact of machine learning and deep learning algorithms; and highlights user experience design challenges. He offers brief but incisive case studies of the digital music service Spotify; ByteDance, the owner of TikTok; and the online personal stylist Stitch Fix. Finally, Schrage considers the future of technological recommenders: Will they leave us disappointed and dependent—or will they help us discover the world and ourselves in novel and serendipitous ways?

This is the first extensive compilation documenting contemporary third wave HCI, covering key methodological developments at the leading edge of human-computer interactions. Now in its second decade as a major current of HCI research, the third wave integrates insights from the humanities and social sciences to emphasize human dimensions beyond workplace efficiency or cognitive capacities. Where the earliest HCI work has been strongly based on the concept of human-machine coupling, which expanded to workplace collaboration as computers came into mainstream professional use, today HCI can connect to almost any human experience because there are new applications for every aspect of daily life. Volume 2 - Methodologies covers methodological approaches grounded in autoethnography, empathy-based design, crowdsourcing, psychometrics, user engagement, speculative design, somatics, embodied cognition, peripheral practices and transdisciplinarity.

The efficient usage, investigation, and promotion of new methods, tools, and technologies within the field of architecture, particularly in urban planning and design, is becoming more critical as innovation holds the key to cities becoming smarter and ultimately more sustainable. In response to this need, strategies that can potentially yield more realistic results are continually being sought. The Handbook of Research on Digital Research Methods and Architectural Tools in Urban Planning and Design is a critical reference source that comprehensively covers the concepts and processes of more than 20 new methods in both planning and design in the field of architecture and aims to explain the ways for researchers to apply these methods in their works. Pairing innovative approaches alongside traditional research methods, the

physical dimensions of traditional and new cities are addressed in addition to the non-physical aspects and applied models that are currently under development in new settlements such as sustainable cities, smart cities, creative cities, and intercultural cities. Featuring a wide range of topics such as built environment, urban morphology, and city information modeling, this book is essential for researchers, academicians, professionals, technology developers, architects, engineers, and policymakers.

In recent years, our world has experienced a profound shift and progression in available computing and knowledge sharing innovations. These emerging advancements have developed at a rapid pace, disseminating into and affecting numerous aspects of contemporary society. This has created a pivotal need for an innovative compendium encompassing the latest trends, concepts, and issues surrounding this relevant discipline area. During the past 15 years, the Encyclopedia of Information Science and Technology has become recognized as one of the landmark sources of the latest knowledge and discoveries in this discipline. The Encyclopedia of Information Science and Technology, Fourth Edition is a 10-volume set which includes 705 original and previously unpublished research articles covering a full range of perspectives, applications, and techniques contributed by thousands of experts and researchers from around the globe. This authoritative encyclopedia is an all-encompassing, well-established reference source that is ideally designed to disseminate the most forward-thinking and diverse research findings. With critical perspectives on the impact of information science management and new technologies in modern settings, including but not limited to computer science, education, healthcare, government, engineering, business, and natural and physical sciences, it is a pivotal and relevant source of knowledge that will benefit every professional within the field of information science and technology and is an invaluable addition to every academic and corporate library.

In recent years, the pace of technological growth—from the very first stages of research and development to full-scale industrial implementation—has quickened at an exponential rate. To better keep pace with rapidly-changing market demands, the gap between university research incubators and public-sector start-up companies has undergone a marked contraction. *Competitive Strategies for Academic Entrepreneurship: Commercialization of Research-Based Products* seeks to fill the gap in research between universities and the public, and offers cutting-edge insight into the current state of the field. Charting a course that moves from discussions of academic resistance and implications for knowledge-transfer theory to current case-studies of academic/industrial launch-pads like COTEC's Technology Commercialization Accelerator and the Maryland Industrial Partnerships program, this publication targets an audience of academicians, administrators, researchers, entrepreneurs, and established professionals, and seeks to provide insight into the mechanisms by which the research of today becomes the household names of tomorrow.

An introduction to computational thinking that traces a genealogy beginning centuries before the digital computer. A few decades into the digital era, scientists discovered that thinking in terms of computation made possible an entirely new way of organizing scientific investigation; eventually, every field had a computational branch: computational physics, computational biology, computational sociology. More recently, “computational thinking” has become part of the K–12 curriculum. But what is computational thinking? This volume in the MIT Press Essential Knowledge series offers an accessible overview, tracing a genealogy that begins centuries before digital computers and portraying computational thinking as pioneers of computing have described it. The authors explain that computational thinking (CT) is not a set of concepts for programming; it is a way of thinking that is honed through practice: the mental skills for designing computations to do jobs for us, and for explaining and interpreting the world as a complex of information processes. Mathematically trained experts (known as “computers”) who performed complex calculations as teams engaged in CT long before electronic computers. The authors identify six dimensions of

today's highly developed CT—methods, machines, computing education, software engineering, computational science, and design—and cover each in a chapter. Along the way, they debunk inflated claims for CT and computation while making clear the power of CT in all its complexity and multiplicity.

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