Food The Mit Press Essential Knowledge Series

Post-TruthFoodNeuroplasticityParadoxMemes in Digital CultureDeep LearningAlgorithmsSmart CitiesThe BookDemocratizing InnovationAgrobio diversitySustainabilityAmerica's FoodInformation and SocietyFood JusticeBig HungerJapan's Dietary Transition and Its ImpactsGPSThe Meat QuestionEnvironmentalism of the RichBite MeOpen AccessFoodThe Internet of ThingsCritical ThinkingComputational ThinkingWhat's the Beef?Sexual ConsentCultivating Food JusticeRecyclingSpatial ComputingRecommendation EnginesCloud ComputingEating ArchitectureIntellectual Property StrategyPhenomenologyMetadataOrganic StruggleThe FutureCumulated Index Medicus

Post-Truth

In a little more than a century, the Japanese diet has undergone a dramatic transformation. This book points out that the gains in the quality of Japans diet have exacted a price in terms of land use changes, water requirements, & marine resource depletion; & because Japan imports so much food, this price is paid globally as well as domestically.

Food

A concise and engaging overview of
neuroplasticity for the general reader,
describing how our brains change continuously
in response to our actions and experiences.
--Cover.

Neuroplasticity

An overview of recycling as an activity and a
process, following different materials
through the waste stream. Is there a point to
recycling? Is recycling even good for the
environment? In this volume in the MIT Press
Essential Knowledge series, Finn Arne
Jørgensen answers (drumroll, please): it
depends. From a technical point of view,
recycling is a series of
processes—collecting, sorting, processing,
manufacturing. Recycling also has a cultural
component; at its core, recycling is about
transformation and value, turning material
waste into something useful—plastic bags into
patio furniture, plastic bottles into T-
shirts. Jørgensen offers an accessible and
engaging overview of recycling as an activity
and as a process at the intersection of the
material and the ideological. Jørgensen
follows a series of materials as they move
back and forth between producer and consumer,
continually transforming in form and value,
in a never-ceasing journey toward becoming

waste. He considers organic waste and cultural contamination; the history of recyclable writing surfaces from papyrus to newsprint; discarded clothing as it moves from the the Global North to the Global South; the shifting fate of glass bottles; the efficiency of aluminum recycling; the many types of plastic and the difficulties of informed consumer choice; e-waste and technological obsolescence; and industrial waste. Finally, re-asking the question posed by John Tierney in an infamous 1996 New York Times article, "is recycling garbage?" Jørgensen argues that recycling is necessary—as both symbolic action and physical activity that has a tangible effect on the real world.

Paradox

How the concept of critical thinking emerged, how it has been defined, and how critical thinking skills can be taught. Critical thinking is regularly cited as an essential twenty-first century skill, the key to success in school and work. Given our propensity to believe fake news, draw incorrect conclusions, and make decisions based on emotion rather than reason, it might even be said that critical thinking is vital to the survival of a democratic society. But what, exactly, is critical thinking? In this volume in the MIT Press Essential Knowledge

series, Jonathan Haber explains how the concept of critical thinking emerged, how it has been defined, and how critical thinking skills can be taught and assessed. Haber describes the term's origins in such disciplines as philosophy, psychology, and science. He examines the components of critical thinking, including structured thinking, language skills, background knowledge, and information literacy, along with such necessary intellectual traits as intellectual humility, empathy, and open-mindedness. He discusses how research has defined critical thinking, how elements of critical thinking have been taught for centuries, and how educators can teach critical thinking skills now. Haber argues that the most important critical thinking issue today is that not enough people are doing enough of it. Fortunately, critical thinking can be taught, practiced, and evaluated. This book offers a guide for teachers, students, and aspiring critical thinkers everywhere, including advice for educational leaders and policy makers on how to make the teaching and learning of critical thinking an educational priority and practical reality.

Memes in Digital Culture

Introduction -- Definitions -- Descriptive metadata -- Administrative metadata -- Use

metadata -- Enabling technologies for metadata -- The Semantic Web -- The future of metadata

Deep Learning

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.

Algorithms

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.

Smart Cities

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.

The Book

"This book provides a lucid overview of the implications of the cloud phenomenon and the opportunities and risks associated with it"--

Democratizing Innovation

An accessible guide to the ideas and technologies underlying such applications as GPS, Google Maps, Pokémon Go, ride-sharing, driverless cars, and drone surveillance. Billions of people around the globe use various applications of spatial computing daily—by using a ride-sharing app, GPS, the e911 system, social media check-ins, even Pokémon Go. Scientists and researchers use spatial computing to track diseases, map the bottom of the oceans, chart the behavior of endangered species, and create election maps in real time. Drones and driverless cars use a variety of spatial computing technologies. Spatial computing works by understanding the physical world, knowing and communicating our relation to places in that world, and navigating through those places. It has changed our lives and infrastructures profoundly, marking a significant shift in how we make our way in the world. This volume in the MIT Essential Knowledge series explains the technologies and ideas behind spatial computing. The book offers accessible descriptions of GPS and location-based services, including the use of Wi-Fi, Bluetooth, and RFID for position

determination out of satellite range; remote sensing, which uses satellite and aerial platforms to monitor such varied phenomena as global food production, the effects of climate change, and subsurface natural resources on other planets; geographic information systems (GIS), which store, analyze, and visualize spatial data; spatial databases, which store multiple forms of spatial data; and spatial statistics and spatial data science, used to analyze location-related data.

Agrobiodiversity

A concise and accessible examination of sustainability in a range of contemporary contexts, from economic development to government policy. The word "sustainability" has been connected to everything from a certain kind of economic development to corporate promises about improved supply sourcing. But despite the apparent ubiquity of the term, the concept of sustainability has come to mean a number of specific things. In this accessible guide to the meanings of sustainability, Kent Portney describes the evolution of the idea and examines its application in a variety of contemporary contexts—from economic growth and consumption to government policy and urban planning. Portney takes as his starting point the 1987 definition by the World Commission on

Environment and Development of sustainability as economic development activity that "meets the needs of the present without compromising the ability of future generations to meet their own needs." At its heart, Portney explains, sustainability focuses on the use and depletion of natural resources. It is not the same as environmental protection or natural resource conservation; it is more about finding some sort of steady state so that the earth can support both human population and economic growth. Portney looks at political opposition to the promotion of sustainability, which usually questions the need for sustainability or calls its costs unacceptable; collective and individual consumption of material goods and resources and to what extent they must be curtailed to achieve sustainability; the role of the private sector, and the co-opting of sustainability by corporations; government policy on sustainability at the international, national, and subnational levels; and how cities could become models for sustainability action.

Sustainability

How the future has been imagined and made, through the work of writers, artists, inventors, and designers. The future is like an unwritten book. It is not something we see in a crystal ball, or can only hope to

predict, like the weather. In this volume of the MIT Press's Essential Knowledge series, Nick Montfort argues that the future is something to be made, not predicted. Montfort offers what he considers essential knowledge about the future, as seen in the work of writers, artists, inventors, and designers (mainly in Western culture) who developed and described the core components of the futures they envisioned. Montfort's approach is not that of futurology or scenario planning; instead, he reports on the work of making the future—the thinkers who devoted themselves to writing pages in the unwritten book. Douglas Engelbart, Alan Kay, and Ted Nelson didn't predict the future of computing, for instance. They were three of the people who made it. Montfort focuses on how the development of technologies—with an emphasis on digital technologies—has been bound up with ideas about the future. Readers learn about kitchens of the future and the vision behind them; literary utopias, from Plato's Republic to Edward Bellamy's Looking Backward and Charlotte Perkins Gilman's Herland; the Futurama exhibit at the 1939 New York World's Fair; and what led up to Tim Berners-Lee's invention of the World Wide Web. Montfort describes the notebook computer as a human-centered alterative to the idea of the computer as a room-sized "giant brain"; speculative practice in design and science fiction; and, throughout, the best ways to imagine and build the future.

America's Food

What it means for global sustainability when environmentalism is dominated by the concerns of the affluent--eco-business, eco-consumption, wilderness preservation. Over the last fifty years, environmentalism has emerged as a clear counterforce to the environmental destruction caused by industrialization, colonialism, and globalization. Activists and policymakers have fought hard to make the earth a better place to live. But has the environmental movement actually brought about meaningful progress toward global sustainability? Signs of global "unsustainability" are everywhere, from decreasing biodiversity to scarcity of fresh water to steadily rising greenhouse gas emissions. Meanwhile, as Peter Dauvergne points out in this provocative book, the environmental movement is increasingly dominated by the environmentalism of the rich--diverted into eco-business, eco-consumption, wilderness preservation, energy efficiency, and recycling. While it's good that, for example, Barbie dolls' packaging no longer depletes Indonesian rainforest, and that Toyota Highlanders are available as hybrids, none of this gets at the source of the current sustainability crisis. More eco-products can just mean more corporate profits, consumption, and waste. Dauvergne examines extraction booms that leave

developing countries poor and environmentally devastated--with the ruination of the South Pacific island of Nauru a case in point; the struggles against consumption inequities of courageous activists like Bruno Manser, who worked with indigenous people to try to save the rainforests of Borneo; and the manufacturing of vast markets for nondurable goods--for example, convincing parents in China that disposable diapers made for healthier and smarter babies. Dauvergne reveals why a global political economy of ever more--more growth, more sales, more consumption--is swamping environmental gains. Environmentalism of the rich does little to bring about the sweeping institutional change necessary to make progress toward global sustainability.

Information and Society

Occupy hunger -- The charity trap -- The politics of corporate giving -- The conflicted nature of SNAP -- Federal food programs as engines of economic democracy -- Who's at the table shapes what's on the menu -- Innovation within the anti-hunger movement -- Innovative models from outside the anti-hunger field

Food Justice

Key concepts, definitions, examples, and

historical contexts for understanding smart cities, along with discussions of both drawbacks and benefits of this approach to urban problems. Over the past ten years, urban planners, technology companies, and governments have promoted smart cities with a somewhat utopian vision of urban life made knowable and manageable through data collection and analysis. Emerging smart cities have become both crucibles and showrooms for the practical application of the Internet of Things, cloud computing, and the integration of big data into everyday life. Are smart cities optimized, sustainable, digitally networked solutions to urban problems? Or are they neoliberal, corporate-controlled, undemocratic non-places? This volume in the MIT Press Essential Knowledge series offers a concise introduction to smart cities, presenting key concepts, definitions, examples, and historical contexts, along with discussions of both the drawbacks and the benefits of this approach to urban life. After reviewing current terminology and justifications employed by technology designers, journalists, and researchers, the book describes three models for smart city development—smart-from-the-start cities, retrofitted cities, and social cities—and offers examples of each. It covers technologies and methods, including sensors, public wi-fi, big data, and smartphone apps, and discusses how developers conceive of

interactions among the built environment, technological and urban infrastructures, citizens, and citizen engagement. Throughout, the author—who has studied smart cities around the world—argues that smart city developers should work more closely with local communities, recognizing their preexisting relationship to urban place and realizing the limits of technological fixes. Smartness is a means to an end: improving the quality of urban life.

Big Hunger

A guided tour through the Internet of Things, a networked world of connected devices, objects, and people that is changing the way we live and work. We turn on the lights in our house from a desk in an office miles away. Our refrigerator alerts us to buy milk on the way home. A package of cookies on the supermarket shelf suggests that we buy it, based on past purchases. The cookies themselves are on the shelf because of a "smart" supply chain. When we get home, the thermostat has already adjusted the temperature so that it's toasty or bracing, whichever we prefer. This is the Internet of Things—a networked world of connected devices, objects, and people. In this book, Samuel Greengard offers a guided tour through this emerging world and how it will change the way we live and work. Greengard explains

that the Internet of Things (IoT) is still in its early stages. Smart phones, cloud computing, RFID (radio-frequency identification) technology, sensors, and miniaturization are converging to make possible a new generation of embedded and immersive technology. Greengard traces the origins of the IoT from the early days of personal computers and the Internet and examines how it creates the conceptual and practical framework for a connected world. He explores the industrial Internet and machine-to-machine communication, the basis for smart manufacturing and end-to-end supply chain visibility; the growing array of smart consumer devices and services—from Fitbit fitness wristbands to mobile apps for banking; the practical and technical challenges of building the IoT; and the risks of a connected world, including a widening digital divide and threats to privacy and security. Finally, he considers the long-term impact of the IoT on society, narrating an eye-opening "Day in the Life" of IoT connections circa 2025.

Japan's Dietary Transition and Its Impacts

A consumer's guide to the food system, from local to global: our part as citizens in the interconnected networks, institutions, and organizations that enable our food choices.

Everybody eats. We may even consider ourselves experts on the topic, or at least Instagram experts. But are we aware that the shrimp in our freezer may be farmed and frozen in Vietnam, the grapes in our fruit bowl shipped from Chile, and the coffee in our coffee maker grown in Nicaragua, roasted in Germany, and distributed in Canada? Whether we know it or not, every time we shop for food, cook, and eat, we connect ourselves to complex supply networks, institutions, and organizations that enable our food choices. Even locavores may not know the whole story of the produce they buy at the farmers market. In this volume in the MIT Press Essential Knowledge series, food writer and scholar Fabio Parasecoli offers a consumer's guide to the food system, from local to global. Parasecoli describes a system made up of open-ended, shifting, and unstable networks rather than well-defined chains; considers healthy food and the contradictory advice about it consumers receive; discusses food waste and the implications for sustainability; explores food technologies (and "culinary luddism"); and examines hunger and food insecurity in both developing and developed countries. Parasecoli reminds us that we are not only consumers but also citizens, and as citizens we have more power to improve the food system than we do by our individual food choices.

GPS

What is open access? -- Motivation -- Varieties -- Policies -- Scope -- Copyright -- Economics -- Casualties -- Future -- Self-help.

The Meat Question

A short, informal account of our ever-increasing dependence on a complex multiplicity of messages, records, documents, and data. We live in an information society, or so we are often told. But what does that mean? This volume in the MIT Press Essential Knowledge series offers a concise, informal account of the ways in which information and society are related and of our ever-increasing dependence on a complex multiplicity of messages, records, documents, and data. Using information in its everyday, nonspecialized sense, Michael Buckland explores the influence of information on what we know, the role of communication and recorded information in our daily lives, and the difficulty (or ease) of finding information. He shows that all this involves human perception, social behavior, changing technologies, and issues of trust. Buckland argues that every society is an "information society"; a "non-information society" would be a contradiction in terms. But the shift from oral and gestural communication to

documents, and the wider use of documents facilitated by new technologies, have made our society particularly information intensive. Buckland describes the rising flood of data, documents, and records, outlines the dramatic long-term growth of documents, and traces the rise of techniques to cope with them. He examines the physical manifestation of information as documents, the emergence of data sets, and how documents and data are discovered and used. He explores what individuals and societies do with information; offers a basic summary of how collected documents are arranged and described; considers the nature of naming; explains the uses of metadata; and evaluates selection methods, considering relevance, recall, and precision.

Environmentalism of the Rich

"How does Netflix know just what to suggest you watch next? How does Amazon determine what a "customer like you" has also purchased? The answer is recommender systems, the technological concept that lies at the heart of most of the successful companies in the digital economy. Michael Schrage starts with the origins of recommender systems, which go back further than you think (see: the Oracle at Delphi for one of history's earliest recommenders), and a history of the first companies to harness recommendations.

He then discusses the technology behind how recommenders work: the AI and machine learning algorithms that power these recommender platforms. Next he discusses the role of user experience, and how recommender systems are designed, and how design choices function as nudges to make certain recommendations more salient than others. He explores three case studies: Spotify, Bytedance, and Stitch Fix, looking at how recommenders can create new business solutions and how algorithms can go beyond curation to content creation. The concluding chapter on the future of recommender systems is perhaps the most enlightening. Moving away from technology and business, Schrage embraces the philosophical, probing the role of free will in a world mediated by recommender systems (a recommendation inherently offers a choice; without the element of choice, any digital manipulation of our preferences cannot truly be called a "recommendation"), and exploring the role of recommender systems as a means of improving the self. In the vein of Free Will, this book presents the essential information while revealing the author's point of view. Schrage wants to push our understanding of recommender systems beyond the technological, to understand what societal role they play and what opportunities they offer now and in the future"--

Bite Me

How a flexible and creative approach to intellectual property can help an organization accomplish goals ranging from building market share to expanding an industry. Most managers leave intellectual property issues to the legal department, unaware that an organization's intellectual property can help accomplish a range of management goals, from accessing new markets to improving existing products to generating new revenue streams. In this book, intellectual property expert and Harvard Law School professor John Palfrey offers a short briefing on intellectual property strategy for corporate managers and nonprofit administrators. Palfrey argues for strategies that go beyond the traditional highly restrictive "sword and shield" approach, suggesting that flexibility and creativity are essential to a profitable long-term intellectual property strategy--especially in an era of changing attitudes about media. Intellectual property, writes Palfrey, should be considered a key strategic asset class. Almost every organization has an intellectual property portfolio of some value and therefore the need for an intellectual property strategy. A brand, for example, is an important form of intellectual property, as is any information managed and produced by an organization. Palfrey identifies the

essential areas of intellectual property--patent, copyright, trademark, and trade secret--and describes strategic approaches to each in a variety of organizational contexts, based on four basic steps. The most innovative organizations employ multiple intellectual property approaches, depending on the situation, asking hard, context-specific questions. By doing so, they achieve both short- and long-term benefits while positioning themselves for success in the global information economy.

Open Access

Innovation is rapidly becoming democratized. Users, aided by improvements in computer and communications technology, increasingly can develop their own new products and services. Eric von Hippel looks closely at this emerging system of user-centred innovation.

Food

"A short, reader-friendly introduction to perhaps the most influential philosophical school of the 20th century -- phenomenology"--

The Internet of Things

In Food Justice, Robert Gottlieb and Anupama

Joshi tell the story of this emerging movement.

Critical Thinking

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.

Computational Thinking

A highly original collection of essays that explore the relationship between food and architecture - the preparation of meals and the production of space.

What's the Beef?

A provocative argument that eating meat is not what made humans human and that the future is not necessarily carnivorous. Humans are eating more meat than ever. Despite ubiquitous Sweetgreen franchises and the example set by celebrity vegans, demand for meat is projected to grow at twice the rate of demand for plant-based foods over the next thirty years. Between 1960 and 2010, per capita meat consumption in the developing world more than doubled; in China, meat consumption grew ninefold. It has even been claimed that meat made us human—that our disproportionately large human brains evolved

because our early human ancestors ate meat. In The Meat Question, Josh Berson argues that not only did meat not make us human, but the contemporary increase in demand for meat is driven as much by economic insecurity as by affluence. Considering the full sweep of meat's history, Berson concludes provocatively that the future is not necessarily carnivorous. Berson, an anthropologist and historian, argues that we have the relationship between biology and capitalism backward. We may associate meat-eating with wealth, but in fact, meat-eating is a sign of poverty; cheap meat—hunger killing, easy to prepare, eaten on the go—enables a capitalism defined by inequality. To answer the meat question, says Berson, we need to think about meat-eating in a way that goes beyond Paleo diets and PETA protests to address the deeply entwined economic and political lives of humans and animals past, present, and future.

Sexual Consent

Paradoxes emerge not just in salons and ivory towers but in everyday life. (An Internet search for "paradox" brings forth a picture of an ashtray with a "no smoking" symbol inscribed on it.) Proposing solutions, Cuonzo writes, is a natural response to paradoxes. She invites us to rethink paradoxes by focusing on strategies for solving them,

arguing that there is much to be learned from this, regardless of whether any of the more powerful paradoxes is even capable of solution.

Cultivating Food Justice

Experts discuss the challenges faced in agrobiodiversity and conservation, integrating disciplines that range from plant and biological sciences to economics and political science. Wide-ranging environmental phenomena—including climate change, extreme weather events, and soil and water availability—combine with such socioeconomic factors as food policies, dietary preferences, and market forces to affect agriculture and food production systems on local, national, and global scales. The increasing simplification of food systems, the continuing decline of plant species, and the ongoing spread of pests and disease threaten biodiversity in agriculture as well as the sustainability of food resources. Complicating the situation further, the multiple systems involved—cultural, economic, environmental, institutional, and technological—are driven by human decision making, which is inevitably informed by diverse knowledge systems. The interactions and linkages that emerge necessitate an integrated assessment if we are to make progress toward sustainable agriculture and

food systems. This volume in the Strüngmann Forum Reports series offers insights into the challenges faced in agrobiodiversity and sustainability and proposes an integrative framework to guide future research, scholarship, policy, and practice. The contributors offer perspectives from a range of disciplines, including plant and biological sciences, food systems and nutrition, ecology, economics, plant and animal breeding, anthropology, political science, geography, law, and sociology. Topics covered include evolutionary ecology, food and human health, the governance of agrobiodiversity, and the interactions between agrobiodiversity and climate and demographic change.

Recycling

The complete story of what we don't know, and what we should know, about American food production and its effect on health and the environment. We don't think much about how food gets to our tables, or what had to happen to fill our supermarket's produce section with perfectly round red tomatoes and its meat counter with slabs of beautifully marbled steak. We don't realize that the meat in one fast-food hamburger may come from a thousand different cattle raised in five different countries. In fact, most of us have a fairly abstract understanding of what

happens on a farm. In America's Food, Harvey Blatt gives us the specifics. He tells us, for example, that a third of the fruits and vegetables grown are discarded for purely aesthetic reasons; that the artificial fertilizers used to enrich our depleted soil contain poisonous heavy metals; that chickens who stand all day on wire in cages choose feed with pain-killing drugs over feed without them; and that the average American eats his or her body weight in food additives each year. Blatt also asks us to think about the consequences of eating food so far removed from agriculture; why unhealthy food is cheap; why there is an International Federation of Competitive Eating; what we don't want to know about how animals raised for meat live, die, and are butchered; whether people are even designed to be carnivorous; and why there is hunger when food production has increased so dramatically. America's Food describes the production of all types of food in the United States and the environmental and health problems associated with each. After taking us on a tour of the American food system—not only the basic food groups but soil, grain farming, organic food, genetically modified food, food processing, and diet—Blatt reminds us that we aren't powerless. Once we know the facts about food in America, we can change things by the choices we make as consumers, as voters, and as ethical human beings

Spatial Computing

An accessible introduction to the artificial intelligence technology that enables computer vision, speech recognition, machine translation, and driverless cars. Deep learning is an artificial intelligence technology that enables computer vision, speech recognition in mobile phones, machine translation, AI games, driverless cars, and other applications. When we use consumer products from Google, Microsoft, Facebook, Apple, or Baidu, we are often interacting with a deep learning system. In this volume in the MIT Press Essential Knowledge series, computer scientist John Kelleher offers an accessible and concise but comprehensive introduction to the fundamental technology at the heart of the artificial intelligence revolution. Kelleher explains that deep learning enables data-driven decisions by identifying and extracting patterns from large datasets; its ability to learn from complex data makes deep learning ideally suited to take advantage of the rapid growth in big data and computational power. Kelleher also explains some of the basic concepts in deep learning, presents a history of advances in the field, and discusses the current state of the art. He describes the most important deep learning architectures, including autoencoders, recurrent neural networks, and long short-term networks, as well as such

recent developments as Generative Adversarial Networks and capsule networks. He also provides a comprehensive (and comprehensible) introduction to the two fundamental algorithms in deep learning: gradient descent and backpropagation. Finally, Kelleher considers the future of deep learning—major trends, possible developments, and significant challenges.

Recommendation Engines

A consumer's guide to the food system, from local to global: our part as citizens in the interconnected networks, institutions, and organizations that enable our food choices. Everybody eats. We may even consider ourselves experts on the topic, or at least Instagram experts. But are we aware that the shrimp in our freezer may be farmed and frozen in Vietnam, the grapes in our fruit bowl shipped from Chile, and the coffee in our coffee maker grown in Nicaragua, roasted in Germany, and distributed in Canada? Whether we know it or not, every time we shop for food, cook, and eat, we connect ourselves to complex supply networks, institutions, and organizations that enable our food choices. Even locavores may not know the whole story of the produce they buy at the farmers market. In this volume in the MIT Press Essential Knowledge series, food writer and scholar Fabio Parasecoli offers a consumer's

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Cloud Computing

Popularized by such best-selling authors as Michael Pollan, Barbara Kingsolver, and Eric Schlosser, a growing food movement urges us to support sustainable agriculture by eating fresh food produced on local family farms. But many low-income neighborhoods and communities of color have been systematically deprived of access to healthy and sustainable food. These communities have been actively prevented from producing their own food and often live in "food deserts" where fast food is more common than fresh food. Cultivating Food Justice describes their efforts to envision and create environmentally sustainable and socially just alternatives to

the food system. Bringing together insights from studies of environmental justice, sustainable agriculture, critical race theory, and food studies, Cultivating Food Justice highlights the ways race and class inequalities permeate the food system, from production to distribution to consumption. The studies offered in the book explore a range of important issues, including agricultural and land use policies that systematically disadvantage Native American, African American, Latino/a, and Asian American farmers and farmworkers; access problems in both urban and rural areas; efforts to create sustainable local food systems in low-income communities of color; and future directions for the food justice movement. These diverse accounts of the relationships among food, environmentalism, justice, race, and identity will help guide efforts to achieve a just and sustainable agriculture.

Eating Architecture

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

Intellectual Property Strategy

Food is not only something we eat, it is something we use to define ourselves. This title considers the ways in which popular

culture reveals our relationship with food and our own bodies and how these have become an arena for political and ideological ba.

Phenomenology

Metadata

An introduction to issues of sexual consent, covering key strands of feminist thought, how sexual consent is negotiated in practice, the influence of popular culture, and more. The #MeToo movement has focused public attention on the issue of sexual consent. People of all genders, from all walks of life, have stepped forward to tell their stories of sexual harassment and violation. In a predictable backlash, others have taken to mass media to inquire plaintively if "flirting" is now forbidden. This volume in the MIT Press Essential Knowledge series offers a nuanced introduction to sexual consent by a writer who is both a scholar and an activist on this issue. It has become clear from discussions of the recent high-profile cases of Harvey Weinstein, Bill Cosby, and others that there is no clear agreement over what constitutes consent or non-consent and how they are expressed and perceived in sexual situations. This book presents key strands of feminist thought on the subject of sexual consent from across academic and activist communities and

covers the history of research on consent in such fields as psychology and feminist legal studies. It discusses how sexual consent is negotiated in practice, from "No means no" to "Yes means yes," and describes what factors might limit individual agency in such negotiations. It examines how popular culture, including pornography, romance fiction, and sex advice manuals, shapes our ideas of consent; explores the communities at the forefront of consent activism; and considers what meaningful social change in this area might look like. Going beyond the conventional cisgender, heterosexual norm, the book lists additional resources for those seeking to improve their practice of consent, survivors of sexual violence, and readers who want to understand contemporary debates on this issue in more depth.

Organic Struggle

Examines European food safety regulation at the national, European, and international levels as a case of "contested governance," illustrating issues of institutional trust and legitimacy.

The Future

An analysis of the successes and failures of the organic movement, focusing on coalition dynamics, movement-state relations, and

market-based strategies for social change.

Cumulated Index Medicus

"This book is an introduction to algorithms targeting an audience with little to no computer science background. In this book, algorithms from a wide area are presented: from music to searching and sorting, to deep learning, to graphs. The author shows how algorithms are used in practice. A unique feature of the book is that it focuses on showing how algorithms really work; not just what algorithms can do. There are many books discussing that and delving in technological applications and their implications. The book aims to show not just what algorithms can do, but how they do it. Louridas covers a wide range of algorithms. He does not shy away from classic algorithms such as searching and sorting, as they are the workhorses of most applications; at the same time, he also covers a wide expanse, such as algorithms in music, non-traditional searching (like the secretary problem), graphs, and the PageRank algorithm. He introduces deep learning, showing how it works in practice, and gives an overview of the limits of computability. He finishes up the text with an eclectic discussion of implications. Most books on algorithms are either too technical, or not technical at all - showing what the algorithms do, without showing how. This book

aims at striking a balance between the two methods. Algorithms should be, and can be explained, in simple terms. To repeat, an algorithm should be explained so that a human can execute it with a pen and paper"--

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