

Machineries Of Oil: An Infrastructural History Of BP In Iran (Infrastructures)

How those with the power to design technology, in the very moment of design, are allowed to imagine who is included--and who is excluded--in the future. Our world is built on an array of standards we are compelled to share. In Proxies, Dylan Mulvin examines how we arrive at those standards, asking, "To whom and to what do we delegate the power to stand in for the world?" Mulvin shows how those with the power to design technology, in the very moment of design, are allowed to imagine who is included--and who is excluded--in the future. For designers of technology, some bits of the world end up standing in for other bits, standards with which they build and calibrate. These "proxies" carry specific values, even as they disappear from view. Mulvin explores the ways technologies, standards, and infrastructures inescapably reflect the cultural milieus of their bureaucratic homes. Drawing on archival research, he investigates some of the basic building-blocks of our shared infrastructures. He tells the history of technology through the labor and communal practices of, among others, the people who clean kilograms to make the metric system run, the women who pose as test images, and the actors who embody disease and disability for medical students. Each case maps the ways standards and infrastructure rely on prototypical ideas of whiteness, able-bodiedness, and purity to control and contain the messiness of reality. Standards and infrastructures, Mulvin argues, shape and distort the possibilities of representation, the meaning of difference, and the levers of change and social justice.

Today, as in the past, public demonstrations are not only tools to prove, persuade, and promote, but also fundamental forms of social interaction and exchange. YouTube demos of makeup products by famous influencers, demonstrations of strength during street protests, demonstrations of military might in North Korea: public demonstrations are omnipresent in social life. Yet they are often perceived as isolated events, unworthy of systematic examination. In The Demonstration Society, Claude Rosental explores the underlying dynamics of what he calls a " demonstration society. " He shows how, both in today ' s world and historically, public demonstrations constitute not only tools to prove, persuade, and promote, but fundamental forms of interaction and exchange, and, in some cases, attempts to lead the world. Rosental compares demos with other forms of public demonstrations, drawing out both their peculiarities and common features. He analyzes the processes through which demonstrations are conceived and carried out, as well as the skills of their producers. He also compares contemporary demos with historical demonstrations including theaters of machines in the Renaissance, public demonstrations of natural philosophy in the seventeenth century, and demonstrations of the magic lantern in the nineteenth century. Above and beyond the entertainment they sometimes provide, demonstrations are experienced as intense moments that broadly involve alliances, material and symbolic goods, and, more generally, the future of individuals and collectives. Rosental elucidates the many ways in which we live today, as in the past, in a society of demonstration.

An investigation of borders as moving entities that influence our notions of territory, authority, sovereignty, and jurisdiction. In Borders as Infrastructure, Huub Dijstelbloem brings science and technology studies, as well as the philosophy of technology, to the study of borders and international human mobility. Taking Europe's borders as a point of departure, he shows how borders can transform and multiply and how they can mark conflicts over international orders. Borders themselves are moving entities, he claims, and with them travel our notions of territory, authority, sovereignty, and jurisdiction. The philosophies of Bruno Latour and Peter Sloterdijk provide a framework for Dijstelbloem's discussion of the material and morphological nature of borders and border politics. Dijstelbloem offers detailed empirical investigations that focus on the so-called migrant crisis of 2014-2016 on the Greek Aegean Islands of Chios and Lesbos; the Europe surveillance system Eurosur; border patrols at sea; the rise of hotspots and "humanitarian borders"; the technopolitics of border control at Schiphol International Airport; and the countersurveillance by NGOs, activists, and artists who investigate infrastructural border violence. Throughout, Dijstelbloem explores technologies used in border control, including cameras, databases, fingerprinting, visual representations, fences, walls, and monitoring instruments. Borders can turn places, routes, and territories into "zones of death." Dijstelbloem concludes that Europe's current relationship with borders renders borders--and Europe itself--an "extreme infrastructure" obsessed with boundaries and limits.

Wax and polishes are used for many purposes. Wax has their principal use in waterproofing; they are mainly consumed industrially as components of complex formulations, often for coatings. Waxes confer matting effects and wear resistance to paints. Although most natural waxes are esters, paraffin waxes are hydrocarbons, mixtures of alkanes usually in a homologous series of chain lengths. These materials represent a significant fraction of petroleum. They are refined by vacuum distillation. The degree of branching has an important influence on the properties. Millions of tons of paraffin waxes are produced annually. They are used in adhesives, in foods (such as chewing gum and cheese wrapping), in cosmetics, and as coatings. Paraffin wax is typical of the agents that are coated on a film or sheet, one that really melt. Waxed paper, still the most widely used heat sealing material, was the earliest product to bring the advantages of heat sealing to packaging. Paraffin wax is mostly found as a white, odorless, tasteless, waxy solid, with an average melting point. The FT waxes are purely synthetic polymers of carbon monoxide and hydrogen which can best be described chemically as mineral waxes. Duroxons of the B group also serve as additives in the manufacture of lubricating greases for the purpose of raising their dropping point and improving the consistency. There are various types of mineral waxes; lignite wax, montan wax, durmont wax, ozocerite wax, utah wax, peat wax etc. Utah waxes are successfully utilized in dance floor wax, linoleum wax, shoe polish etc. Some other important uses of waxes are in candles, polishes, electrical insulation, coatings and carbon paper. There are various types of polishes having industrial and domestic applications; abrasive polish, aluminium polish, motor car polishes, cellulose friction polishes, furniture polishes, leather belt polishes, pine oil metal polish etc. For many years, petroleum wax was considered a byproduct of lubricant base stock production, it has come onto its own over the last decade and is considered by most refiners to be a relatively high margin product and is often an important contributor to the overall profitability of the refinery. Pure paraffin wax is an excellent electrical insulator. There are many refineries in India which have with fuel, lube, wax and petrochemical feed stocks production facilities. Mineral waxes (including petroleum) account for an estimated 85% of this global demand, with synthetic waxes accounting for 10% and animal and vegetable waxes, accounting for 5%. Wax consumption is expected to grow at an average annual growth rate of 1% in this decade. Clearly, different regions and different product applications will enjoy different growth rates. This book basically deals with microcrystalline waxes in floor polishes, properties of braxilian grades of carnauba wax, compatibility of paraffin waxes with other substances, synthetic mineral waxes, miscellaneous synthetic waxes, additives for raising melting point of candles, wax coating for fruits, shrubs, and plants, effect of paraffin on esparto montan mixtures, water proofing of kraft papers, production of montan wax, polish, abrasives, metal cleaners, nickel silver castings, cleaning, polishing metals for metallographic analysis, paste for wax calf leather, burnishing polishes for automobile maintenance, etc. The purpose of this book is to present comprehensive information of different types of wax and polishes like their processing, properties and uses. This book is very useful for new entrepreneurs, technocrats, professionals and researchers.

The Complete Technology Book on Wax and Polishes (Reprint)
Infrastructural Brutalism

A History of the City through Infrastructure, 1920-2020

Art and the Necropolitics of Infrastructure

The History of the British Petroleum Company: Volume 1, The Developing Years, 1901-1932

Carbon Democracy

The emergence of the international oil corporation as a political actor in the twentieth century, seen in BP's infrastructure and information arrangements in Iran. In the early twentieth century, international oil corporations emerged as a new kind of political actor. The development of the world oil industry, argues Katayoun Shafiee, was one of the era's largest political projects of techno-economic development. In this book, Shafiee maps the machinery of oil operations in the Anglo-Iranian oil industry between 1901 and 1954, tracking the organizational work involved in moving oil through a variety of technical, legal, scientific, and administrative networks. She shows that, in a series of disagreements, the British-controlled Anglo-Iranian Oil Company (AIOC, which later became BP) relied on various forms of information management to transform political disputes into techno-economic calculation, guaranteeing the company complete control over profits, labor, and production regimes. She argues that the building of alliances and connections that constituted Anglo-Iranian oil's infrastructure reconfigured local politics of oil regions and examines how these arrangements in turn shaped the emergence of both nation-state and transnational oil corporation. Drawing on her extensive archival and field research in Iran, Shafiee investigates the surprising ways in which nature, technology, and politics came together in battles over mineral rights; standardizing petroleum expertise; formulas for calculating profits, production rates, and labor; the “Persianization” of employees; nationalism and oil nationalization; and the long-distance machinery of an international corporation. Her account shows that the politics of oil cannot be understood in isolation from its technical dimensions.

Political Crises, Social Conflict and Economic Development is a rare attempt to undertake comparative political economy analysis of the Andean region and thus represents a welcome contribution. . . . It is clearly written and will engage scholars interested in Latin America from a wide range of disciplines. Jonathan di John, Journal of Agrarian Change This collection of essays on the political economy of the Andean region goes to the heart of the struggle these smaller economies face in completing crucial reforms and achieving higher growth. Andrés Solimano has brought together the best and the brightest talent from each country, the result being the most compelling analysis ever of how enclave development and a historical dependence on primary exports renders these countries distinctly Andean. As the essays argue, the political solutions and economic remedies must address this phenomenon, rather than mimicking those strategies of the larger emerging market countries in the region. Carol Wise, University of Southern California, US The contributors to this authoritative volume analyze the impact of political crises and social conflict on economic performance in the Andean region of Latin America. The blend of theory and case studies is also relevant for understanding other complex societies in the developing world and transition economies. The book provides illuminating insights on how to understand, and survive, the complicated interactions between volatile politics, unstable democracies, violence, social inequality and uneven economic performance. Recent political economy theories are combined with valuable quantitative and qualitative information on presidential crises, breakdowns of democracy, constitutional reforms, quality of institutions, and social inequality and exclusion to understand actual country realities. Part I provides the conceptual framework and a regional perspective of the book. Part II contains five political economy country studies Bolivia, Colombia, Ecuador, Peru and Venezuela written by leading scholars in the field and former senior policymakers, including a former President. Together, the chapters highlight the detrimental effects of political instability and social conflict on economic growth and stability, as well as the feedback effects from poor economic performance on political instability and institutional fragility. The country studies warn that narrow economic reforms that do not pay adequate attention to politics, institutions and social structures are bound to fail in bringing lasting prosperity and stability to complex societies. Examining new and rich information on episodes of political turmoil, military interventions, forced presidential resignations, constitutional reforms and social uprisings, this book will be required reading for all those interested in the interface of politics and economic development.

Minerals are part of virtually every product we use. Common examples include copper used in electrical wiring and titanium used to make airplane frames and paint pigments. The Information Age has ushered in a number of new mineral uses in a number of products including cell phones (e.g., tantalum) and liquid crystal displays (e.g., indium). For some minerals, such as the platinum group metals used to make catalytic converters in cars, there is no substitute. If the supply of any given mineral were to become restricted, consumers and sectors of the U.S. economy could be significantly affected. Risks to minerals supplies can include a sudden increase in demand or the possibility that natural ores can be exhausted or become too difficult to extract. Minerals are more vulnerable to supply restrictions if they come from a limited number of mines, mining companies, or nations. Baseline information on minerals is currently collected at the federal level, but no established methodology has existed to identify potentially critical minerals. This book develops such a methodology and suggests an enhanced federal initiative to collect and analyze the additional data needed to support this type of tool.

The Organization of the Petroleum Exporting Countries (OPEC) is one of the most recognizable acronyms among international organizations. It is mainly associated with the 'oil shock' of 1973 when prices of petroleum quadrupled and industrialized countries and consumers were forced to face the limits of their development model. This is the first history of OPEC and of its members written by a professional historian. It carries the reader from the formation of the first petrostate in the world, Venezuela in the late 1920s, to the global ascent of petrostates and OPEC during the 1970s, to their crisis in the late-1980s and early- 1990s. Formed in 1960, OPEC was the first international organization of the Global South. It was perceived as acting as the economic 'spearhead' of the Global South and acquired a role that went far beyond the realm of oil politics. Petrostates such as Venezuela, Nigeria, Algeria, Saudi Arabia, Iraq, and Iran were (and continue to be) key regional actors, and their enduring cooperation, defying wide political and cultural differences and even wars, speaks to the centrality of natural resources in the history of the twentieth century, and to the underlying conflict between producers and consumers of these natural resources.

Riding the New York Subway

An Infrastructural History of BP in Iran

Quantification, Democracy, and the Birth of National Statistics

The Cultural Work of Standing In

Machineries of Oil

Repairing Infrastructures

Logistics Transportation Systems

This is the United Nations definitive report on the state of the world economy, providing global and regional economic outlook for 2020 and 2021. Produced by the Department of Economic and Social Affairs, the five United Nations regional commissions, the United Nations

Conference on Trade and Development, with contributions from the UN World Tourism Organization and other intergovernmental agencies.

Logistics Transportation Systems compiles multiple topics on transportation logistics systems from both qualitative and quantitative perspectives, providing detailed examples of real-world logistics workflows. It explores the key concepts and problem-solving techniques required by researchers and logistics professionals to effectively manage the continued expansion of logistics transportation systems, which is expected to reach an estimated 25 billion tons in the United States alone by 2045. This book provides an ample understanding of logistics transportation systems, including basic concepts, in-depth modeling analysis, and network analysis for researchers and practitioners. In addition, it covers policy issues related to transportation logistics, such as security, rules and regulations, and emerging issues including reshoring. This book is an ideal guide for academic researchers and both undergraduate and graduate students in transportation modeling, supply chains, planning, and systems. It is also useful to transportation practitioners involved in planning, feasibility studies, consultation and policy for transportation systems, logistics, and infrastructure. Provides real-world examples of logistics systems solutions for multiple transportation modes, including seaports, rail, barge, road, pipelines, and airports Covers a wide range of business aspects, including customer service, cost, and decision analysis Features key-term definitions, concept overviews, discussions, and analytical problem-solving

An examination of Berlin’s turbulent history through the lens of its water and energy infrastructures. In Remaking Berlin, Timothy Moss takes a novel perspective on Berlin's turbulent twentieth-century history, examining it through the lens of its water and energy infrastructures. He shows that, through a century of changing regimes, geopolitical interventions, and socioeconomic volatility, Berlin's networked urban infrastructures have acted as medium and manifestation of municipal, national, and international politics and policies. Moss traces the coevolution of Berlin and its infrastructure systems from the creation of Greater Berlin in 1920 to remunicipalization of services in 2020, encompassing democratic, fascist, and socialist regimes. Throughout, he explores the tension between obduracy and change in Berlin's infrastructures.

Examining the choices made by utility managers, politicians, and government officials, Moss makes visible systems that we often take for granted. Moss describes the reorganization of infrastructure systems to meet the needs of a new unitary city after Berlin’s incorporation in 1920, and how utilities delivered on political promises; the insidious embedding of repression, racism, autarky, and militarization within the networked city under the Nazis; and the resilience of Berlin’s infrastructures during wartime and political division. He examines East Berlin’s socialist infrastructural ideal (and its under-resourced systems), West Berlin’s insular existence (and its aspirations of system autarky), and reunified Berlin’s privatization of utilities (subsequently challenged by social movements). Taking Berlin as an exemplar, Moss’s account will inspire researchers to take a fresh look at urban infrastructure histories, offering new ways of conceptualizing the multiple temporalities and spatialities of the networked city.

Metal recycling is a complex business that is becoming increasingly difficult! Recycling started long ago, when people realized that it was more resource- and cost-efficient than just throwing away the resources and starting all over again. In this report, we discuss how to increase metal-recycling rates and thus resource efficiency from both quantity and quality viewpoints. The discussion is based on data about recycling input, and the technological infrastructure and worldwide economic realities of recycling. Decision-makers set increasingly ambitious targets for recycling, but far too much valuable metal today is lost because of the imperfect collection of end-of-life (EoL) products, improper practices, or structural deficiencies within the recycling chain, which hinder achieving our goals of high resource efficiency and resource security, and of better recycling rates.

A Framework for Assessing Effects of the Food System

RFID and Infrastructures of Identification

Principles of Infrastructure

Underground

Planetary Mine

The Charisma Machine

The Life, Death, and Legacy of One Laptop per Child

How the increasing reliance on metrics to evaluate scholarly publications has produced new forms of academic fraud and misconduct. The traditional academic imperative to “publish or perish” is increasingly coupled with the newer necessity of “impact or perish”—the requirement that a publication have “impact,” as measured by a variety of metrics, including citations, views, and downloads. Gaming the Metrics examines how the increasing reliance on metrics to evaluate scholarly publications has produced radically new forms of academic fraud and misconduct. The contributors show that the metrics-based “audit culture” has changed the ecology of research, fostering the gaming and manipulation of quantitative indicators, which lead to the invention of such novel forms of misconduct as citation rings and variously rigged peer reviews. The chapters, written by both scholars and those in the trenches of academic publication, provide a map of academic fraud and misconduct today. They consider such topics as the shortcomings of metrics, the gaming of impact factors, the emergence of so-called predatory journals, the “salami slicing” of scientific findings, the rigging of global university rankings, and the creation of new watchdogs and forensic practices. This comprehensive history of British Petroleum has been based firmly on the evidence from contemporary records.

A history of New York subway passengers as they navigated the system's constraints while striving for individuality, or at least a smooth ride. When the subway first opened with much fanfare on October 27, 1904, New York became a city of underground passengers almost overnight. In this book, Stefan Höhne examines how the experiences of subway passengers in New York City were intertwined with cultural changes in urban mass society throughout the twentieth century. Höhne argues that underground transportation—which early passengers found both exhilarating and distressing—changed perceptions, interactions, and the organization of everyday life.

Bringing together historians of US foreign relations and scholars of Iranian studies, American-Iranian Dialogues examines the cultural connections between Americans and Iranians from the constitutional period of the 1890s through to the start of the White Revolution in the 1960s. Taking an innovative cultural approach, chapters are centred around major themes in American-Iranian encounters and cultural exchange throughout this period, including stories of origin, cultural representations, nationalism and discourses on development. Expert contributors draw together different strands of US-Iranian relations to discuss a range of path-breaking topics such as the history of education, heritage exchange, oil development and the often-overlooked interactions between American and Iranian non-state actors. Through exploring the understudied cultural dimensions of US-Iranian relations, this book will be essential reading for students and scholars interested in American history, international history, Iranian studies and Middle Eastern studies.

World Economic Situation and Prospects 2020

Downtime on the Microgrid

American-Iranian Dialogues

Infrastructure Management and Construction

From Constitution to White Revolution, c. 1890s-1960s

A Billion Little Pieces

The Maintenance of Materiality and Power

How “drowned town” literature, road movies, energy landscape photography, and “death train” narratives represent the brutality of industrial infrastructures. In this book, Michael Truscello looks at the industrial infrastructure not as an invisible system of connectivity and mobility background but as a manufactured miasma of despair, toxicity, and death. Truscello terms this “infrastructural brutality”—a formulation that not only alludes to the historical nexus of infrastructure and the concrete aesthetic of Brutalist architecture but also describes the ecological impact of industrial infrastructures. Truscello explores the necropolitics of infrastructure—how infrastructure determines who may live and who must die—through the lens of artistic media. He examines the white settler nostalgia of “drowned town” fiction written after the Tennessee Va

projects; argues that the road movie represents a struggle with liberal governmentality; considers the ruins of oil capitalism, as seen in photographic landscapes of postindustrial waste; and offers an account of “death train narratives” ranging from the history of the Holocaust to “brisanctic politics,” a culture of unmaking that is capable of slowing the advance of capitalist suicide. “Brisance” refers to the shattering effect of an explosive, but Truscello uses the term to signal a variety of practices for defeating infrastructural power. Brisantic politics, he writes, is a politics toward infrastructure, sabotage, and cascading destruction in an interconnected world.

This book covers topics relevant to the concept of infrastructure construction, including key requirements of development such as measuring productivity and maintenance. It presents different categories of sustainability maintenance of critical infrastructures. In addition, it presents a reconfiguration simulator, which enables evaluation of the effectiveness of resilience enhancement strategies for electric distribution networks and the required resources to implement them. Then, it discusses health services as a critical sector in this field, which should be able to respond to the needs of the population. The last chapter presents a brief review of different bridges, including the processes of design, material selection, construction, and maintenance.

How we produce and consume food has a bigger impact on Americans' well-being than any other human activity. The food industry is the largest sector of our economy; food touches everything from our health to the environment, climate change, economic inequality, and the future of agriculture, a major goal has been to attain sufficient foods that provide the energy and the nutrients needed for a healthy, active life. Over time, food production, processing, marketing, and consumption have evolved and become highly complex. The challenges of improving the food system require systemic approaches that take full account of social, economic, ecological, and evolutionary factors. Policy or business interventions involving a segment of the food system often have consequences beyond the original issue the intervention was meant to address. A Framework for Food System Analysis: A Systematic Framework for Assessing Effects Associated with the Ways in Which Food is Grown, Processed, Distributed, Marketed, Retailed, and Consumed in the United States. The framework will allow users to recognize effects across the full food system, consider all domains and scales, and complexities, and choose appropriate methods for analysis. This report provides example applications of the framework based on complex questions that are currently under debate: consumption of a healthy and safe diet, food security, animal welfare, and preserving the environment. Assessing Effects of the Food System describes the U.S. food system and provides a brief history of its evolution into the current system. This report identifies some of the real and potential implications of the current system in terms of its health, environmental, and socioeconomic impacts. The system, potential metrics, and some of the data needs that are required to assess the effects. The overview of the food system and the framework described in this report will be an essential resource for decision makers, researchers, and others to examine the possible impacts of food processing practices.

How shipping is central to the very fabric of global capitalism In our networked world, the realities governing the international movement of freight are easily forgotten. But maritime transport remains the bedrock of trade. Convoys perpetually crisscross the oceans, carrying goods and commodities. These movements, though practically invisible, mean that control of the seas is vital in an age when no nation can survive on domestic products alone. Professor and author Laleh Khalili travelled the Mediterranean, the Red Sea, and the Indian Ocean aboard gigantic cargo ships, sometimes dangerous world of maritime trade. What she discovered was strangely disturbing: brutally exploited seafarers enduring loneliness and risking injury to keep the cogs of trade turning. In the Arabian peninsula's ports, forbidden places encircled by barbed wire and mortar walls, she found political rights, as they have for generations. Environmental catastrophes threaten with increasing intensity and frequency. Around the oil-trading nations of the Middle East, a history of British colonialism, modern US imperialism, and local autocracies combine to worsen the situation. She persists near the Horn of Africa. From her research riding the sea lanes and visiting the major Middle Eastern ports, Khalili has produced a book that exposes the frayed and tense sinews of modern capital, a physical network without which none of our more abstracted webs and systems could exist.

- A Critical Political Economy of the Middle East and North Africa
- Sinews of War and Trade
- Shipping and Capitalism in the Arabian Peninsula
- The Invention of the Modern Passenger
- Political Power in the Age of Oil
- Urban Operating Systems
- Understanding Oil Spills and Oil Spill Response

An investigation of the causes and consequences of the strange, ambivalent, and increasingly central role of infrastructure repair in modern life. Infrastructures—communication, food, transportation, energy, and information—are all around us, and their enduring function and influence depend on the constant work of repair. In this book, Christopher Henke and Benjamin Sims explore the causes and consequences of the strange, ambivalent, and increasingly central role of infrastructure repair in modern life. Henke and Sims offer examples, from local to global, to investigate not only the role of repair in maintaining infrastructures themselves but also the social and political orders that are created and sustained through them. Repair can encompass not only the kind of work we most commonly associate with the term but also any set of practices aimed at restoring a sense of normalcy or credibility to the places and institutions we inhabit in everyday life. From cases as diverse as the repair of building systems on a university campus, a conflict over retrofitting a bridge while protecting murals painted on it, and the global challenge posed by climate change, Henke and Sims assemble a range of examples to illustrate key conceptual points about the role of repair. They show that repair is an essential if often overlooked aspect of understanding the broader impact and politics of infrastructures. Understanding repair helps us better understand infrastructures and the scope of their influence on our lives.

This series contains the decisions of the Court in both the English and French texts.

An examination of how post-9/11 security concerns have transformed the public view and governance of infrastructure. After September 11, 2001, infrastructures—the mundane systems that undergird much of modern life—were suddenly considered “soft targets” that required immediate security enhancements. Infrastructure protection quickly became the multibillion dollar core of a new and expansive homeland security mission. In this book, Ryan Ellis examines how the long shadow of post-9/11 security concerns have remade and reordered infrastructure, arguing that it has been a stunning transformation. Ellis describes the way workers, civic groups, city councils, bureaucrats, and others used the threat of terrorism as a political resource, taking the opportunity not only to address security vulnerabilities but also to reassert a degree of public control over infrastructure. Nearly two decades after September 11, the threat of terrorism remains etched into the inner workings of infrastructures through new laws, regulations, technologies, and practices. Ellis maps these changes through an examination of three U.S. infrastructures: the postal system, the freight rail network, and the electric power grid. He describes, for example, how debates about protecting the mail from anthrax and other biological hazards spiraled into larger arguments over worker rights, the power of large-volume mailers, and the fortunes of old media in a new media world; how environmental activists leveraged post-9/11 security fears over shipments of hazardous materials to take on the rail industry and the chemical lobby; and how otherwise marginal federal regulators parlayed new mandatory cybersecurity standards for the electric power industry into a robust system of accountability. How is digitalization of the offshore oil industry fundamentally changing how we understand work and ways of knowing? Digitalization sits at the forefront of public and academic conversation today, calling into question how we work and how we know. In *Digital Oil*, Eric Monteiro uses the Norwegian offshore oil and gas industry as a lens to investigate the effects of digitalization on embodied labor, and in doing so shows how our use of new digital technology transforms work and knowing. For years, roughnecks have performed the dangerous and unwieldy work of extracting the oil that lies three miles below the seabed along the Norwegian Continental Shelf. Today, the Norwegian oil industry is largely digital, operated by sensors and driven by data. Digital representations of physical processes inform work practices and decision-making with remotely operated, unmanned deep-sea facilities. Drawing on two decades of in-depth interviews, observations, news clips, and studies of this industry, Eric Monteiro dismantles the divide between the virtual and the physical in Digital Oil. What is gained or lost when objects and processes become algorithmic phenomena with the digital inferred from the physical? How can data-driven work practices and operational decision-making approximate qualitative interpretation, professional judgement, and evaluation? How are emergent digital platforms and infrastructures, as machineries of knowing, enabling digitalization? In answering these questions Monteiro offers a novel analysis of digitalization as an effort to press the limits of quantification of the qualitative.

- Metal Recycling
- Gaming the Metrics
- The Rise and Fall of OPEC in the Twentieth Century
- The Demonstration Society
- The Fourth Industrial Revolution
- Minerals, Critical Minerals, and the U.S. Economy
- Producing the Computational City

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.

How RFID, a ubiquitous but often invisible mobile technology, identifies tens of billions of objects as they move through the world. RFID (Radio Frequency Identification) is ubiquitous but often invisible, a mobile technology used by more people more often than any flashy smartphone app. RFID systems use radio waves to communicate identifying information, transmitting data from a tag that carries data to a reader that accesses the data. RFID tags can be found in credit cards, passports, key fobs, car windshields, subway passes, consumer electronics, tunnel walls, and even human and animal bodies—identifying tens of billions of objects as they move through the world. In this book, Jordan Frith looks at RFID technology and its social impact, bringing into focus a technology that was designed not to be noticed. RFID, with its ability to collect unique information about almost any material object, has been hyped as the most important identification technology since the bar code, the linchpin of the Internet of Things—and also seen (by some evangelical Christians) as a harbinger of the end times. Frith views RFID as an infrastructure of identification that simultaneously functions as an infrastructure of communication. He uses RFID to examine such larger issues as big data, privacy, and surveillance, giving specificity to debates about societal trends. Frith describes how RFID can monitor hand washing in hospitals, change supply chain logistics, communicate wine vintages, and identify rescued pets. He offers an accessible explanation of the technology, looks at privacy concerns, and pushes back against alarmist accounts that exaggerate RFID's capabilities. The increasingly granular practices of identification enabled by RFID and other identification technologies, Frith argues, have become essential to the working of contemporary networks, reshaping the ways we use information.

Does oil wealth lead to political poverty? It often looks that way, but Carbon Democracy tells a more complex story. In this magisterial study, Timothy Mitchell rethinks the history of energy, bringing into his grasp as he does so environmental politics, the struggle for democracy, and the place of the Middle East in the modern world. With the rise of coal power, the producers who oversaw its production acquired the ability to shut down energy systems, a threat they used to build the first mass democracies. Oil offered the West an alternative, and with it came a new form of politics. Oil created a denatured political life whose central object — the economy — appeared capable of infinite growth. What followed was a Western democracy dependent on an undemocratic Middle East. We now live with the consequences: an impoverished political practice, incapable of addressing the crises that threaten to end the age of carbon democracy — namely, the disappearance of cheap energy and the carbon-fueled collapse of the ecological order.

Something good about the smart city: a human-centered account of why the future of electricity is local. Resilience now matters most, and most resilience is local—even for that most universal, foundational modern resource: the electric power grid. Today that technological marvel is changing more rapidly than it has for a lifetime, and in our new grid awareness, community microgrids have become a fascinating catalyst for cultural value change. In *Downtime* on the Microgrid, Malcolm McCullough offers a thoughtful counterpoint to the cascade of white papers on smart clean infrastructure. Writing from an experiential perspective, McCullough avoids the usual smart city futurism, technological solutionism, policy acronyms, green idealism, critical theory jargon, and doomsday prepping to provide new cultural context for a subject long a favorite theme in science and technology studies. McCullough describes the three eras of North American electrification: innovation, consolidation, and decentralization. He considers the microgrid boom and its relevance to the built environment as “architecture's grid edge.” Finally, he argues that resilience arises from clusters; although a microgrid is often described as an island, future resilience will require archipelagos—clusters of microgrids, with a two-way, intermittent connectiveness that is very different from the always-on, top-down technofuture we may be expecting. With *Downtime* on the Microgrid, McCullough rises above techno-hype to find something good about the smart city and reassuring about local resilience.

- Palm Oil Milling & Processing Handbook
- Borders as Infrastructure
- Data Science
- Review of Maritime Transport 2020
- Machineries of Knowing
- Proxies
- The Politics of Infrastructure Security

How new techniques of quantification shaped the New Deal and American democracy. When the Great Depression struck, the US government lacked tools to assess the situation; there was no reliable way to gauge the unemployment rate, the number of unemployed, or how many families had abandoned their farms to become migrants. In America by the Numbers, Emmanuel Didier examines the development in the 1930s of one such tool: representative sampling. Didier describes and analyzes the work of New Deal agricultural economists and statisticians who traveled from farm to farm, in search of information that would be useful for planning by farmers and government agencies. Didier shows that their methods were not just simple enumeration; these new techniques of quantification shaped the New Deal and American democracy even as the New Deal shaped the evolution of statistical surveys. Didier explains how statisticians had to become detectives and anthropologists, searching for elements that would help them portray America as a whole. Representative surveys were one of the most effective instruments for their task. He examines pre-Depression survey techniques; the invention of the random sampling method and the development of the Master Sample; and the application of random sampling by employment experts to develop the “Trial Census of Unemployment.”

A clarion call to rethink natural resource extraction beyond the extractive industries Planetary Mine rethinks the politics and territoriality of resource extraction, especially as the mining industry becomes reorganized in the form of logistical networks, and East Asian economies emerge as the new pivot of the capitalist world-system. Through an exploration of the ways in which mines in the Atacama Desert of Chile—the driest in the world—have become intermingled with an expanding constellation of megacities, ports, banks, and factories across East Asia, the book rethinks uneven geographical development in the era of supply chain capitalism. Arguing that extraction entails much more than the mere spatiality of mine shafts and pits, Planetary Mine points towards the expanding webs of infrastructure, of labor, of finance, and of struggle, that drive resource-based industries in the twenty-first century.

How Iranians forged a vibrant, informal video distribution infrastructure when their government banned all home video technology in 1983. In 1983, the Iranian government banned the personal use of home video technology. In Underground, Blake Atwood recounts how in response to the ban, technology enthusiasts, cinephiles, entrepreneurs, and everyday citizens forged an illegal but complex underground system for video distribution. Atwood draws on archival sources including trade publications, newspapers, memoirs, films, and laws, but at the heart of the book lies a corpus of oral history interviews conducted with participants in the underground. He argues that videocassettes helped to institutionalize the broader underground within the Islamic Republic. As Atwood shows, the videocassette underground reveals a great deal about how people construct vibrant cultures beneath repressive institutions. It was not just that Iranians gained access to banned movies, but rather that they established routes, acquired technical knowledge, broke the law, and created rituals by passing and trading plastic videocassettes. As material objects, the videocassettes were a means of negotiating the power of the state and the agency of its citizens. By the time the Ministry of Culture and Islamic Guidance lifted the ban in 1994, millions of videocassettes were circulating efficiently and widely throughout the country. The very presence of a video underground signaled the failure of state policy to regulate media. Embedded in the informal infrastructure—even in the videocassettes themselves—was the triumph of everyday people over the state.

A new wave of enthusiasm for smart cities, urban data, and the Internet of Things has created the impression that computation can solve almost any urban problem. Subjecting this claim to critical scrutiny, in this book, Andrés Luque-Ayala and Simon Marvin examine the cultural, historical, and contemporary contexts in which urban computational logics have emerged. They consider the rationalities and techniques that constitute emerging computational forms of urbanization, including work on digital urbanism, smart cities, and, more recently, platform urbanism. They explore the modest potentials and serious contradictions of reconfiguring urban life, city services, and urban-networked infrastructure through computational operating systems—an urban OS. Luque-Ayala and Marvin argue that in order to understand how digital technologies transform and shape the city, it is necessary to analyze the underlying computational logics themselves. Drawing on fieldwork that stretches across eleven cities in American, European, and Asian contexts, they investigate how digital products, services, and ecosystems are reshaping the ways in which the city is imagined, known, and governed. They discuss the reconstitution of the contemporary city through digital technologies, practices, and techniques, including data-driven governance, predictive analytics, digital mapping, urban sensing, digitally enabled control rooms, civic hacking, and open data narratives. Focusing on the relationship between the emerging operating systems of the city and their traditional infrastructures, they shed light on the political implications of using computer technologies to understand and generate new urban spaces and flows.

- The Technopolitics of Border Control
- The Political Economy of the Andean Region
- Territories of Extraction under Late Capitalism
- Opportunities, Limits, Infrastructure
- The Secret Life of Videocassettes in Iran
- America by the Numbers
- Architecture, Electricity, and Smart City Islands

A fascinating examination of technological utopianism and its complicated consequences. In The Charisma Machine, Morgan Ames chronicles the life and legacy of the One Laptop per Child project and explains why—despite its failures—the same utopian visions that inspired OLPC still motivate other projects trying to use technology to “disrupt” education and development. Announced in 2005 by MIT Media Lab cofounder Nicholas Negroponte, One Laptop per Child promised to transform the lives of children across the Global South with a small, sturdy, and cheap laptop computer, powered by a hand crank. In reality, the project fell short in many ways—starting with the hand crank, which never materialized. Yet the project remained charismatic to many who were captivated by its claims of access to educational opportunities previously out of reach. Behind its promises, OLPC, like many technology projects that make similarly grand claims, had a fundamentally flawed vision of who the computer was made for and what role technology should play in learning. Drawing on fifty years of history and a seven-month study of a model OLPC project in Paraguay, Ames reveals that the laptops were not only frustrating to use, easy to break, and hard to repair, they were designed for “technically precocious boys”—idealized younger versions of the developers themselves—rather than the children who were actually using them. The Charisma Machine offers a cautionary tale about the allure of technology hype and the problems that result when utopian dreams drive technology development.

Infrastructure is a priority around the world for all stakeholders. Infrastructure projects can continue for several years, from planning and construction to the provision of services. As development in Asia and the Pacific accelerates, governments must invest more in infrastructure to ensure continued economic growth. This book draws on lessons and case studies from Japan and worldwide, covering broad and long-term infrastructure projects. It describes the principles of developing quality infrastructure and focuses on the various steps of a project—from design, planning, and construction to operation and management. It also discusses overseas development assistance, taking examples from Asian Development Bank and World Bank projects. This book is an important reference tool for policy makers in Asia who are planning and implementing large-scale public infrastructure.

Between the 18th and 19th centuries, Britain experienced massive leaps in technological, scientific, and economical advancement

- Machineries of OilAn Infrastructural History of BP in IranMIT Press
- Political Crises, Social Conflict and Economic Development

Case Studies and Best Practices

- Remaking Berlin
- Digital Oil

- Misconduct and Manipulation in Academic Research
- Letters, Power Lines, and Other Dangerous Things

This book offers the first critical engagement with the political economy of the Middle East and North Africa. Challenging conventional wisdom on the origins and contemporary dynamics of capitalism in the region, these cutting-edge essays demonstrate how critical political economy can illuminate both historical and contemporary dynamics of the region and contribute to wider political economy debates from the vantage point of the Middle East. Leading scholars, representing several disciplines, contribute both thematic and country-specific analyses. Their writings critically examine major issues in political economy—notably, the mutual constitution of states, markets, and classes; the co-constitution of class, race, gender, and other forms of identity; varying modes of capital accumulation and the legal, political, and cultural forms of their regulation; relations among local, national, and global forms of capital, class, and culture; technopolitics; the role of war in the constitution of states and classes; and practices and cultures of domination and resistance. Visit politicaleconomyproject.org for additional media and learning resources.