





management theorists and economists. Often, inquiry focuses on the emergence of stability, technical closure and culturally uniform modernity. Yet current literature also emphasizes the durability of localism, heterogeneity and user choice. This collection investigates the apparent tension between these trends using case studies from across the nineteenth and twentieth centuries. The History of Technology addresses tensions between material standards and process standards, explores the distinction between specifying standards and achieving convergence towards them, and examines some of the discontents generated by the reach of standards into 'everyday life'. Includes the Special Issue "By whose standards? Standardization, stability and uniformity in the history of information and electrical technologies" Locations of Knowledge in Dutch Contexts examines how places give shape to scientific knowledge production. Contributors to this volume use four hundred years of Dutch history as laboratory to contribute to spatialized understanding of the history of knowledge.

"Misa brings his acclaimed text up to date by examining how today's unsustainable energy systems, insecure information networks, and vulnerable global shipping have helped foster geopolitical risks and instability. A masterful analysis of how technology and culture have influenced each other over five centuries, Leonardo to the Internet frames a history that illuminates modern-day problems and prospects faced by our technology-dependent world

"Knowledge commons" describes the institutionalized community governance of the sharing and, in some cases, creation, of information, science, knowledge, data, and other types of intellectual and cultural resources. It is the subject of enormous recent interest and enthusiasm with respect to policymaking about innovation, creative production, and intellectual property. Taking that enthusiasm as its starting point, Governing Knowledge Commons argues that policymaking should be based on evidence and a deeper understanding of what makes commons institutions work. It offers a systematic way to study knowledge commons, borrowing and building on Elinor Ostrom's Nobel Prize-winning research on natural resource commons. It proposes a framework for studying knowledge commons that is adapted to the unique attributes of knowledge and information, describing the framework in detail and explaining how to put it into context both with respect to commons research and with respect to innovation and information policy. Eleven detailed case studies apply and discuss the framework exploring knowledge commons across a wide variety of scientific and cultural domains.

Flat-World Fiction analyzes representations of digital technology and the social and ethical concerns it creates in mainstream literary American fiction and fiction written about the United States in the first two decades of the twenty-first century. In this period, authors such as Don DeLillo, Jennifer Egan, Dave Eggers, Joshua Ferris, Jonathan Safran Foer, Mohsin Hamid, Thomas Pynchon, Kristen Roupenian, Gary Shteyngart, and Zadie Smith found themselves not only

implicated in the developing digital world of flat screens but also threatened by it, while simultaneously attempting to critique it. As a result, their texts explore how human relationships with digital devices and media transform human identity and human relationships with one another, history, divinity, capitalism, and nationality. Liliana M. Naydan walks us through these complex relationships, revealing how authors show through their fiction that technology is political. In the process, these authors complement and expand on work by historians, philosophers, and social scientists, creating accessible, literary road maps to our digital future.

The second edition of this bestselling textbook has been fully updated with a synopsis of the latest changes in the fields of intercultural communication and leadership development. This includes new benchmark interviews from some of the world's foremost companies; a wealth of proven guidelines, tools, and models, including Wibbeke's own Geoleadership Model and two new chapters focusing on the influence of gender and technology on culture and leadership. This new edition also emphasizes practical examples of individuals and organizations that have utilized the core concept of "geoleadership"—including updated research from those at the forefront of various industries, including finance, healthcare, and manufacturing. With contributions and endorsements from some of the most important thought leaders in leadership development and intercultural communication, this edition offers a resource for designing, delivering, and evaluating successful leadership theories and practices to both students and practitioners.

Over the last 2,000 years, critical innovations have transformed small regions into global powers. But these powers have faded when they did not embrace the next big innovation. Gerard J. Tellis and Stav Rosenzweig argue that openness to new ideas and people, empowerment of individuals and competition are key drivers in the development and adoption of transformative innovations. These innovations, in turn, fuel economic growth, national dominance and global leadership. In *How Transformative Innovations Shaped the Rise of Nations*, Tellis and Rosenzweig examine the transformative qualities of concrete in Rome; swift equine warfare in Mongolia; critical navigational innovations in the golden ages of Chinese, Venetian, Portuguese and Dutch empires; the patent system and steam engine in Britain; and mass production in the United States of America.

Contains contributions from scholars in eight different humanities and social science disciplines. This book aims to present a range of surveillance technologies used in everyday life and investigate the politics of their use.

This book is an up-to-date text on rubber science and is a breakthrough among many rubber-related publications. Emphasis is placed on the most modern scientific approaches to rubber science, departing from the usual detailed descriptions of trial-and-error results of traditional rubber technology. The book is a good introduction to modern rubber science both for graduate students and for more or less experienced rubber engineers for updating their way of thinking in handling of technological problems. Due to the increasing importance of pneumatic tires of vehicles and aircraft in modern transportation, this work will be of great use for general readers as well, including those who are concerned with sustainable development.

We live in a world where science and technology shape the global economy and everyday culture, where new biotechnologies are changing what we eat and how we can reproduce, and where email, mobiles and the internet have revolutionized the ways we communicate with each other and engage with the world outside us. *Technoculture: The Key Concepts* explores the power of scientific ideas, their impact on how we understand the natural world and how successive technological developments have influenced our attitudes to work, art, space, language

and the human body. Throughout, the lively discussion of ideas is illustrated with provocative case studies--from biotech foods to life-support systems, from the walkman and ipod to sex and cloning, from video games to military hardware. Designed to be both provocative and instructive, *Technoculture: The Key Concepts* outlines the place of science and technology in today's culture.

How electricity became a metaphor for modernity in the United States, inspiring authors from Mark Twain to Ralph Ellison. At the turn of the twentieth century, electricity emerged as a metaphor for modernity. Writers from Mark Twain to Ralph Ellison grappled with the idea of electricity as both life force (illumination) and death spark (electrocution). The idea that electrification created exclusively modern experiences took hold of Americans' imaginations, whether they welcomed or feared its adoption. In *Power Lines*, Jennifer Lieberman examines the apparently incompatible notions of electricity that coexisted in the American imagination, tracing how electricity became a common (though multifarious) symbol for modern life. Lieberman examines a series of moments of technical change when electricity accrued new social meanings, plotting both power lines and the power of narrative lines in American life and literature. While discussing the social construction of electrical systems, she offers a new interpretation of Twain's use of electricity as an organizing metaphor in *A Connecticut Yankee in King Arthur's Court*, describes the rhetoric surrounding the invention of electric execution, analyzes Charlotte Perkins Gilman's call for human connection in her utopian writing and in her little-known *Human Work*, considers the theme of electrical interconnection in Jack London's work, and shows how Ralph Ellison and Louis Mumford continued the literary tradition of electrical metaphor. Electrical power was a distinctive concept in American literary, cultural, and technological histories. For this reason, narratives about electricity were particularly evocative. Bridging the realistic and the romantic, the historical and the fantastic, these stories guide us to ask new questions about our enduring fascination with electricity and all it came to represent.

Accounts of the early events of the computing industry--the Turing machine, the massive Colossus, the ENIAC computer--are well-told tales, and equally well known is the later emergence of Silicon Valley and the rise of the personal computer. Yet there is an extraordinary untold middle history--with deep roots in Minnesota. From the end of World War II through the 1970s, Minnesota was home to the first computing-centered industrial district in the world. Drawing on rare archival documents, photographs, and a wealth of oral histories, *Digital State* unveils the remarkable story of computer development in the heartland after World War II. These decades found corporations--concentrated in large part in Minnesota--designing state-of-the-art mainframe technologies, revolutionizing new methods of magnetic data storage, and, for the first time, truly integrating software and hardware into valuable products for the American government and public. Minnesota-based companies such as Engineering Research Associates, Univac, Control Data, Cray Research, Honeywell, and IBM Rochester were major international players and together formed an unrivaled epicenter advancing digital technologies. These companies not only brought vibrant economic growth to Minnesota, they nurtured the state's present-day medical device and software industries and possibly even tomorrow's nanotechnology. Thomas J. Misa's groundbreaking history shows how Minnesota recognized and embraced the coming information age through its leading-edge companies, its workforce, and its prominent institutions. *Digital State* reveals the inner workings of the birth of the digital age in Minnesota and what we can learn from this era of sustained innovation.

*Urban Machinery* investigates the technological dimension of modern European cities, vividly describing the most dramatic changes in the urban environment over the last century and a half. Written by leading scholars from the history of technology, urban history, sociology and science, technology, and society, the book views the European city as a complex construct entangled with technology. The chapters examine the increasing similarity of modern cities and their technical infrastructures (including communication, energy, industrial, and transportation

systems) and the resulting tension between homogenization and cultural differentiation. The contributors emphasize the concept of circulation--the process by which architectural ideas, urban planning principles, engineering concepts, and societal models spread across Europe as well as from the United States to Europe. They also examine the parallel process of appropriation--how these systems and practices have been adapted to prevailing institutional structures and cultural preferences. *Urban Machinery*, with contributions by scholars from eight countries, and more than thirty illustrations (many of them rare photographs never published before), includes studies from northern and southern and from eastern and western Europe, and also discusses how European cities were viewed from the periphery (modernizing Turkey) and from the United States. Contributors Hans Buitter, Paolo Capuzzo, Noyan Dinkal, Cornelis Disco, Pi Germuska, Mikael Hrd, Martina Heler, Dagmara Jajiesniak-Quast, Andrew Jamison, Per Lundin, Thomas J. Misa, Dieter Schott, Marcus Stippak Mikael Hrd is Professor of History at Darmstadt University of Technology. His books include *The Intellectual Appropriation of Technology: Discourses on Modernity, 1900-1939* (coedited with Andrew Jamison; MIT Press, 1998). Thomas J. Misa is ERA-Land Grant Professor of the History of Technology at the University of Minnesota, where he directs the Charles Babbage Institute. His books include *Modernity and Technology* (coedited with Philip Brey and Andrew Feenberg; MIT Press, 2003).

Drawing on essays from leading international and multi-disciplinary scholars, *A Companion to the Philosophy of Technology* is the first comprehensive and authoritative reference source to cover the key issues of technology's impact on society and our lives. Presents the first complete, authoritative reference work in the field Organized thematically for use both as a full introduction to the field or an encyclopedic reference Draws on original essays from leading interdisciplinary scholars Features the most up-to-date and cutting edge research in the interdisciplinary fields of philosophy, technology, and their broader intellectual environments

Leonardo to the Internet Technology and Culture from the Renaissance to the Present JHU Press

This book applies a multiparadigmatic philosophical frame of analysis to the global political economy. Crossing two disciplines and lines of literature—social philosophy and global political economy—this book considers seven aspects of global political economy and discusses each aspect from four diverse paradigmatic viewpoints: functionalist, interpretive, radical humanist, and radical structuralist. The four paradigms are founded upon different assumptions about the nature of social science and the nature of society. Each paradigm generates theories, concepts, and analytical tools which are different from those of other paradigms; developing an understanding of the different paradigms leads to a better understanding of the multi-faceted nature of the subject matter. In this book, the first chapter reviews the four paradigms. Each of the next seven chapters provides four paradigmatic explanations for each of the seven aspects of the global political economy. The final chapter concludes by recommending further paradigmatic diversity. This book will be of particular interest to students and researchers interested in political economy, heterodox economics, political science and international relations.



these crucial contexts may impede an innovation's diffusion—and eventual success. This book places culture at the center of discussions on innovation, beginning with a comprehensive introduction to innovation's various forms, including the history, sociology, and economics of innovation. Insights from marketing and psychology are integrated into a complexity theory framework, which are then utilized to evaluate case studies of organizations experiencing repeated innovation successes. The sometimes fraught relationship of firms to creativity is discussed, and a new model for calculating the creativity of an economy is presented.

This book provides an in-depth study of controlled languages used in technical documents from both a theoretical and practical perspective. It first explores the history of controlled languages employed by the manufacturing industry to shape and constrain the information in technical documents. The author then offers a comparative analysis of existing controlled languages and distills the best-practice features of those language systems. He concludes by offering innovative models that can be used to develop and trial a new controlled language. This book will be of interest to linguists working in technical and professional communication, as well as writers and practitioners involved in the production of technical documents for companies in multiple industries and geographical locations.

Authors from 13 countries come together in this edited volume, *Common Law and Civil Law Today: Convergence and Divergence*, to present different aspects of the relationship and intersections between common and civil law.

Approaching the relationship between common and civil law from different perspectives and from different fields of law, this book offers an intriguing insight into the similarities, differences and connections between these two major legal traditions. This volume is divided into 3 parts and consists of 22 articles. The first part discusses the common law/civil law dichotomy in the international legal systems and theory. The second focuses on case-law and arbitration, while the third part analyses elements of common and civil law in various legal systems. By offering such a variety of approaches and voices, this book allows the reader to gain an invaluable insight into the historical, comparative and theoretical contexts of this legal dichotomy. From its carefully selected authors to its comprehensive collection of articles, this edited volume is an essential resource for students, researchers and practitioners working or studying within both legal systems.

*The Digital Hand, Volume 2*, is a historical survey of how computers and telecommunications have been deployed in over a dozen industries in the financial, telecommunications, media and entertainment sectors over the past half century. It is part of a sweeping three-volume description of how management in some forty industries embraced the computer and changed the American economy. Computers have fundamentally changed the nature of work in America. However it is difficult to grasp the full extent of these changes and their implications for the future of business. To begin the long process of understanding the effects of computing in American business, we need to know the history of how computers were first used, by whom and why. In this, the second volume of *The Digital Hand*, James W. Cortada combines detailed analysis with narrative history to provide a broad overview of computing's and telecommunications' role in over a dozen industries,

ranging from Old Economy sectors like finance and publishing to New Economy sectors like digital photography and video games. He also devotes considerable attention to the rapidly changing media and entertainment industries which are now some of the most technologically advanced in the American economy. Beginning in 1950, when commercial applications of digital technology began to appear, Cortada examines the ways different industries adopted new technologies, as well as the ways their innovative applications influenced other industries and the US economy as a whole. He builds on the surveys presented in the first volume of the series, which examined sixteen manufacturing, process, transportation, wholesale and retail industries. In addition to this account, of computers' impact on industries, Cortada also demonstrates how industries themselves influenced the nature of digital technology. Managers, historians and others interested in the history of modern business will appreciate this historical analysis of digital technology's many roles and future possibilities in a wide array of industries. The Digital Hand provides a detailed picture of what the infrastructure of the Information Age really looks like and how we got there.

Explores the concept of intellectual property in the United States and how it relates to international law.

The West's history is one of extraordinary success; no other region, empire, culture, or civilization has left so powerful a mark upon the world. The Rise of Western Power charts the West's achievements-representative government, the free enterprise system, modern science, and the rule of law-as well as its misdeeds-two frighteningly destructive World Wars, the Holocaust, imperialistic domination, and the Atlantic slave trade. Adopting a global perspective, Jonathan Daly explores the contributions of other cultures and civilizations to the West's emergence. Historical, geographical, and cultural factors all unfold in the narrative. Adopting a thematic structure, the book traces the rise of Western power through a series of revolutions-social, political, technological, military, commercial, and industrial, among others. The result is a clear and engaging introduction to the history of Western civilization.

Since its initial publication, Critical Digital Studies has proven an indispensable guide to understanding digitally mediated culture. Bringing together the leading scholars in this growing field, internationally renowned scholars Arthur and Marilouise Kroker present an innovative and interdisciplinary survey of the relationship between humanity and technology. The reader offers a study of our digital future, a means of understanding the world with new analytic tools and means of communication that are defining the twenty-first century. The second edition includes new essays on the impact of social networking technologies and new media. A new section - "New Digital Media" - presents important, new articles on topics including hacktivism in the age of digital power and the relationship between gaming and capitalism. The extraordinary range and depth of the first edition has been maintained in this new edition. Critical Digital Studies will continue to provide the leading edge to readers wanting to understand the complex intersection of digital culture and human knowledge.

Autos and Progress reinterprets twentieth-century Brazilian history through automobiles, using them as a window for understanding the nation's struggle for modernity in the face of its massive geographical size, weak central government, and dependence on agricultural exports. Among the topics Wolfe touches upon are the first sports cars and elite consumerism; intellectuals' embrace of cars as the key for transformation and unification of Brazil; Henry Ford's building of a company town in the Brazilian jungle; the creation of a transportation infrastructure; democratization and consumer culture; auto workers and their creation of a national political party; and the economic and environmental impact of autos on Brazil. This focus on Brazilians' fascination with automobiles and their reliance on auto production and consumption as keys to their economic and social transformation, explains how Brazil--which enshrined its belief in science and technology in its national slogan of Order and Progress--has differentiated itself from other Latin American nations. Autos and Progress engages key issues

in Brazil around the meaning and role of race in society and also addresses several classic debates in Brazilian studies about the nature of Brazil's great size and diversity and how they shaped state-making.

The rise of digital photography and imaging has transformed the landscape of visual communication and culture. Events, activities, moments, objects, and people are 'captured' and distributed as images on an unprecedented scale. Many of these are shared publicly; some remain private, others become intellectual property, and some have the potential to shape global events. In this timely introduction, the ubiquity of photography is explored in relation to interdisciplinary debates about changes in the production, distribution, and consumption of images in digital culture. Ubiquitous Photography provides a critical examination of the technologies, practices, and cultural significance of digital photography, placing the phenomenon in historical, social, and political-economic context. It examines shifts in image-making, storage, commodification, and interpretation as highly significant processes of digitally mediated communication in an increasingly image-rich culture. It covers debates in social and cultural theory, the history and politics of image-making and manipulation, the current explosion in amateur photography, tagging and sharing via social networking, and citizen journalism. The book engages with key contemporary theoretical issues about memory and mobility, authorship and authenticity, immediacy and preservation, and the increased visibility of ordinary social life. Drawing upon a range of sources and original empirical research, Ubiquitous Photography provides a comprehensive introduction to critical academic debate and concrete developments in the field of digital photography. It is essential reading for students and scholars interested in media and society, visual culture, and digital technology.

Volume 5 offers essays by leading scholars on the writing of history globally since 1945. Divided into two parts, part one selects and surveys theoretical and interdisciplinary approaches to history, and part two examines select national and regional historiographies throughout the world.

Historian Thomas J. Misa's sweeping history of the relationship between technology and society over the past 500 years reveals how technological innovations have shaped -- and have been shaped by -- the cultures in which they arose. Spanning the preindustrial past, the age of scientific, political, and industrial revolutions, as well as the more recent eras of imperialism, modernism, and global security, this compelling work evaluates what Misa calls "the question of technology." Misa brings his acclaimed text up to date by examining how today's unsustainable energy systems, insecure information networks, and vulnerable global shipping have helped foster geopolitical risks and instability. A masterful analysis of how technology and culture have influenced each other over five centuries, Leonardo to the Internet frames a history that illuminates modern-day problems and prospects faced by our technology-dependent world. Praise for the first edition "Closely reasoned, reflective, and written with insight, grace, and wit, Misa's book takes us on a personal tour of technology and history, seeking to define and analyze paradigmatic techno-cultural eras." -- Technology and Culture "Follows [Thomas] Hughes's model of combining an engaging historical narrative with deeper lessons about technology." -- American Scholar "His case studies, such as that of Italian futurism or the localizations of the global McDonalds, provide good starting points for thought and discussion." -- Journal of Interdisciplinary History "This review cannot do justice to the precision and grace with which Misa analyzes technologies in their social contexts. He convincingly demonstrates the usefulness of his conceptual model." -- History and Technology "A fascinating, informative, and well-illustrated book." -- Choice

A much-anticipated new edition of this acclaimed work on intellectual property (IP) in its global context. With intelligent and

insightful coverage of IP law from international and comparative perspectives this second edition has been thoroughly revised and expanded. This unique textbook presents the main IP rights, identifying their basic features and tracing their evolution up to the present day by reference to statutes, cases and international treaties.

Fascinating and compelling in equal measure this volume presents a critical examination of the multilayered relationships between engineering and business. In so doing the study also stimulates ethical reflection on how these relationships either enhance or inhibit strategies to address vital issues of our time. In the context of geopolitical, economic, and environmental tendencies the authors explore the world that we should want to create and the role of the engineer and the business manager in this endeavor. Throughout this volume the authors identify periods of alignment and periods of tension between engineering and business. They look at focal points of the engineering-business nexus related to the development of capitalism. The book explores past and present movements to reshape, reform, or reject this nexus. The volume is informed by questions of importance for industry as well as for higher education. These are: What kinds of conflict arise for engineers in their attempts to straddle both professional and organizational commitments? How should professionals be managed to avoid a clash of managerial and professional cultures? How do engineers create value in firms and corporations? What kinds of tension exist between higher education and industry? What challenges does the neoliberal entrepreneurial university pose for management, faculty, students, society, and industry? Should engineering graduates be ready for work, and can they possibly be? What kinds of business issues are reflected in engineering education curricula, and for what purpose? Is there a limit to the degree of business hybridization in engineering degree programs, and if so, what would be the criterion for its definition? Is there a place in engineering education curricula for reflective critique of assumptions related to business and economic thinking? One ideal of management and control comes to the fore as the Anthropocene - the world transformed into an engineered artefact which includes human existence. The volume raises the question as to how engineering and business together should be considered, given the fact that the current engineering-business nexus remains embedded within an economic model of continual growth. By addressing macro-level issues such as energy policy, sustainable development, globalization, and social justice this study will both help create awareness and stimulate development of self-knowledge among practitioners, educators, and students thereby ultimately addressing the need for better informed citizens to safeguard planet Earth as a human life supporting system.

By examining a selection of the discourse surrounding Marconi's invention of the wireless, which excited early 20th century audiences even before becoming a viable technology, this book establishes a broader definition for contemporary technical communication.

Although the history of technological and scientific illustrations is a well-established field in the West, scholarship on the much longer Chinese experience is still undeveloped. This work by Peter Golas is a short, illustrated overview tracing the subject to pre-Han inscriptions but focusing mainly on the Song, Yuan, Ming, and Qing dynasties. His main theme is that technological drawings developed in a different way in China from in the West largely because they were made by artists rather than by specialist

