Routledge Handbook Of Science Technology And Society Routledge International Handbooks

The Routledge Handbook of Transformative Global Studies provides diverse and cutting-edge perspectives on this fast-changing field. For 30 years the world has been caught in a long 'global interregnum,' plunging from one crisis to the next and witnessing the emergence of new, vibrant, multiple, and sometimes contradictory forms of popular resistance and politics. This global 'interregnum' – or a period of uncertainty where the old hegemony is fading and the new ones have not yet been fully realized – necessitates critical self-reflection, brave intellectual speculation and (un)learning of perceived wisdoms, and greater transdisciplinary collaboration across theories, localities, and subjects. This Handbook takes up this challenge by developing fresh perspectives on globalization, development, neoliberalism, capitalism, and their progressive alternatives, addressing issues of democracy, power, inequality, insecurity, precarity, wellbeing, education, displacement, social movements, violence and war, and climate change. Throughout, it emphasizes the dynamics for system change, including bringing post-capitalist, feminist, (de)colonial, and other critical perspectives to support transformative global praxis. This volume brings together a mixture of fresh and established scholars from across disciplines and from a range of both Northern and Southern contexts. Researchers and students from around the world and across the fields of politics, sociology, international development, international relations, geography, economics, area studies, and philosophy will find this an invaluable and fresh guide to global studies in the 21st century.

Financial technology is rapidly changing and shaping financial services and markets. These changes are considered making the future of finance a digital one.This Handbook analyses developments in the financial services, products and markets that are being reshaped by technologically driven changes with a view to their policy, regulatory, supervisory and other legal implications. The Handbook aims to illustrate the crucial role the law has to play in tackling the revolutionary developments in the financial sector by offering a framework of legally enforceable principles and values in which such innovations might take place without threatening the acquis of financial markets law and more generally the rule of law and basic human rights. With contributions from international leading experts, topics will include: Policy, High-level Principles, Trends and Perspectives Fintech and Lending Fintech and Payment Services Fintech, Investment and Insurance Services Fintech, Financial Inclusion and Sustainable Finance Cryptocurrencies and Cryptoassets Markets and Trading Regtech and Suptech This Handbook will be of great relevance for practitioners and students alike, and a first reference point for academics researching in the fields of banking and financial markets law.

The "commons" has come to mean many things to many people, and the term is often used inconsistently. The study of the commons has expanded dramatically since Garrett Hardin's The Tragedy of the Commons (1968) popularized the dilemma faced

by users of common pool resources. This comprehensive Handbook serves as a unique synthesis and resource for understanding how analytical frameworks developed within the literature assist in understanding the nature and management of commons resources. Such frameworks include those related to Institutional Analysis and Development, Social-Ecological Systems, and Polycentricity, among others. The book aggregates and analyses these frameworks to lay a foundation for exploring how they apply according to scholars across a wide range of disciplines. It includes an exploration of the unique problems arising in different disciplines of commons study, including natural resources (forests, oceans, water, energy, ecosystems, etc), economics, law, governance, the humanities, and intellectual property. It shows how the analytical frameworks discussed early in the book facilitate interdisciplinarity within commons scholarship. This interdisciplinary approach within the context of analytical frameworks helps facilitate a more complete understanding of the similarities and differences faced by commons resource users and managers, the usefulness of the commons lens as an analytical tool for studying resource management problems, and the best mechanisms by which to formulate policies aimed at addressing such problems.

Communicating science and technology is a high priority of many research and policy institutions, a concern of many other private and public bodies, and an established subject of training and education. Over the past few decades, the field has developed and expanded significantly, both in terms of professional practice and in terms of research and reflection. The Routledge Handbook of Public Communication of Science and Technology provides a state-of-the-art review of this fast-growing and increasingly important area, through an examination of the research on the main actors, issues, and arenas involved. In this brand-new revised edition, the book brings the reviews up-to-date and deepens the analysis. As well as substantial reworking of many chapters, it gives more attention to digital media and the global aspects of science communication, with the inclusion of four new chapters. Several new contributors are added to leading mass-communication scholars, sociologists, public-relations practitioners, science writers, and others featured herein. With key questions for further discussion highlighted in each chapter, the handbook is a student-friendly resource and its scope and expert contributors mean it is also ideal for both practitioners and professionals working in the field. Combining the perspectives of different disciplines and of different geographical and cultural contexts, this original text provides an interdisciplinary and global approach to the public communication of science and technology. It is a valuable resource for students, researchers, educators, and professionals in media and journalism, sociology, the history of science, and science and technology.

Once treated as the absence of knowledge, ignorance today has become a highly influential topic in its own right, commanding growing attention across the natural and social sciences where a wide range of scholars have begun to explore the social life and political issues involved in the distribution and strategic use of not knowing. The field is growing fast and this handbook reflects this interdisciplinary field of study by drawing contributions from economics, sociology, history, philosophy, cultural studies, anthropology, feminist studies, and related fields in order to serve as a seminal guide to the political, legal and social uses of ignorance in social and political life. Chapter 33 of this book is freely available as a downloadable Open Access PDF under a

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Over the last decade or so, the field of science and technology studies (STS) has become an intellectually dynamic interdisciplinary arena. Concepts, methods, and theoretical perspectives are being drawn both from long-established and relatively young disciplines. From its origins in philosophical and political debates about the creation and use of scientific knowledge, STS has become a wide and deep space for the consideration of the place of science and technology in the world, past and present. The Routledge Handbook of Science, Technology and Society seeks to capture the dynamism and breadth of the field by presenting work that pushes the reader to think about science and technology and their intersections with social life in new ways. The interdisciplinary contributions by international experts in this handbook are organized around six topic areas: embodiment consuming technoscience digitization environments science as work rules and standards This volume highlights a range of theoretical and empirical approaches to some of the persistent – and new – questions in the field. It will be useful for students and scholars throughout the social sciences and humanities, including in science and technology studies, history, geography, critical race studies, sociology, communications, women's and gender studies, anthropology, and political science.

"Technology-mediated language learning has matured over the past few decades, with various tools and contexts now widely used in language education for all ages and levels. Many of today's language learners have experienced technology as an ever-present feature both within and beyond the classroom, highlighting how the role of technology has expanded into many daily activities, and underscoring how research in Second Language Acquisition (SLA) can inform and support the use of established and emerging technologies. Given this continued and expanding interest in technology for SLA, as well as the heightened attention technology for language learning has received due to the recent COVID-19 global pandemic, this Handbook seeks to provide a complete and extensive survey of key topics and issues related to second, foreign, heritage, and other language (L2) learning, performance, and where relevant, teaching. Intended for a broad audience, including L2 researchers, teachers, and students, this handbook addresses not only the efficacy of technology-mediated L2 learning, but also how technology has enhanced our understanding of SLA. In addition, this Handbook explores how technology might provide researchers with methodological opportunities to more thoroughly examine processes and constructs of SLA than might be available using more traditional experimental approaches (for example, intelligent CALL and the use of 'big data'). With chapters from a diverse group of global experts, this volume discusses the impact of technology on L2 learning from a variety of perspectives and approaches, providing valuable information for research and practice and serving as a wide-ranging resource on how technology can support L2 learning and development"--

This volume provides an authoritative, cutting-edge resource on the characteristics of both technological and social change in warfare in the twenty-first century, and the challenges such change presents to international law. The character of contemporary warfare has recently undergone significant transformation in several important respects: the nature of the actors, the changing technological capabilities available to them, and the sites and spaces in which war is fought. These changes have augmented the

phenomenon of non-obvious warfare, making understanding warfare one of the key challenges. Such developments have been accompanied by significant flux and uncertainty in the international legal sphere. This handbook brings together a unique blend of expertise, combining scholars and practitioners in science and technology, international law, strategy and policy, in order properly to understand and identify the chief characteristics and features of a range of innovative developments, means and processes in the context of obvious and non-obvious warfare. The handbook has six thematic sections: Law, war and technology Cyber warfare Autonomy, robotics and drones Synthetic biology New frontiers International perspectives. This interdisciplinary blend and the novel, rich and insightful contribution that it makes across various fields will make this volume a crucial research tool and guide for practitioners, scholars and students of war studies, security studies, technology and design, ethics, international relations and international law.

The problem of addiction is one of the major challenges and controversies confronting medicine and society. It also poses important and complex philosophical and scientific problems. What is addiction? Why does it occur? And how should we respond to it, as individuals and as a society? The Routledge Handbook of Philosophy and Science of Addiction is an outstanding reference source to the key topics, problems and debates in this exciting subject. It spans several disciplines and is the first collection of its kind. Organised into three clear parts, forty-five chapters by a team of international contributors examine key areas, including: the meaning of addiction to individuals conceptions of addiction varieties and taxonomies of addiction methods and models of addiction evolution and addiction history, sociology and anthropology population distribution and epidemiology developmental processes vulnerabilities and resilience psychological and neural mechanisms prevention, treatment and spontaneous recovery public health and the ethics of care social justice, law and policy. Essential reading for students and researchers in addiction research and in philosophy, particularly philosophy of mind and psychology and ethics, The Routledge Handbook of Philosophy and Science of Addiction will also be of great interest to those in related fields, such as medicine, mental health, social work, and social policy.

The Routledge Handbook of Science and Empire introduces readers to important new research in the field of science and empire. This compilation of inquiry into the inextricably intertwined history of science and empire reframes the field, showing that one could not have grown without the other. The volume expands the history of science through careful attention to connections, exchanges, and networks beyond the scientific institutions of Europe and the United States. These 27 original essays by established scholars and new talent examine: scientific and imperial disciplines, networks of science, scientific practice within empires, and decolonised science. The chapters cover a wide range of disciplines, from anthropology and psychiatry to biology and geology. There is global coverage, with essays about China, Southeast Asia, the Pacific, Australia and New Zealand, India, the Middle East, Russia, the Arctic, and North and South America. Specialised essays cover Jesuit science, natural history collecting, energy systems, and science in UNESCO. With authoritative chapters by leading scholars, this is a guiding resource for all scholars of empire and science. Free of jargon and with clearly written essays, the handbook is a valuable path to further inquiry for any student of the history of science and empire.

Technology has become increasingly important to both the function and our understanding of the justice process. Many forms of criminal

behaviour are highly dependent upon technology, and crime control has become a predominantly technologically driven process – one where 'traditional' technological aids such as fingerprinting or blood sample analysis are supplemented by a dizzying array of tools and techniques including surveillance devices and DNA profiling. This book offers the first comprehensive and holistic overview of global research on technology, crime and justice. It is divided into five parts, each corresponding with the key stages of the offending and justice process: Part I addresses the current conceptual understanding of technology within academia and the criminal justice system; Part II gives a comprehensive overview of the current relations between technology and criminal behaviour; Part III explores the current technologies within crime control and the ways in which technology underpins contemporary formal and informal social control; Part IV sets out some of the fundamental impacts technology is now having upon the judicial process; Part V reveals the emerging technologies for crime, control and justice and considers the extent to which new technology can be effectively regulated. This landmark collection will be essential reading for academics, students and theorists within criminology, sociology, law, engineering and technology, and computer science, as well as practitioners and professionals working within and around the criminal justice system.

Art and science work is experiencing a dramatic rise coincident with burgeoning Science and Technology Studies (STS) interest in this area. Science has played the role of muse for the arts, inspiring imaginative reconfigurations of scientific themes and exploring their cultural resonance. Conversely, the arts are often deployed in the service of science communication, illustration, and popularization. STS scholars have sought to resist the instrumentalization of the arts by the sciences, emphasizing studies of theories and practices across disciplines and the distinctive and complementary contributions of each. The manifestation of this commonality of creative and epistemic practices is the emergence of Art, Science, and Technology Studies (ASTS) as the interdisciplinary exploration of art–science. This handbook defines the modes, practices, crucial literature, and research interests of this emerging field. It explores the questions, methodologies, and theoretical implications of scholarship and practice that arise at the intersection of art and STS. Further, ASTS demonstrates how the arts are intervening in STS. Drawing on methods and concepts derived from STS and allied fields including visual studies, performance studies, design studies, science communication, and aesthetics and the knowledge of practicing artists and curators, ASTS is predicated on the capacity to see both art and science as constructions of human knowledge- making. Accordingly, it posits a new analytical vernacular, enabling new ways of seeing, understanding, and thinking critically about the world. This handbook provides scholars and practitioners already familiar with the themes and tensions of art–science with a means of connecting across disciplines. It proposes organizing principles for thinking about art–science across the sciences, social sciences, humanities, and arts. Encounters with art and science become meaningful in relation to practices and materials manifest as perceptual habits, background knowledge, and cultural norms. As the chapters in this handbook demonstrate, a variety of STS tools can be brought to bear on art–science so that systematic research can be conducted on this unique set of knowledge-making practices.

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From carbon fibre racing bikes to 'sharkskin' swimsuits, the application of cutting-edge design, technology and engineering has proved to be a vital ingredient in enhanced sports performance. This is the first book to offer a comprehensive survey of contemporary sports technology and engineering, providing a complete overview of academic, professional and industrial knowledge and technique. The book is divided into eight sections covering the following topics : Sustainable Sports Engineering Instrumentation Technology Summer Mobility Sports Winter Mobility Sports Apparel and Protection Equipment Sports Implements (racquets, clubs, bats, sticks) Sports Balls Sports Surfaces and

Facilities Written by an international team of leading experts from industry, academia and commercial research institutes, the emphasis throughout the book is on innovation, the relationship between business and science, and the improvement of sports performance. This is an essential reference for anybody working in sports technology, sports product design, sports engineering, biomechanics, ergonomics, sports business or applied sport science.

Emergence is often described as the idea that the whole is greater than the sum of the parts: interactions among the components of a system lead to distinctive novel properties. It has been invoked to describe the flocking of birds, the phases of matter and human consciousness, along with many other phenomena. Since the nineteenth century, the notion of emergence has been widely applied in philosophy, particularly in contemporary philosophy of mind, philosophy of science and metaphysics. It has more recently become central to scientists' understanding of phenomena across physics, chemistry, complexity and systems theory, biology and the social sciences. The Routledge Handbook of Emergence is an outstanding reference source and exploration of the concept of emergence, and is the first collection of its kind. Thirty-two chapters by an international team of contributors are organised into four parts: Foundations of emergence Emergence and mind Emergence and physics Emergence and the special sciences Within these sections important topics and problems in emergence are explained, including the British Emergentists; weak vs. strong emergence; emergence and downward causation; dependence, complexity and mechanisms; mental causation, consciousness and dualism; quantum mechanics, soft matter and chemistry; and evolution, cognitive science and social sciences. Essential reading for students and researchers in philosophy of mind, philosophy of science and metaphysics, The Routledge Handbook of Emergence will also be of interest to those studying foundational issues in biology, chemistry, physics and psychology.

The Routledge Social Science Handbook of AI is a landmark volume providing students and teachers with a comprehensive and accessible guide to the major topics and trends of research in the social sciences of artificial intelligence (AI), as well as surveying how the digital revolution – from supercomputers and social media to advanced automation and robotics – is transforming society, culture, politics and economy. The Handbook provides representative coverage of the full range of social science engagements with the AI revolution, from employment and jobs to education and new digital skills to automated technologies of military warfare and the future of ethics. The reference work is introduced by editor Anthony Elliott, who addresses the question of relationship of social sciences to artificial intelligence, and who surveys various convergences and divergences between contemporary social theory and the digital revolution. The Handbook is exceptionally wide-ranging in span, covering topics all the way from AI technologies in everyday life to single-purpose robots throughout home and work life, and from the mainstreaming of human-machine interfaces to the latest advances in AI, such as the ability to mimic (and improve on) many aspects of human brain function. A unique integration of social science on the one hand and new technologies of artificial intelligence on the other, this Handbook offers readers new ways of understanding the rise of AI and its associated global transformations. Written in a clear and direct style, the Handbook will appeal to a wide undergraduate audience.

The Routledge Handbook of Feminist Philosophy of Science is a comprehensive resource for feminist thinking about and in the sciences. Its 33 chapters were written exclusively for this Handbook by a group of leading international philosophers as well as scholars in gender studies, women's studies, psychology, economics, and political science. The chapters of the Handbook are organized into four main parts: I. Hidden Figures and Historical Critique II. Theoretical Frameworks III. Key Concepts and Issues IV. Feminist Philosophy of Science in Practice. The chapters in this extensive, fourth part examine the relevance of feminist philosophical thought for a range of scientific and professional

disciplines, including biology and biomedical sciences; psychology, cognitive science, and neuroscience; the social sciences; physics; and public policy. The Handbook gives a snapshot of the current state of feminist philosophy of science, allowing students and other newcomers to get up to speed quickly in the subfield and providing a handy reference for many different kinds of researchers.

The explosive growth in information technology has ushered in unparalleled new opportunities for advancing public service. Featuring 24 chapters from foremost experts in the field of digital government, this Handbook provides an authoritative survey of key emerging technologies, their current state of development and use in government, and insightful discussions on how they are reshaping and influencing the future of public administration. This Handbook explores: Key emerging technologies (i.e., big data, social media, Internet of Things (IOT), GIS, smart phones & mobile technologies) and their impacts on public administration The impacts of the new technologies on the relationships between citizens and their governments with the focus on collaborative governance Key theories of IT innovations in government on the interplay between technological innovations and public administration The relationship between technology and democratic accountability and the various ways of harnessing the new technologies to advance public value Key strategies and conditions for fostering success in leveraging technological innovations for public service This Handbook will prove to be an invaluable guide and resource for students, scholars and practitioners interested in this growing field of technological innovations in government.

Comprehensive yet accessible, this key Handbook provides an up-to-date overview of the fast growing and increasingly important area of 'public communication of science and technology', from both research and practical perspectives. As well as introducing the main issues, arenas and professional perspectives involved, it presents the findings of earlier research and the conclusions previously drawn. Unlike most existing books on this topic, this unique volume couples an overview of the practical problems faced by practitioners with a thorough review of relevant literature and research. The practical Handbook format ensures it is a student-friendly resource, but its breadth of scope and impressive contributors means that it is also ideal for practitioners and professionals working in the field. Combining the contributions of different disciplines (media and journalism studies, sociology and history of science), the perspectives of different geographical and cultural contexts, and by selecting key contributions from appropriate and well-respected authors, this original text provides an interdisciplinary as well as a global approach to public communication of science and technology.

The Routledge Handbook of the Economics of Knowledge provides a comprehensive framework to integrate the advancements over the last 20 years in the analysis of technological knowledge as an economic good, and in the static and dynamic characteristics of its generation process. There is a growing consensus in the field of economics that knowledge, technological knowledge in particular, is one of the most relevant resources of wealth, yet it is one of the most difficult and complex activities to understand or even to conceptualize. The economics of knowledge is an emerging field that explores the generation, exploitation, and dissemination of technological knowledge. Technological knowledge cannot any longer be regarded as a homogenous good that stems from standardized generation processes. Quite the opposite, technological knowledge appears more and more to be a basket of heterogeneous items, resources, and even experiences. All of these sources, which are both internal and external to the firm, are complementary, as is the interplay between a bottom-up and top-down generation processes. In this context, the interactions between the public research system, private research laboratories, and various networks of learning processes, within and among firms, play a major role in the creation of technological knowledge. In this Handbook special attention is given to the relationship among technological knowledge and both upstream scientific knowledge and related downstream resources. By addressing the antecedents and consequences of technological knowledge from both an upstream and downstream

perspective, this Handbook will become an indispensable tool for scholars and practitioners aiming to master the generation and the use of technological knowledge.

The Routledge Handbook of Translation and Technology provides a comprehensive and accessible overview of the dynamically evolving relationship between translation and technology. Divided into five parts, with an editor's introduction, this volume presents the perspectives of users of translation technologies, and of researchers concerned with issues arising from the increasing interdependency between translation and technology. The chapters in this Handbook tackle the advent of technologization at both a technical and a philosophical level, based on industry practice and academic research. Containing over 30 authoritative, cutting-edge chapters, this is an essential reference and resource for those studying and researching translation and technology. The volume will also be valuable for translators, computational linguists and developers of translation tools.

Philosophers, legal scholars, criminologists, psychiatrists, and psychologists have long asked important questions about punishment: What is its purpose? What theories help us better understand its nature? Is punishment just? Are there effective alternatives to punishment? How can empirical data from the sciences help us better understand punishment? What are the relationships between punishment and our biology, psychology, and social environment? How is punishment understood and administered differently in different societies? The Routledge Handbook of the Philosophy and Science of Punishment is the first major reference work to address these and other important questions in detail, offering 31 chapters from an international and interdisciplinary team of experts in a single, comprehensive volume. It covers the major theoretical approaches to punishment and its alternatives; emerging research from biology, psychology, and social neuroscience; and important special issues like the side-effects of punishment and solitary confinement, racism and stigmatization, the risk and protective factors for antisocial behavior, and victims' rights and needs. The Handbook is conveniently organized into four sections: I. Theories of Punishment and Contemporary Perspectives II. Philosophical Perspectives on Punishment III. Sciences, Prevention, and Punishment IV. Alternatives to Current Punishment Practices A volume introduction and a comprehensive index help make The Routledge Handbook of the Philosophy and Science of Punishment essential reading for upper-undergraduate and postgraduate students in disciplines such as philosophy, law, criminology, psychology, and forensic psychiatry, and highly relevant to a variety of other disciplines such as political and social sciences, behavioral and neurosciences, and global ethics. It is also an ideal resource for anyone interested in current theories, research, and programs dealing with the problem of punishment.

The landscape of contemporary research is characterized by growing interdisciplinarity, and disciplinary boundaries are blurring faster than ever. Yet while interdisciplinary methods, and methodological innovation in general, are often presented as the 'holy grail' of research, there are few examples or discussions of their development and 'behaviour' in the field. This Routledge Handbook of Interdisciplinary Research presents a bold intervention by showcasing a diversity of stimulating approaches. Over 50 experienced researchers illustrate the challenges, but also the rewards of doing and representing interdisciplinary research through their own methodological developments. Featured projects cover a variety of scales and topics, from small art-science collaborations to the 'big data' of mass observations. Each section is dedicated to an aspect of data handling, from collection, classification, validation to communication to research audiences. Most importantly, Interdisciplinary Methods presents a distinctive approach through its focus on knowledge as process, defamiliarising and reworking familiar practices such as experimenting, archiving, observing, prototyping or translating.

The colonial heritage and its renewed aftermaths – expressed in the inter-American experiences of slavery, indigeneity, dependence, and

freedom movements, to mention only a few aspects – form a common ground of experience in the Western Hemisphere. The flow of peoples, goods, knowledge and finances have promoted interdependence and integration that cut across borders and link the countries of North and South America together. The nature of this transversally related and multiply interconnected region can only be captured through a transnational, multidisciplinary, and comprehensive approach. The Routledge Handbook to the History and Society of the Americas explores the history and society of the Americas, placing particular emphasis on collective and intertwined experiences. Forty-four chapters cover a range of concepts and dynamics in the Americas from the colonial period until the present century: The shared histories and dynamics of Inter-American relationships are considered through pre-Hispanic empires, colonization, European hegemony, migration, multiculturalism, and political and economic interdependences. Key concepts are selected and explored from different geopolitical, disciplinary, and epistemological perspectives. Highlighting the contested character of key concepts that are usually defined in strict disciplinary terms, the Handbook provides the basis for a better and deeper understanding of inter-American entanglements. This multidisciplinary approach will be of interest to a broad array of academic scholars and students in history, sociology, political science cultural, postcolonial, gender, literary, and globalization studies.

The Routledge Handbook of Research Methods for Social-Ecological Systems provides a synthetic guide to the range of methods that can be employed in social-ecological systems (SES) research. The book is primarily targeted at graduate students, lecturers and researchers working on SES, and has been written in a style that is accessible to readers entering the field from a variety of different disciplinary backgrounds. Each chapter discusses the types of SES questions to which the particular methods are suited and the potential resources and skills required for their implementation, and provides practical examples of the application of the methods. In addition, the book contains a conceptual and practical introduction to SES research, a discussion of key gaps and frontiers in SES research methods, and a glossary of key terms in SES research. Contributions from 97 different authors, situated at SES research hubs in 16 countries around the world, including South Africa, Sweden, Germany and Australia, bring a wealth of expertise and experience to this book. The first book to provide a guide and introduction specifically focused on methods for studying SES, this book will be of great interest to students and scholars of sustainability science, environmental management, global environmental change studies and environmental governance. The book will also be of interest to upper-level undergraduates and professionals working at the science–policy interface in the environmental arena.

Scientific realism is a central, long-standing, and hotly debated topic in philosophy of science. Debates about scientific realism concern the very nature and extent of scientific knowledge and progress. Scientific realists defend a positive epistemic attitude towards our best theories and models regarding how they represent the world that is unobservable to our naked senses. Various realist theses are under sceptical fire from scientific antirealists, e.g. empiricists and instrumentalists. The different dimensions of the ensuing debate centrally connect to numerous other topics in philosophy of science and beyond. The Routledge Handbook of Scientific Realism is an outstanding reference source – the first collection of its kind – to the key issues, positions, and arguments in this important topic. Its thirty-four chapters, written by a team of international experts, are divided into five parts: Historical development of the realist stance Classic debate: core issues and positions Perspectives on contemporary debates The realism debate in disciplinary context Broader reflections In these sections, the core issues and debates presented, analysed, and set into broader historical and disciplinary contexts. The central issues covered include motivations and arguments for realism; challenges to realism from underdetermination and history of science; different variants of realism; the connection of realism to relativism and perspectivism; and the relationship between realism, metaphysics, and epistemology. The Routledge Handbook of

Scientific Realism is essential reading for students and researchers in philosophy of science. It will also be very useful for anyone interested in the nature and extent of scientific knowledge.

The exponential growth and development of modern technologies in all sectors has made it increasingly difficult for students, teachers and teacher educators to know which technologies to employ and how best to take advantage of them. The Routledge Handbook of Language Learning and Technology brings together experts in a number of key areas of development and change, and opens the field of language learning by exploring the pedagogical importance of technological innovation. The handbook is structured around six themes: historical and conceptual contexts core issues interactive and collaborative technologies for language learning corpora and data driven learning gaming and language learning purpose designed language learning resources. Led by fundamental concepts, theories and frameworks from language learning and teaching research rather than by specific technologies, this handbook is the essential reference for all students, teachers and researchers of Language Learning and TESOL. Those working in the areas of Applied Linguistics, Education and Media Studies will also find this a valuable book.

Consumption research is burgeoning across a wide range of disciplines. The Routledge Handbook on Consumption gathers experts from around the world to provide a nuanced overview of the latest scholarship in this expanding field. At once ambitious and timely, the volume provides an ideal map for those looking to position their work, find new analytic insights and identify research gaps. With an intuitive thematic structure and resolutely international outlook, it engages with theory and methodology; markets and businesses; policies, politics and the state; and culture and everyday life. It will be essential reading for students and scholars across the social and economic sciences.

Information and communication technology occupies a central place in the modern world, with society becoming increasingly dependent on it every day. It is therefore unsurprising that it has become a growing subject area in contemporary philosophy, which relies heavily on informational concepts. The Routledge Handbook of Philosophy of Information is an outstanding reference source to the key topics and debates in this exciting subject and is the first collection of its kind. Comprising over thirty chapters by a team of international contributors the Handbook is divided into four parts: basic ideas quantitative and formal aspects natural and physical aspects human and semantic aspects. Within these sections central issues are examined, including probability, the logic of information, informational metaphysics, the philosophy of data and evidence, and the epistemic value of information. The Routledge Handbook of Philosophy of Information is essential reading for students and researchers in philosophy, computer science and communication studies.

The Routledge Handbook of FinTech offers comprehensive coverage of the opportunities, challenges and future trends of financial technology. This handbook is a unique and in-depth reference work. It is organised in six thematic parts. The first part outlines the development, funding, and the future trends. The second focuses on blockchain technology applications and various aspects of cryptocurrencies. The next covers FinTech in banking. A significant element of FinTech, mobile payments and online lending, is included in the fourth part. The fifth continues with several chapters covering other financial services, while the last discusses ethics and regulatory issues. These six parts represent the most significant and overarching themes of FinTech innovations. This

handbook will appeal to students, established researchers seeking a single repository on the subject, as well as policy makers and market professionals seeking convenient access to a one-stop guide.

The political economy of research and innovation (R&I) is one of the central issues of the early twenty-first century. 'Science' and 'innovation' are increasingly tasked with driving and reshaping a troubled global economy while also tackling multiple, overlapping global challenges, such as climate change or food security, global pandemics or energy security. But responding to these demands is made more complicated because R&I themselves are changing. Today, new global patterns of R&I are transforming the very structures, institutions and processes of science and innovation, and with it their claims about desirable futures. Our understanding of R&I needs to change accordingly. Responding to this new urgency and uncertainty, this handbook presents a pioneering selection of the growing body of literature that has emerged in recent years at the intersection of science and technology studies and political economy. The central task for this research has been to expose important but consequential misconceptions about the political economy of R&I and to build more insightful approaches. This volume therefore explores the complex interrelations between R&I (both in general and in specific fields) and political economies across a number of key dimensions from health to environment, and universities to the military. The Routledge Handbook of the Political Economy of Science offers a unique collection of texts across a range of issues in this burgeoning and important field from a global selection of top scholars. The handbook is essential reading for students interested in the political economy of science, technology and innovation. It also presents succinct and insightful summaries of the state of the art for more advanced scholars.

The Routledge Handbook of Language and Science provides a state-of-the-art volume on the language of scientific processes and communications. This book offers comprehensive coverage of socio-cultural approaches to science, as well as analysing new theoretical developments and incorporating discussions about future directions within the field. Featuring original contributions from an international range of renowned scholars, as well as academics at the forefront of innovative research, this handbook: identifies common objects of inquiry across the areas of rhetoric, sociolinguistics, communication studies, science and technology studies, and public understanding of science; covers the four key themes of power, pedagogy, public engagement, and materiality in relation to the study of scientific language and its development; uses qualitative and quantitative approaches to demonstrate how humanities and social science scholars can go about studying science; details the meaning and purpose of socio-cultural approaches to science, including the impact of new media technologies; analyses the history of the field and how it positions itself in relation to other areas of study. Ushering the study of language and science toward a more interdisciplinary, diverse, communal and ecological future, The Routledge Handbook of Language and Science is an essential reference for anyone with an interest in this area.

The Routledge Handbook of Postsecularity offers an internationally significant and comprehensive interdisciplinary collection which provides a series of critical reviews of the current state of the art and future trends in philosophical, theoretical, and conceptual terms. The volume likewise presents a range of empirical knowledges and engagements with postsecularity. A critical

yet sympathetic dialogue across disciplinary divides in an international context ensures that the volume covers a wide and interrelated intellectual and geographical scope. The editor's introduction with Klaus Eder offers a robust foundation for the volume, setting out the central aims and objectives, the rationale for the contributions, and an outline of the structure. Thorny issues of normativity and empirical challenges are highlighted for the reader. The handbook comprises four interrelated sections. Part I: Philosophical meditations discusses postsecularity from philosophical standpoints, and Part II: Theological perspectives presents contributions from a variety of theological viewpoints. Part III: Theory, space, social relations contains pieces from geography, planning, sociology, and religious studies that delve into theoretically informed empirical implications of postsecularity. Part IV: Political and social engagement offers chapters that emphasize the political and social implications of the debate. In the Afterword, Eduardo Mendieta joins the editor to reflect on the notion of reflexive secularization across the volume as a whole, alluding to new lines of inquiry. The handbook is an invaluable guide for graduate and advanced undergraduate teaching, and a key reference for students and scholars of human geography, sociology, political science, applied philosophy, urban and public theology, planning, and urban studies.

Crime science is precisely what it says it is: the application of science to the phenomenon of crime. This handbook, intended as a crime science manifesto, showcases the scope of the crime science field and provides the reader with an understanding of the assumptions, aspirations and methods of crime science, as well as the variety of topics that fall within its purview. Crime science provides a distinctive approach to understanding and dealing with crime: one that is outcome-oriented, evidence-based and that crosses boundaries between disciplines. The central mission of crime science is to find new ways to cut crime and increase security. Beginning by setting out the case for crime science, the editors examine the roots of crime science in environmental criminology and describe its key features. The book is then divided into two sections. The first section comprises chapters by disciplinary specialists about the contributions their sciences can make or have already made to crime science. The second section of the book comprises a series of exemplary case studies in crime science, showing a wide range of the kind of work that crime scientists do. The editors conclude by drawing on the preceding contributions, as well as germane areas of research, to offer a thoughtful consideration of future directions for crime science. This book is essential reading for social scientists and scientists alike and marks a new phase in the study of crime and its detection and prevention.

Trust is pervasive in our lives. Both our simplest actions – like buying a coffee, or crossing the street – as well as the functions of large collective institutions – like those of corporations and nation states – would not be possible without it. Yet only in the last several decades has trust started to receive focused attention from philosophers as a specific topic of investigation. The Routledge Handbook of Trust and Philosophy brings together 31 never-before published chapters, accessible for both students and researchers, created to cover the most salient topics in the various theories of trust. The Handbook is broken up into three sections: I. What is Trust? II. Whom to Trust? III. Trust in Knowledge, Science, and Technology The Handbook is preceded by a foreword by Maria Baghramian, an introduction by volume editor Judith Simon, and each chapter includes a bibliography and

cross-references to other entries in the volume.

The Routledge Handbook of Transregional Studies brings together the various fields within which transregional phenomena are scientifically observed and analysed. This handbook presents the theoretical and methodological potential of such studies for the advancement of the conceptualization of global and area-bound developments. Following three decades of intense debate about globalization and transnationalism, it has become clear that border-crossing connections and interactions between societies are highly important, yet not all extend beyond the borders of nation-states or are of truly world-wide reach. The product of extensive international and interdisciplinary cooperation, this handbook is divided into ten sections that introduce the wide variety of topics within transregional studies, including Colonialism and Post-Colonial Studies, Spatial Formats, International Organizations, Religions and Religious Movements, and Transregional Studies and Narratives of Globalization. Recognizing that transregional studies asks about the space-making and space-formatting character of connections as well as the empirical status of such connections under the global condition, the volume reaches beyond the typical confines of area and regional studies to consider how areas are transcended and transformed more widely. Combining case studies with both theoretical and methodological considerations, The Routledge Handbook of Transregional Studies provides the first overview of the currently flourishing field of transregional studies and is the ideal volume for students and scholars of this diverse subject and its related fields.

This innovative handbook provides a comprehensive, and truly global, overview of the main approaches and themes within law and society scholarship or social-legal studies. A one-volume introduction to academic resources and ideas that are relevant for today's debates on issues from reproductive justice to climate justice, food security, water conflicts, artificial intelligence, and global financial transactions, this handbook is divided into two sections. The first, 'Perspectives and Approaches', accessibly explains a variety of frameworks through which the relationship between law and society is addressed and understood, with emphasis on contemporary perspectives that are relatively new to many socio-legal scholars. Following the book's overall interest in social justice, the entries in this section of the book show how conceptual tools originate in, and help to illuminate, real-world issues. The second and largest section of the book (42 short well-written pieces) presents reflections on topics or areas concerning law, justice, and society that are inherently interdisciplinary and that are relevance to current – but also classical – struggles around justice. Informing readers about the lineage of ideas that are used or could be used today for research and activism, the book attends to the full range of local, national and transnational issues in law and society. The authors were carefully chosen to achieve a diverse and non-Eurocentric view of socio-legal studies. This volume will be invaluable for law students, those in inter-disciplinary programs such as law and society, justice studies and legal studies, and those with interests in law, but based in other social sciences. It will also appeal to general readers interested in questions of justice and rights, including activists and advocates around the world.

This handbook provides a comprehensive global survey of the politics of technology. Written by an outstanding line up of distinguished scholars in the field, the handbook covers all aspects of the relationship between politics and technology including: Demand and support for new technologies and innovation by the state The effects of technology policies Technology development and innovation difference between various countries and regions Policy instruments and techno-industrial innovation Dynamism and change as outcomes of government policies Driving forces for science and innovative development Forming the basis of this handbook are examples of regional development, country studies and a rich variety of technologies, as well as topical issues such as divergent political interests in relation to technology and the economic exploitation of technologies. Employing a comparative and interdisciplinary approach in order to analyse the interplay between government activities and the development of new technologies, this handbook will be an invaluable resource for all students, scholars and practitioners working in the politics of technology, public policy and policy analysis. "Given current science-related crises facing the world such as climate change, the targeting and manipulation of DNA, GMO foods and vaccine denial, the way in which we communicate science matters is vital for current and future generations of scientists and publics. The Routledge Handbook of Scientific Communication scrutinizes what we value, prioritise and grapple with in science as highlighted by the rhetorical choices of scientists, students, educators, science gatekeepers, and lay commentators. Drawing on contributions from leading thinkers in the field, this volume explores some of the most pressing questions in this growing field of study, including: How do issues such as ethics, gender, race, shifts in the publishing landscape, and English as the lingua franca of science influence scientific communication practices? How have scientific genres evolved and adapted to current research and societal needs? How have scientific visuals developed in response to technological advances and communication needs? How is scientific communication taught to a variety of audiences? Offering a critical look at the complex relationships that characterize current scientific communication practices in academia, industry, government and elsewhere, this Handbook will be essential reading for students, scholars and professionals involved in the study, practice and teaching of scientific, medical and technical communication"--
Scientists studying the burning of stars, the evolution of species, DNA, the brain, the economy, and social change, all frequently describe their work as searching for mechanisms. Despite this fact, for much of the twentieth century philosophical discussions of the nature of mechanisms remained outside philosophy of science. The Routledge Handbook of Mechanisms and Mechanical Philosophy is an outstanding reference source to the key topics, problems, and debates in this exciting subject and is the first collection of its kind. Comprising over thirty chapters by a team of international contributors, the Handbook is divided into four Parts: Historical perspectives on mechanisms The nature of

mechanisms Mechanisms and the philosophy of science Disciplinary perspectives on mechanisms. Within these Parts central topics and problems are examined, including the rise of mechanical philosophy in the seventeenth century; what mechanisms are made of and how they are organized; mechanisms and laws and regularities; how mechanisms are discovered and explained; dynamical systems theory; and disciplinary perspectives from physics, chemistry, biology, biomedicine, ecology, neuroscience, and the social sciences. Essential reading for students and researchers in philosophy of science, the Handbook will also be of interest to those in related fields, such as metaphysics, philosophy of psychology, and history of science.

What are we to make of our digital social lives and the forces that shape it? Should we feel fortunate to experience such networked connectivity? Are we privileged to have access to unimaginable amounts of information? Is it easier to work in a digital global economy? Or is our privacy and freedom under threat from digital surveillance? Our security and welfare being put at risk? Our politics undermined by hidden algorithms and misinformation? Written by a distinguished group of leading scholars from around the world, the Routledge Handbook of Digital Media and Communication provides a comprehensive, unique, and multidisciplinary exploration of this rapidly growing and vibrant field of study. The Handbook adopts a three-part structural framework for understanding the sociocultural impact of digital media: the artifacts or physical devices and systems that people use to communicate; the communicative practices in which they engage to use those devices, express themselves, and share meaning; and the organizational and institutional arrangements, structures, or formations that develop around those practices and artifacts. Comprising a series of essay-chapters on a wide range of topics, this volume crystallizes current knowledge, provides historical context, and critically articulates the challenges and implications of the emerging dominance of the network and normalization of digitally mediated relations. Issues explored include the power of algorithms, digital currency, gaming culture, surveillance, social networking, and connective mobilization. More than a reference work, this Handbook delivers a comprehensive, authoritative overview of the state of new media scholarship and its most important future directions that will shape and animate current debates.