# Human Machine Reconfigurations Plans And Situated Actions Learning In Doing Social Cognitive And Computational Perspectives

Scholars from communication and media studies join those from science and technology studies to examine media technologies as complex, sociomaterial phenomena. In recent years, scholarship around media technologies has finally shed the assumption that these technologies are separate from and powerfully determining of social life, looking at them instead as produced by and embedded in distinct social, cultural, and political practices. Communication and media scholars have increasingly taken theoretical perspectives originating in science and technology studies (STS), while some STS scholars interested in information technologies have linked their research to media studies inquiries into the symbolic dimensions of these tools. In this volume, scholars from both fields come together to advance this view of media technologies as complex sociomaterial phenomena. The contributors first address the relationship between materiality and mediation, considering such topics as the lived realities of network infrastructure. The contributors then highlight media technologies as always in motion, held together through the minute, unobserved work of many, including efforts to keep these technologies alive. Contributors Pablo J. Boczkowski, Geoffrey C. Bowker, Finn Brunton, Gabriella Coleman, Gregory J. Downey, Kirsten A. Foot, Tarleton Gillespie, Steven J. Jackson, Christopher M. Kelty, Leah A. Lievrouw, Sonia Livingstone, Ignacio Siles, Jonathan Sterne, Lucy Suchman, Fred Turner

This book gathers new empirical findings fostering advances in the areas of digital and communication design, web, multimedia and motion design, graphic design, branding, and related ones. It includes original contributions by authoritative authors based on the best papers presented at the 4th International Conference on Digital Design and Communication, Digicom 2020, together with some invited chapters written by leading international researchers. They report on innovative design strategies supporting communication in a global, digital world, and addressing, at the same time, key individual and societal needs. This book is intended to offer a timely snapshot of technologies, trends and challenges in the area of design, communication and branding, and a bridge connecting researchers and professionals of different disciplines, such as graphic design, digital communication, corporate, UI Design and UX design.

Many of the things we now live with do not take a purely physical form. Objects such as smart phones, laptops and wearable fitness trackers are different from our things of the past. These new digital forms are networked, dynamic and contextually configured. They can be changeable and unpredictable, even inscrutable when it comes to understanding what they actually do and whom they really serve. In Changing Things, Johan Redstrom and Heather Wiltse address critical questions that have assumed a fresh urgency in the context of these rapidly-developing forms. Drawing on critical traditions from a range of disciplines that have been used to understand the nature of things, they develop a new vocabulary and a theoretical approach that allows us to account for and address the multi-faceted, dynamic, constantly evolving forms and functions of contemporary things. In doing so, the book prototypes a new design

discourse around everyday things, and describes them as 'fluid assemblages'. Redstrom and Wiltse explore how a new theoretical framework could enable a richer understanding of things as fluid and networked, with a case study of the evolution of music players culminating in an in-depth discussion of Spotify. Other contemporary 'things' touched on in their analysis include smart phones and watches, as well as digital platforms and applications such as Google, Facebook and Twitter.

An exploration of how financial market laws and regulations can - and should - govern the use of artificial intelligence.

Essays on Communication, Materiality, and Society

Exploring the Three Worlds of Mathematics

Cutting Code

The Way Forward

Media Technologies

A Human Activity Approach To User Interface Design

Fabricating Modern Societies

A pair of technology experts describe how humans will have to keep pace with machines in order to become prosperous in the future and identify strategies and policies for business and individuals to use to combine digital processing power with human ingenuity.

The New York Times-bestselling guide to how automation is changing the economy, undermining work, and reshaping our lives Winner of Best Business Book of the Year awards from the Financial Times and from Forbes "Lucid, comprehensive, and unafraid...;an indispensable contribution to a long-running argument."--Los Angeles Times What are the jobs of the future? How many will there be? And who will have them? As technology continues to accelerate and machines begin taking care of themselves, fewer people will be necessary. Artificial intelligence is already well on its way to making "good jobs" obsolete: many paralegals, journalists, office workers, and even computer programmers are poised to be replaced by robots and smart software. As progress continues, blue and white collar jobs alike will evaporate, squeezing working- and middle-class families ever further. At the same time, households are under assault from exploding costs, especially from the two major industries-education and health care-that, so far, have not been transformed by information technology. The result could well be massive unemployment and inequality as well as the implosion of the consumer economy itself. The past solutions to technological disruption, especially more training and education, aren't going to work. We must decide, now, whether the future will see broad-based prosperity or catastrophic levels of inequality and economic insecurity. Rise of the Robots is essential reading to understand what accelerating technology means for our economic prospects-not to mention those of our children-as well as for society as a whole.

In 1950, Alan Turing, the British mathematician, cryptographer, and computer pioneer, looked to the future: now that the conceptual and technical parameters for electronic brains had been established, what kind of intelligence could be built? Should machine intelligence mimic the abstract thinking of a chess player or should it be more like the developing mind of a child? Should an intelligent agent only think, or should it also learn, feel, and grow? Affect and Artificial Intelligence is the first in-depth analysis of affect and intersubjectivity in the computational sciences. Elizabeth Wilson makes use of archival and unpublished material from the early years of AI (194570) until the present to show that early researchers were more engaged with questions of emotion than many commentators have assumed. She documents how affectivity was managed in the canonical works of Walter Pitts in the 1940s and Turing in the 1950s, in projects from the 1960s that injected artificial agents into psychotherapeutic encounters, in chess-playing machines from the 1940s to the present, and in the Kismet (sociable robotics) project at MIT in the 1990s.

Not long ago, projections of how office technologies would revolutionize the production of documents in a high-tech future carriedmany promises. The paper less office and the seamless and problem-free sharing of texts and other work materials among co-workers werejust around the corner, we were told. To anyone who has been involved in putting together a volume of the present kind, such forecasts will be met with considerable skepticism, if not outright distrust. The diskette, the email, the fax, the net, and all the other forms of communication that are now around are powerful assets, but they do not in any way reduce the flow of paper or the complexity of coordinating activities involved in producing an artifact such as a book. Instead, the reverse seems to be true. Obviously, the use of such tools requires considerable skill at the center of coordination, to borrow an expression from a chapter in this volume. As editors, we have been fortunate to have Ms. Lotta Strand, Linkoping University, at the center of the distributed activity that producing this volume has required over the last few years. With her considerable skill and patience, Ms. Strand and her work provide a powerful illustration of the main thrust of most of the chapters in this volume: Practice is a coordination of thinking and action, and many things had to be kept in mind during the production of this volume.

Proceedings of SOHOMA 2019

Essays on Situated Cognition

The Field Guide to Human Error Investigations

Divining a Digital Future

Affect and Artificial Intelligence

Service Oriented, Holonic and Multi-agent Manufacturing Systems for Industry of the Future

Education, Bodies, and Minds in the Age of Steel

***Defines the psychology of human-computer interaction, showing how to span the gap between science & application. Studies the behavior of users in interacting with computer systems.***

***This book describes and evaluates existing models of human performance and their use in the design and evaluation of new human-technology systems. Its primary focus is on the modeling of system operators who perform supervisory and manual control tasks. After an introduction on human performance modeling, the book describes information processing, control theory, task network, and knowledge-based models. It explains models of human performance in aircraft operations, nuclear power plant control, maintenance, and the supervisory control of process control systems, such as oil refineries. The book concludes with a discussion of model parameterization and validation and recommends a number of lines of research needed to strengthen model development and application.***

***Tracing the connections between human-like robots and AI at the site of dehumanization and exploited labor The word robot—introduced in Karel Čapek's 1920 play R.U.R.—derives from rabota, the Czech word for servitude or forced labor. A century later, the play's dystopian themes of dehumanization and exploited labor are being played out in factories, workplaces, and battlefields. In The Robotic Imaginary, Jennifer Rhee traces the provocative and productive connections of contemporary robots in technology, film, art, and literature. Centered around the twinned processes of anthropomorphization and dehumanization, she analyzes the coevolution of cultural and technological robots and artificial intelligence, arguing that it is through the conceptualization of the human and, more important, the***

***dehumanized that these multiple spheres affect and transform each other. Drawing on the writings of Alan Turing, Sara Ahmed, and Arlie Russell Hochschild; such films and novels as Her and The Stepford Wives; technologies like Kismet (the pioneering "emotional robot"); and contemporary drone art, this book explores anthropomorphic paradigms in robot design and imagery in ways that often challenge the very grounds on which those paradigms operate in robotics labs and industry. From disembodied, conversational AI and its entanglement with care labor; embodied mobile robots as they intersect with domestic labor; emotional robots impacting affective labor; and armed military drones and artistic responses to drone warfare, The Robotic Imaginary ultimately reveals how the human is made knowable through the design of and discourse on humanoid robots that are, paradoxically, dehumanized.***

***This book presents comprehensive coverage of the latest advances in research into enabling machines to listen to and compose new music. It includes chapters introducing what we know about human musical intelligence and on how this knowledge can be simulated with AI. The development of interactive musical robots and emerging new approaches to AI-based musical creativity are also introduced, including brain-computer music interfaces, bio-processors and quantum computing. Artificial Intelligence (AI) technology permeates the music industry, from management systems for recording studios to recommendation systems for online commercialization of music through the Internet. Yet whereas AI for online music distribution is well advanced, this book focuses on a largely unexplored application: AI for creating the actual musical content.***

***Lessons from the Flight Deck***

***Cambridge Handbook of Strategy as Practice***

***Addiction by Design***

***Guide for All-Hazard Emergency Operations Planning***

***The Human and the Price of Dehumanized Labor***

***An Approach to Cognitive Engineering***

***Cognitive Ergonomics and Human-Computer Interaction***

*A cross-disciplinary approach is offered to consider the challenge of emerging technologies designed to enhance human bodies and minds. Perspectives from philosophy, ethics, law, and policy are applied to a wide variety of enhancements, including integration of technology within human bodies, as well as genetic, biological, and pharmacological modifications. Humans may be permanently or temporarily enhanced with artificial parts by manipulating (or reprogramming) human DNA and through other enhancement techniques (and combinations thereof). We are on the cusp of significantly modifying (and perhaps improving) the human ecosystem. This evolution necessitates a continuing effort to re-evaluate current laws and, if appropriate, to modify such laws or develop new laws that address enhancement technology. A legal, ethical, and policy response to current and future human enhancements should strive to protect the rights of all involved and to recognize the responsibilities of humans to other conscious and living beings, regardless of what they look like or what abilities they*

*have (or lack). A potential ethical approach is outlined in which rights and responsibilities should be respected even if enhanced humans are perceived by non-enhanced (or less-enhanced) humans as "no longer human" at all.*

*This 1989 book is a distinctive work in the field of human-computer interaction (HCI). Cognitive ergonomics and HCI encompass a wide range of research and development activities in both academic and industrial environments, and this book satisfies a clear need for the dissemination of the knowledge generated by work in progress or completed.*

*Fabricating Modern Societies: Education, Bodies, and Minds in the Age of Steel offers new interdisciplinary and transnational perspectives on industrialization and societal transformation in early-twentieth-century Luxembourg by analyzing social-educational initiatives and various technologies of modernity and their effects.*

*Publisher description*

*Autonomous Horizons*

*The Problem of Human-Machine Communication*

*Human-machine Reconfigurations*

*Rethinking Communication, Technology, and Ourselves*

*The Second Annual Debate of Anthropological Keywords*

*Handbook of Artificial Intelligence for Music*

*Discourse, Tools and Reasoning*

From the Booker Prize winner and bestselling author of Atonement–"a sharply intelligent novel of ideas" (The New York Times) that asks whether a machine can understand the human heart, or whether we are the ones who lack understanding. Set in an uncanny alternative 1982 London–where Britain has lost the Falklands War, Margaret Thatcher battles Tony Benn for power, and Alan Turing achieves a breakthrough in artificial intelligence–Machines Like Me powerfully portrays two lovers who will be tested beyond their understanding. Charlie, drifting through life and dodging full-time employment, is in love with Miranda, a bright student who lives with a terrible secret. When Charlie comes into money, he buys Adam, one of the first generation of synthetic humans. With Miranda's assistance, he codesigns Adam's personality. The near-perfect human that emerges is beautiful, strong, and smart–and a love triangle soon forms. Ian McEwan's subversive, gripping novel poses fundamental questions: What makes us human–our outward deeds or our inner lives? Could a machine understand the human heart? This provocative and thrilling tale warns against the power to invent things beyond our control. Don't miss Ian McEwan's new novel, Lessons, coming in September!

Meant to aid State & local emergency managers in their efforts to develop & maintain a viable all-hazard emergency operations plan. This guide clarifies the preparedness, response, & short-term recovery planning elements that warrant inclusion in emergency operations plans. It offers the best judgment & recommendations on how to deal with the entire planning process -- from forming a planning team to writing the plan. Specific topics of discussion include: preliminary considerations, the planning process, emergency operations plan format, basic plan content, functional annex content, hazard-unique planning, & linking Federal & State operations.

This volume analyzes real in-flight communications to explain the dynamics of knowledge construction. With the use of a grounded theory approach, real-life scenarios for in-depth interviews with aviation informants were developed and analyzed using discourse analysis. The study revealed aspects of tacit knowledge and expertise behavior that develop in mission-critical environments. Among the findings, the author discovered: · Silence is an interactional element and a substantial contributing factor to both completed flights and aviation incidents/accidents · Hesitation is an early reaction when situational awareness is lacking · The aviation sub-cultures contain several distinct micro-cultures which affect professional responsibility and decision making in micro-environments · Human errors should be acknowledged, discussed and repaired by all actors of the flight model · Non-verbal communication in institutional settings and mediated environments is instrumental to safe and efficient operations The results suggest fruitful applications of theory to explore how knowledge is generated in highly structured, high-risk organizational environments, such as hospitals, nuclear plants, battlefields and crisis and disaster locations. Katerinakis explains the emergent knowledge elements in communication command with messages "spoken-heard-understood-applied," from multiple stakeholders... The interplay of theory and real-flight examples, with key interlocutors, creates a valuable narrative both for the expert reader and the lay-person interested in the insights of hospitals, nuclear plants, battlefields, safety and rescue systems, and crisis and disaster locations. Ilias Panagopoulos, PhD Command Fighter Pilot, Col (Ret) Senior Trainer, Joint Aviation Authorities (JAA) Training Organisation Safety Manager, NATO Airlift Management Programme In this path-breaking work, Theodore Katerinakis brings the study of human communication to the airplane cockpit as a knowledge environment. Toward that end, drawing on his own experience with the Air Force and Aviation Authorities and interviews with flight controllers and scores of pilots, Katerinakis both builds on moves beyond human factors research and ecological psychology... It is a work of theoretical value across disciplines and organizational settings and of practical importance as well. His lively narrative adds to translational research by translating knowledge or evidence into action in mission-critical systems. Douglas V. Porpora, PhD Professor of Sociology & Director Communication, Culture and Media Drexel University

The world we live in is increasingly complex. It throws up complex problems. This book is about tackling them. At ThinkPlace, we ' ve pioneered the application of design thinking to complex challenges like climate change, family violence and global malnutrition. We work globally with governments, organisations and communities using a methodology - the Design SystemTM outlined in this book - that has been developed over more than a decade. We bring together different voices and help them to create better futures. If you ' re one of those voices, or would like to be, this book is for you. It ' s part roadmap, part instruction manual, but mostly it ' s a clarion call for a new way of doing things: tackling the world ' s biggest problems in a way that brings people together and produces positive, lasting change.

An Anthropologist in the World of Artificial Intelligence

Plans and Situated Actions

Proceedings of SOHOMA 2018

Through the Interface

A guide to designing in complex systems

Technology and the Threat of a Jobless Future
How Humans Learn to Think Mathematically

**"Since its inception, Artificial Intelligence (AI) has been nurtured by the dream - cherished by some scientists while dismissed as unrealistic by others - that it will lead to forms of intelligence similar or alternative to human life. However, AI might be more accurately described as a range of technologies providing a convincing illusion of intelligence - in other words, not much the creation of intelligent beings, but rather of technologies that are perceived by humans as such. Deceitful Media argues that AI resides also and especially in the perception of human users. Exploring the history of AI from its origins in the Turing Test to contemporary AI voice assistants such as Alexa and Siri, Simone Natale demonstrates that our tendency to project humanity into things shapes the very functioning and implications of AI. He argues for a recalibration of the relationship between deception and AI that helps recognize and critically question how computing technologies mobilize specific aspects of users' perception and psychology in order to create what we call "AI." Introducing the concept of "banal deception," which describes deceptive mechanisms and practices that are embedded in AI, the book shows that deception is as central to AI's functioning as the circuits, software, and data that make it run. Delving into the relationship between AI and deception, Deceitful Media thus reformulates the debate on AI on the basis of a new assumption: that what machines are changing is primarily us, humans. If 'intelligent' machines might one day revolutionize life, the book provocatively suggests, they are already transforming how we understand and carry out social interactions"--**

**How Humans Learn to Think Mathematically describes the development of mathematical thinking from the young child to the sophisticated adult. Professor David Tall reveals the reasons why mathematical concepts that make sense in one context may become problematic in another. For example, a child's experience of whole number arithmetic successively affects subsequent understanding of fractions, negative numbers, algebra, and the introduction of definitions and proof. Tall's explanations for these developments are accessible to a general audience while encouraging specialists to relate their areas of expertise to the full range of mathematical thinking. The book offers a comprehensive framework for understanding mathematical growth, from practical beginnings through theoretical developments, to the continuing evolution of mathematical thinking at the highest level.**

**This book serves as an introduction to HMC as a specific area of study within communication and to the research possibilities of HMC. The research presented here focuses on people's interactions with multiple technologies used within different contexts from a variety of epistemological and methodological approaches.**

**This book considers how agencies are currently figured at the human-machine interface and how they might be imaginatively and materially reconfigured. Contrary to the apparent enlivening of objects promised by the sciences of the artificial, the author proposes that the rhetorics and practices of those sciences work to obscure the performative nature of both persons and things. The question then shifts from debates over the status of humanlike machines to that of how humans and machines are enacted as similar or different in practice and with what theoretical, practical, and political consequences. Drawing on recent scholarship across the social sciences, humanities, and computing, the author argues for research aimed at tracing the differences within specific**

**sociomaterial arrangements without resorting to essentialist divides. This requires expanding our unit of analysis, while recognizing the inevitable cuts or boundaries through which technological systems are constituted.**

**Changing Things**

**The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies**

**Deceitful Media**

**Human Enhancement Technologies and Our Merger with Machines**

**Human-Machine Reconfigurations**

**Quantitative Modeling of Human Performance in Complex, Dynamic Systems**

**Machine Gambling in Las Vegas**

**Software has often been marginalized in accounts of digital cultures and network societies. Although software is everywhere, it is hard to say what it actually is. Cutting Code: Software and Sociality is one of the first books to treat software seriously as a full-blown cultural process and as a subtly powerful material in contemporary communication. From deCSS to Java, from Linux to Extreme Programming, this book analyses software artworks, operating systems, commercial products, infrastructures, and programming practices. It explores social forms, identities, materialities, and power relations associated with software, and it asks how software provokes the re-thinking of production, consumption and distribution as entwined cultural processes. Cutting Code argues that analysis of code as a mosaic of algorithms, protocols, infrastructures, and programming conventions offers valuable insights into how contemporary social formations invent new kinds of personhood and new ways of acting.**

**Human-Machine ReconfigurationsPlans and Situated ActionsCambridge University Press**

**Anthropology has long centered on the human, taking human life as a main focus and exploring multiple ways to be human. In recent years, however, we have also seen the rise of the idea of the Anthropocene and emerging debates on the place of the "post-human." Can and should the human still occupy a privileged position in a universe composed of the nonhuman, the other-than-human, the inhuman, and the trans-human? Reckoning with concepts, practices, and relations across these categories requires that we move beyond classical understandings of humanism, to replace them with a contemporary reworking of the possibilities and limits of anthropological humanism. This timely book is the product of the second Annual Debate of Anthropological Keywords, a collaborative project between HAU, the American Ethnological Society, and L'Homme. The aim of the debate is to reflect critically on keywords and terms that play a pivotal and timely role in discussions of different cultures and societies. This volume brings together leading thinkers to reflect anew on humanism and the anthropological project, with insightful contributions from Cléo Carastro, Didier Fassin, Hugh Gusterson, Saba Mahmood, Carole McGranahan, Joel Robbins, Danilyn Rutherford, and Lucy Suchman.**

**In providing a theoretical framework for understanding human- computer interaction as well as design of user interfaces, this book combines elements of anthropology, psychology, cognitive science, software engineering, and computer science. The framework examines the everyday work practices of users when analyzing and designing computer applications. The text advocates the unique theory that computer application design is fundamentally a collective activity in which the various practices of the participants meet in a process of mutual learning.**

**Service Orientation in Holonic and Multi-Agent Manufacturing**

**Foundations, Advanced Approaches, and Developments for Creativity**

**Research, Innovations and Best Practices**

**The Social Construction of Knowledge in Mission-Critical Environments**

**Design for a Better Future**

**Algo Bots and the Law**

**A Novel**

A compelling case for the re-examination of interface design models is presented by this text's assertion that human behavior is not taken into account in the planning model generally favored by artificial intelligence.

Dr. Greg Zacharias, former Chief Scientist of the United States Air Force (2015-18), explores next steps in autonomous systems (AS) development, fielding, and training. Rapid advances in AS development and artificial intelligence (AI) research will change how we think about machines, whether they are individual vehicle platforms or networked enterprises. The payoff will be considerable, affording the US military significant protection for aviators, greater effectiveness in employment, and unlimited opportunities for novel and disruptive concepts of operations. Autonomous Horizons: The Way Forward identifies issues and makes recommendations for the Air Force to take full advantage of this transformational technology.

Recent decades have seen a dramatic shift away from social forms of gambling played around roulette wheels and card tables to solitary gambling at electronic terminals. Slot machines, revamped by ever more compelling digital and video technology, have unseated traditional casino games as the gambling industry's revenue mainstay. Addiction by Design takes readers into the intriguing world of machine gambling, an increasingly popular and absorbing form of play that blurs the line between human and machine, compulsion and control, risk and reward. Drawing on fifteen years of field research in Las Vegas, anthropologist Natasha Dow Schüll shows how the mechanical rhythm of electronic gambling pulls players into a trancelike state they call the "machine zone," in which daily worries, social demands, and even bodily awareness fade away. Once in the zone, gambling addicts play not to win but simply to keep playing, for as long as possible--even at the cost of physical and economic exhaustion. In continuous machine play, gamblers seek to lose themselves while the gambling industry seeks profit. Schüll describes the strategic calculations behind game algorithms and machine ergonomics, casino architecture and "ambience management," player tracking and cash access systems--all designed to meet the market's

desire for maximum "time on device." Her account moves from casino floors into gamblers' everyday lives, from gambling industry conventions and Gamblers Anonymous meetings to regulatory debates over whether addiction to gambling machines stems from the consumer, the product, or the interplay between the two. Addiction by Design is a compelling inquiry into the intensifying traffic between people and machines of chance, offering clues to some of the broader anxieties and predicaments of contemporary life. At stake in Schüll's account of the intensifying traffic between people and machines of chance is a blurring of the line between design and experience, profit and loss, control and compulsion.
A sociotechnical investigation of ubiquitous computing as a research enterprise and as a lived reality. Ubiquitous computing (or ubicomp) is the label for a “third wave” of computing technologies. Following the eras of the mainframe computer and the desktop PC, ubicomp is characterized by small and powerful computing devices that are worn, carried, or embedded in the world around us. The ubicomp research agenda originated at Xerox PARC in the late 1980s; these days, some form of that vision is a reality for the millions of users of Internet-enabled phones, GPS devices, wireless networks, and "smart" domestic appliances. In Divining a Digital Future, computer scientist Paul Dourish and cultural anthropologist Genevieve Bell explore the vision that has driven the ubiquitous computing research program and the contemporary practices that have emerged—both the motivating mythology and the everyday messiness of lived experience. Reflecting the interdisciplinary nature of the authors' collaboration, the book takes seriously the need to understand ubicomp not only technically but also culturally, socially, politically, and economically. Dourish and Bell map the terrain of contemporary ubiquitous computing, in the research community and in daily life; explore dominant narratives in ubicomp around such topics as infrastructure, mobility, privacy, and domesticity; and suggest directions for future investigation, particularly with respect to methodology and conceptual foundations.
Mess and Mythology in Ubiquitous Computing

Technology, Automation, and the Regulation of Futures and Other Derivatives
Human-Machine Communication
Information Processing and Human-machine Interaction
Rise of the Robots
Studying Those who Study Us

Now in its second edition, this extended and thoroughly updated handbook introduces researchers and students to the growing range of theoretical and methodological perspectives being developed in the vibrant field of strategy as practice. With new authors and additional chapters, it shows how the strategy as practice approach in strategic management moves away from disembodied and asocial studies of firm assets, technologies and practices to explore and explain the contribution that strategizing makes to people working at all levels of an organization. It breaks down many of the traditional paradigmatic barriers in strategy to investigate who the strategists are, what they do, how they do it, and what the consequences or outcomes of their actions are. This essential work summarizes recent developments in the field while presenting a clear agenda for future research.
Diana E. Forsythe was a leading anthropologist of science, technology, and work, and especially of the field of artificial intelligence. This volume collects her best-known essays, along with other major works

that remained unpublished upon her death in 1997. The essays proceed as a series of developing variations on the key questions that still confront science and technology studies today. What assumptions do expert systems designers make about users, and about knowledge more broadly, when they build software? How should humans interact with computers, and how do they, really? Why do computing firms hire anthropologists to study human-computer interaction, and what do anthropologists find once they are hired? And how and why are traditional power asymmetries between men and women produced and maintained in engineering firms and laboratories? The book is not only a significant anthropological study of artificial intelligence and informatics, but is also an exemplar of how reflexive ethnography should be done. Among several pioneering strands of thought, it investigates the roles of gender and power in computer engineering, looking at the cultural mechanisms that support the persistent male domination of engineering, and analyzing the laboratory as a fictive kin group that reproduces gender asymmetries.

This proceedings book presents selected peer-reviewed papers from the 9th International Workshop on 'Service Oriented, Holonic and Multi-agent Manufacturing Systems for the Industry of the Future' organized by Universitat Politècnica de València, Spain, and held on October 3–4, 2019. The SOHOMA 2019 Workshop aimed to foster innovation in the digital transformation of manufacturing and logistics by promoting new concepts and methods and solutions through service orientation in holonic and agent-based control with distributed intelligence. The book provides insights into the theme of the SOHOMA'19 Workshop – 'Smart anything everywhere – the vertical and horizontal manufacturing integration, ' addressing 'Industry of the Future' (IoF), a term used to describe the 4th industrial revolution initiated by a new generation of adaptive, fully connected, analytical and highly efficient robotized manufacturing systems. This global IoF model describes a new stage of manufacturing, that is fully automatized and uses advanced information, communication and control technologies such as industrial IoT, cyber-physical production systems, cloud manufacturing, resource virtualization, product intelligence, and digital twin, edge and fog computing. It presents the IoF interconnection of distributed manufacturing entities using a 'system-of-systems' approach, discussing new types of highly interconnected and self-organizing production resources in the entire value chain; and new types of intelligent decision-making support based on from real-time production data collected from resources, products and machine learning processing. This book is intended for researchers and engineers working in the manufacturing value chain, and specialists developing computer-based control and robotics solutions for the 'Industry of the Future'. It is also a valuable resource for master's and Ph.D. students in engineering sciences programs.

This book gathers the peer-reviewed papers presented at the 8th edition of the International Workshop "Service Orientation in Holonic and Multi-Agent Manufacturing – SOHOMA'18" held at the University of Bergamo, Italy on June 11–12, 2018. The objective of the SOHOMA annual workshops is to foster innovation in smart and sustainable manufacturing and logistics systems by promoting new concepts, methods and solutions that use service orientation of agent-based control technologies with distributed intelligence. Reflecting the theme of SOHOMA'18: "Digital transformation of manufacturing with agent-based control and service orientation of Internet-scale platforms", the research included focuses on how the digital transformation, as advocated by the "Industry 4.0", "Industrial Internet of Things", "Cyber-Physical Production Systems" and "Cloud Manufacturing" frameworks, improves the efficiency, agility and sustainability of manufacturing processes, products, and services, and how it relates to the interaction between the physical and informational worlds, which is implemented in the virtualization of products, processes and resources managed as services.

Artificial Intelligence and Social Life After the Turing Test

Perspectives on Design and Digital Communication II

Being Human in a Hyperconnected Era

Machines Like Me

Humanism

The Onlife Manifesto

Software and Sociality

*What is the impact of information and communication technologies (ICTs) on the human condition? In order to address this question, in 2012 the European Commission organized a research project entitled The Onlife Initiative: concept reengineering for rethinking societal concerns in the digital transition. This volume collects the work of the Onlife Initiative. It explores how the development and widespread use of ICTs have a radical impact on the human condition. ICTs are not mere tools but rather social forces that are increasingly affecting our self-conception (who we are), our mutual interactions (how we socialise); our conception of reality (our metaphysics); and our interactions with reality (our agency). In each case, ICTs have a huge ethical, legal, and political significance, yet one with which we have begun to come to terms only recently. The impact exercised by ICTs is due to at least four major transformations: the blurring of the distinction between reality and virtuality; the blurring of the distinction between human, machine and nature; the reversal from information scarcity to information abundance; and the shift from the primacy of stand-alone things, properties, and binary relations, to the primacy of interactions, processes and networks. Such transformations are testing the foundations of our conceptual frameworks. Our current conceptual toolbox is no longer fitted to address new ICT-related challenges. This is not only a problem in itself. It is also a risk, because the lack of a clear understanding of our present time may easily lead to negative projections about the future. The goal of The Manifesto, and of the whole book that contextualises, is therefore that of contributing to the update of our philosophy. It is a constructive goal. The book is meant to be a positive contribution to rethinking the philosophy on which policies are built in a hyperconnected world, so that we may have a better chance of understanding our ICT-related problems and solving them satisfactorily. The Manifesto launches an open debate on the impacts of ICTs on public spaces, politics and societal expectations toward policymaking in the Digital Agenda for Europe's remit. More broadly, it helps start a reflection on the way in which a hyperconnected world calls for rethinking the referential frameworks on which policies are built.*

*A provocative attempt to think about what was previously considered unthinkable: a serious philosophical case for the rights of robots. We are in the midst of a robot invasion, as devices of different configurations and capabilities slowly but surely come to take up increasingly important positions in everyday social reality—self-driving vehicles, recommendation*

*algorithms, machine learning decision making systems, and social robots of various forms and functions. Although considerable attention has already been devoted to the subject of robots and responsibility, the question concerning the social status of these artifacts has been largely overlooked. In this book, David Gunkel offers a provocative attempt to think about what has been previously regarded as unthinkable: whether and to what extent robots and other technological artifacts of our own making can and should have any claim to moral and legal standing. In his analysis, Gunkel invokes the philosophical distinction (developed by David Hume) between "is" and "ought" in order to evaluate and analyze the different arguments regarding the question of robot rights. In the course of his examination, Gunkel finds that none of the existing positions or proposals hold up under scrutiny. In response to this, he then offers an innovative alternative proposal that effectively flips the script on the is/ought problem by introducing another, altogether different way to conceptualize the social situation of robots and the opportunities and challenges they present to existing moral and legal systems.*

*This title was first published in 2002: This field guide assesses two views of human error - the old view, in which human error becomes the cause of an incident or accident, or the new view, in which human error is merely a symptom of deeper trouble within the system. The two parts of this guide concentrate on each view, leading towards an appreciation of the new view, in which human error is the starting point of an investigation, rather than its conclusion. The second part of this guide focuses on the circumstances which unfold around people, which causes their assessments and actions to change accordingly. It shows how to "reverse engineer" human error, which, like any other componant, needs to be put back together in a mishap investigation.*

*Human learning in the digital era*

*Robot Rights*

*The Robotic Imaginary*

*The Future of Objects in a Digital World*

*The Psychology of Human-Computer Interaction*