

ALGORITHMIC ORGANIZING

Edited by Vern L. Glaser, Christine Moser,
Deborah A. Anderson and P. Devereaux Jennings

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RESEARCH IN THE
SOCIOLOGY OF ORGANIZATIONS

VOLUME 95

ALGORITHMIC ORGANIZING

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ALGORITHMIC ORGANIZING

EDITED BY

VERN L. GLASER

University of Alberta, Canada

CHRISTINE MOSER

Vrije Universiteit Amsterdam, The Netherlands

DEBORAH A. ANDERSON

University of Alabama, USA

and

P. DEVEREAUX JENNINGS

University of Alberta, Canada



United Kingdom – North America – Japan
India – Malaysia – China


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INVESTOR IN PEOPLE

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ABOUT THE EDITORS

Vern L. Glaser is a Professor of Entrepreneurship and Family Enterprise in the Department of Strategy, Entrepreneurship and Management at the Alberta School of Business. He is currently the Academic Director for the University of Alberta's Centre for Entrepreneurship and Family Enterprise and the Alberta Business Family Institute. Professor Glaser studies the question: How do organizations strategically change practices and culture? His research focuses on understanding how organizations use analytics, arguments, and analogies to change routines and to create new capabilities. His research has been published in journals including *Academy of Management Review*, *Academy of Management Journal*, *Academy of Management Annals*, *Journal of Management Studies*, *MIT Sloan Management Review*, *Organization Science*, *Organization Studies*, and *Organization Theory*, among others. Professor Glaser earned his Ph.D. from the University of Southern California, his M.B.A. from Duke University's Fuqua School of Business and his B.A. in Economics from the University of California at Los Angeles.

Christine Moser is a Professor of Sustainable Organizing at the Vrije Universiteit Amsterdam. Her research is on the role of technology in social interaction, corporate social responsibility (CSR), and knowledge flows in social networks. She is currently an Associate Editor for *Academy of Management Learning & Education*, and incoming Chair of the European Group for Organizational Studies (EGOS). Her work has been published among others in *Academy of Management Review*, *Academy of Management Learning and Education*, *MIT Sloan Management Review*, *Research Policy*, *Human Relations*, *Organization Studies*, *Business & Society*, *New Media and Society*, *Innovation: Organization and Management*, and *Research in the Sociology of Organizations*. Professor Moser holds a Bachelor in Music from the Conservatorium van Amsterdam, and received her Ph.D. and M.Sc. from Vrije Universiteit Amsterdam.

Deborah A. Anderson is an Assistant Professor in Strategic Management in the Honors College of the University of Alabama. She currently serves as the Treasurer of the Organization and Management Theory Division of the Academy of Management. For her research, she uses ethnographic and historical methods to study technology, work, and organizations. Professor Anderson is especially interested in how expertise and professional judgment are influenced by and organized during the implementation of both new and simplified technologies. She typically studies highly regulated contexts, such as accounting and finance. She earned her D.Phil. from the University of Oxford, her Master of Tax

Accounting from Alabama's Manderson Graduate School of Business, and her B.A. in Philosophy and B.S. in Accounting from the University of Alabama.

P. Devereaux Jennings is a Professor of Strategy, Entrepreneurship and Management at the Alberta School of Business. He is a Co-coordinator of the Interpretive Data Science (IDeaS) Group and former Director of the Canadian Centre for CSR. He has published research on a wide variety of organizational topics, ranging from M-form use, entrepreneurial storytelling for resource acquisition, hybrid startups in nanotech, and AI ecosystem cultural holes to corporate engagement with environmental regulation and Anthropocene issues. Dev has extensive editorial experience, including work as associate editor at *Academy of Management Review*, *Administrative Science Quarterly*, and *Journal of Business Venturing*, and co-editor of *Strategic Organization*. He received his Ph.D. and M.A. from Stanford University and his A.B. from Dartmouth College.

ABOUT THE CONTRIBUTORS

Angela Aristidou speaks, writes, and advises about the real-life deployment of emerging digital technologies for public good. Her research spans the contexts of health, higher education, nonprofit, and humanitarian aid, in the UK, United States, Canada, and several Asian countries. Her current work on the deployment of Artificial Intelligence tools has been honored through a Stanford CASBS Award and a generous UK Research Innovation Award. She specializes in Strategy and Entrepreneurship at University College London's School of Management, is a Fellow at the Stanford Digital Economy Lab and the Stanford Institute for Human-Centered AI, and holds degrees from Cambridge and Harvard.

Timothy R. Hannigan is an Associate Professor of Strategy and Organization and the Father Edgar Thivierge Chair in Canadian Business at the University of Ottawa's Telfer School of Management. His research examines the early moments of markets, fields, and ecosystems with a cultural-relational lens. He has applied this lens to nascent product markets, entrepreneurial possibility formation, and the genesis of social evaluations. More specifically, he examines the interface of organizational imaginaries and how they materialize. His most recent work focuses on prefigurative organizing and governance with blockchain fields, as well as studying epistemic risks and using generative AI with integrity in organizations. His research has been published in the top journals in the field including *Academy of Management Annals*, *Academy of Management Review*, *Strategic Management Journal*, *Organization Studies*, *Research Policy*, *Harvard Business Review*, *Organization Theory*, and *Research in the Sociology of Organizations*.

Konstantin Hopf is Head of the research group "Machine Learning and Data Work in organizations" and is a Lecturer in Information Systems at the University of Bamberg. His research focuses on the development of machine learning methods, their embedding in operational processes, and the interplay between human and algorithmic decision-making. He explores these topics in the sustainability contexts energy and education. His contributions in *The Journal of Strategic Information Systems*, *California Management Review*, *Electronic Markets*, and leading Information Systems conferences received several best paper awards. Beyond academia, he regularly speaks at practitioner conferences and contributes to industry magazines, bridging research and practice.

Mayur Joshi is an Assistant Professor of Information Systems at the University of Ottawa's Telfer School of Management. He holds a Ph.D. from Western University's Ivey Business School. His research investigates how digital technologies shape and are shaped by organizational practices, processes, and strategies, with a particular focus on the relational dynamics of AI development and deployment in organizations. His research has appeared in, among other outlets, *MIT Sloan Management Review* and the *Journal of the Association for Information Systems*.

Lise Justesen is Associate Professor at the Department of Organization, Copenhagen Business School. Her research interests include the interplay between management technologies and organization, public sector digitalization, and actor-network theory. She has published in journals such as *Accounting, Organizations and Society, Organization*, and *Organization Theory*, and she is the co-editor of the volume *Making Things Valuable* published at Oxford University Press. She is co-PI of the research project *Valuing Invisible Work: From Efficiency Ambitions to Digitalization Projects in Practice*.

Lena Kostuj is a Ph.D. candidate at Leuphana University of Lüneburg, affiliated with the Institute of Management & Organization (IMO) and the Leuphana Center for Organization & Social Transformation (LOST). Her research explores the intersection of organization, communication, and digital cultures, with a critical focus on alternative forms of organizing. She is especially interested in how practices and communication shape digital (and) cultural spaces, as well as the role of affect and conspiracy thinking in contemporary organizational dynamics. Her work examines how individuals and groups navigate algorithmic environments and media infrastructures.

Bomi Kim is an Assistant Professor in the Department of Entrepreneurship, Innovation and Technology at the Stockholm School of Economics. She obtained her Ph.D. in Information Systems & Organization Studies from the KIN Center for Digital Innovation. Her research seeks to understand the impact of emerging digital technologies like artificial intelligence on how people work and organize in complex and collaborative settings such as healthcare. Her research has won the Best Student Paper Award in the CTO division at the Academy of Management Annual Meeting in 2022.

Ursula Plesner is Associate Professor at the Department of Organization, Copenhagen Business School. She conducts research on digitalization and organization, mostly in a public sector context. Her work has been published in journals such as *Organization, M@n@gement, Strategic Organization, International Journal of Management Reviews*, and *Organization Theory*. She is the co-author of *Digital Organizing – Revisiting Themes in Organization Studies*. She is co-PI of the research project *Valuing Invisible Work: From Efficiency Ambitions to Digitalization Projects in Practice*.

Pauline C. Reinecke is an Assistant Professor at the Leuphana University of Lüneburg. Her research and teaching focus on entrepreneurial strategies for addressing societal challenges, particularly in the areas of datafication, platforms, AI, sustainable resource use, and reducing social inequality. She examines how strategic, interdisciplinary approaches that promote collaboration across businesses, policymakers, NGOs, and civil society can address these challenges. Her work has been published in the *Journal of Management Studies*, *Journal of Information Technology*, *Journal of Management Inquiry*, *Journal of Business Economics*, and the *International Journal of Physical Distribution & Logistics Management*.

Shivaang Sharma is a Ph.D. candidate and Adjunct Lecturer at University College London (UCL) School of Management. His research focuses on human–AI collaboration and AI ethics in extreme contexts such as humanitarian crises. As an engaged scholar, he actively collaborates with United Nations agencies and non-profit organizations to translate research findings into practice and directly participates in the implementation of Artificial Intelligence (AI) technologies in crisis contexts across Asia and Africa.

Arisa Shollo is an Associate Professor in the Department of Digitalization at Copenhagen Business School. Her research focuses on the use of data and information technologies in organizational decision-making processes, with particular emphasis on Artificial Intelligence (AI) and Business Intelligence (BI) systems. She has published her work in international journals such as *Journal of Strategic Information Systems*, *Information Systems Journal*, *California Management Review*, and presented her work at a number of major international conferences, including ICIS, ECIS, AoM, EGOS and HICSS among others.

Bryan Spencer is an Assistant Professor in the Department of Strategy, Entrepreneurship and Management at the Alberta School of Business, University of Alberta. He is an organizational ethnographer whose research explores the processes through which emerging technologies influence work, occupations, and organizations. He has published research in journals including *Administrative Science Quarterly*, *Scandinavian Journal of Management*, and *Industrial and Corporate Change*. He earned his Ph.D. in Management from the Frankfurt School of Finance and Management.

Marta Stelmaszak is an Assistant Professor of Information Systems in the Isenberg School of Management at the University of Massachusetts Amherst. She holds a Ph.D. from the London School of Economics and Political Science and an M.Sc. in Data Science from Birkbeck, University of London. Marta's research interests concern digital data and their responsible, sustainable, and ethical management in organizations. Her research has appeared in, among other outlets, *MIS Quarterly*, *Information Systems Research*, and *Journal of the Association for Information Systems*.

Verena Timmer is the Head of Research at the applied science-oriented Centre for Sustainable Leadership at the Witten/Herdecke University. Her research focuses on how organizations tackle grand challenges, manage sustainability, navigate datafication, and implement algorithmic organizing. She is particularly interested in change and transformation processes and how organizations manage increasing complexity. Her work examines how management tools can support organizations in integrating sustainability into their operations – not only to mitigate negative corporate impacts on issues like biodiversity but also to drive positive change. Additionally, she explores how businesses strategically adapt to the "twin transition" – the simultaneous shift toward digitalization and sustainability – to strengthen corporate resilience. Her research has been published in the *Journal of Cleaner Production* and various practitioner-oriented outlets.

Hannah Trittin-Ulbrich is Professor of Business Administration, in particular Business in Society at Leuphana University Lüneburg, Germany. She conducts research on corporate social responsibility (CSR), CSR communication, corporate digital responsibility (CDR), new forms of work and organizing, and the role of change agents for sustainability for the sustainability transformation of organizations. Hannah Trittin-Ulbrich's work has been published in the *Journal of Management Studies*, *Organization*, *Business & Society*, *Journal of Management Inquiry*, *Journal of Business Ethics*, among others.

Rodrigo Valadão is the Head of Business Development for Conventional Energy and Biomass at Porto do Açu, the largest industrial port complex in Brazil and a key player in energy transition efforts. Before returning to the corporate sector, Rodrigo earned a Ph.D. in Strategic Management from the University of Alberta (Canada), specializing in innovation ecosystems and emerging technologies. He also served as an assistant professor of entrepreneurship and innovation at NEOMA Business School (France). Over an 18-year corporate career, Rodrigo has honed his expertise in corporate strategy, business development, and operations across Brazil, Latin America, and global markets. Previously, he participated in General Electric's global XLP executive leadership program, leading transformative initiatives in a 250,000+ employee organization. His work is centered on innovation, growth, and resilience in emerging industries, and he has consistently demonstrated his ability to lead multimillion-dollar projects while leveraging novel technologies and business models for strategic advantage.

Dr Anne L. Washington investigates the governance of emerging digital technologies. She is Director of the Digital Interests Lab and an Associate Professor of Data Policy at New York University. As a leading voice in scholarship on public interest technology, her writing focuses on widely shared technical infrastructures. As a computer scientist trained in organizational ethnography, she unites inductive qualitative research methodology with technology tools. In addition to generous international and domestic funding, the National Science Foundation has recognized her work multiple times including a prestigious five-year NSF

CAREER award. Before completing her doctorate, she worked at Barclays Global Investors, the Congressional Research Service at the Library of Congress, and Apple Computers. She completed a Undergraduate Computer Science degree from Brown University and a Master's degree in Library and Information Science, MLIS, from Rutgers University. She holds a Doctorate from The George Washington University School of Business in Information Systems and Technology Management. She testified before Congress on the ethics of artificial intelligence in finance and served as Chair of the 2020 AAAI/ACM Conference on AI, Ethics, and Society. She is a 2024–2025 Fellow at the Center for Advanced Study in the Behavioral Sciences (CASBS), Stanford University. Her book, *Ethical Data Science: Prediction in the Public Interest*, was published in 2023 by Oxford University Press.

Thomas Wrona is Professor and Chair of the Institute for Strategic and International Management at Hamburg University of Technology (TUHH). His research explores how organizations engage with technological and environmental transitions, balancing competing logics, structural constraints, and evolving epistemic regimes in their strategic and organizational practices. In addition, he examines methodological questions in qualitative research, such as how theory and technology facilitate abductive reasoning in empirical inquiry. He has published in journals such as *Journal of Management Studies*, *Journal of Strategy and Management*, *Journal of Business Economics*, *European Management Journal*, and the *International Journal of Physical Distribution & Logistics Management*, among others. He has also authored several books, including textbooks on strategic management.

FOREWORD: RESEARCH IN THE SOCIOLOGY OF ORGANIZATIONS

Research in the Sociology of Organizations (RSO) publishes cutting-edge empirical research and theoretical papers that seek to enhance our understanding of organizations and organizing as pervasive and fundamental aspects of society and economy. We seek provocative papers that push the frontiers of current conversations, that help to revive old ones, or that incubate and develop new perspectives. Given its successes in this regard, RSO has become an impactful and indispensable fount of knowledge for scholars interested in organizational phenomena and theories. RSO is indexed and ranks highly in Scopus/SCImago as well as in the *Academic Journal Guide* published by the Chartered Association of Business Schools.

As one of the most vibrant areas in the social sciences, the sociology of organizations engages a plurality of empirical and theoretical approaches to enhance our understanding of the varied imperatives and challenges that these organizations and their organizers face. Of course, there is a diversity of formal and informal organizations – from for-profit entities to nonprofits, state and public agencies, social enterprises, communal forms of organizing, non-governmental associations, trade associations, publicly traded, family owned and managed, private firms – the list goes on! Organizations, moreover, can vary dramatically in size from small entrepreneurial ventures to large multinational conglomerates to international governing bodies such as the United Nations.

Empirical topics addressed by RSO include the formation, survival, and growth of organizations; collaboration and competition between organizations; the accumulation and management of resources and legitimacy; and how organizations or organizing efforts cope with a multitude of internal and external challenges and pressures. Particular interest is growing in the complexities of contemporary organizations as they cope with changing social expectations and as they seek to address societal problems related to corporate social responsibility, inequality, corruption and wrongdoing, and the challenge of new technologies. As a result, levels of analysis reach from the individual to the organization, industry, community and field, and even the nation-state or world society. Much research is multilevel and embraces both qualitative and quantitative forms of data.

Diverse theory is employed or constructed to enhance our understanding of these topics. While anchored in the discipline of sociology and the field of management, RSO also welcomes theoretical engagement that draws on other disciplinary conversations – such as those in political science or economics, as well as work from diverse philosophical traditions. RSO scholarship has helped push forward a plethora of theoretical conversations on institutions and institutional

change, networks, practice, culture, power, inequality, social movements, categories, routines, organization design and change, configurational dynamics, and many other topics.

Each volume of RSO tends to be thematically focused on a particular empirical phenomenon (e.g., creative industries, multinational corporations, and entrepreneurship) or theoretical conversation (e.g., institutional logics, actors and agency, and microfoundations). The series publishes papers by junior as well as leading international scholars and embraces diversity on all dimensions. If you are scholar interested in organizations or organizing, I hope you find RSO to be an invaluable resource as you develop your work.

Professor Michael Lounsbury
Series Editor, *Research in the Sociology of Organizations*
Canada Research Chair in Entrepreneurship & Innovation
University of Alberta

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INTRODUCTION: ALGORITHMIC ORGANIZING

Vern L. Glaser^a, Christine Moser^b, Deborah A. Anderson^c
and P. Devereaux Jennings^a

^aAlberta School of Business, University of Alberta, Canada

^bVrije Universiteit Amsterdam, The Netherlands

^cUniversity of Alabama, USA

ABSTRACT

Volume 95 of Research in the Sociology of Organizations explores the phenomenon of “algorithmic organizing,” the embedding of data-driven computational processes into organizational structures, processes, and everyday work. Through diverse empirical studies across four thematic sections, the contributors in this volume reveal how: (a) data scientists craft algorithmic solutions, (b) organizations transform for algorithmic readiness, (c) users navigate algorithmic encounters, and (d) researchers develop new methodological approaches. Together, the papers highlight that algorithmic organizing involves more than implementing predictive models – it requires a deep grasp of how algorithms are embedded within organizational structures, processes, and social practices. This collection advances our scientific understanding of algorithms “in the wild” while offering practical insights for managing the increasing entanglement of computational processes with organizational life.

Keywords: Algorithms; artificial intelligence; sociomateriality; algorithmic management; data science; human–machine interaction

Algorithmic Organizing

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Algorithms are ubiquitous in everyday life and organizing. Few work processes and operations function without at least some algorithmic interaction; indeed, algorithms play key roles in online recommendations, financial transactions, and logistics workflows, to name but a few examples. The term “algorithm” itself derives from the Latinized translation of the last name of Persian mathematician Muhammad ibn Musa al-Kharizmi (c. 780–850 CE) as “Algorizmi,” initially referring to calculations using Indian numerals and evolving to refer to arithmetic more generally (Daston, 2022). Over time, “algorithm” came to denote “a finite set of rules which gives a sequence of operations for solving a specific type of problem” with five particular features: finiteness, definiteness, input, output, and effectiveness (Daston, 2022, p. 85). This conceptual evolution underscores how algorithms have broadened from arithmetic procedures to a wide variety of computational processes now embedded in countless organizational and personal contexts.

In recent years, this longstanding yet often-invisible backbone of digital infrastructure has become increasingly salient, propelled by milestones like Rosenblatt’s perceptron in 1957, IBM’s Deep Blue in 1997, the invention of the transformer model (Vaswani et al., 2017), and most recently the late-2022 launch of ChatGPT and the corresponding explosive rise of generative large language models (LLMs) (Zhao et al., 2023). Indeed, algorithms, including LLMs as well as a wide variety of machine learning (ML) and other algorithms, have not only captured consumer interest, but also spawned heated discourse about their organizational potential (Berg et al., 2023; Hinds & von Krogh, 2024) and their capacity to transform management research itself (Kulkarni et al., 2024; Lindebaum et al., 2024). While some celebrate the novel capabilities and efficiency gains such algorithmic models promise (e.g., Agrawal et al., 2022; Davenport, 2018), others caution that widespread data-tracking and AI-driven analytics risk entrapping users in dystopian cycles of digital surveillance (e.g., Ngwenyama et al., 2024; Zuboff, 2019, 2022). Reflecting these tensions, the integration of algorithmic tools in organizational settings can spark both admiration for their immediate utility and anxiety regarding ethical, social, and existential consequences (Glaser et al., 2024; Raisch & Krakowski, 2021). For instance, scholars have begun to question the shifting balance between human and algorithmic judgment, raising concerns about the erosion of moral reasoning if vital decisions are delegated to machines (Moser et al., 2022a). Collectively, these debates signal that while algorithms have long been part of our world, their rapid transformation and heightened visibility demand renewed scrutiny of their broader impacts.

While scholars in technical fields such as computer science continue to refine algorithms’ computational power – improving model accuracy, scalability, and speed – management and organization scholars have increasingly turned their attention to how such technologies are actually used in practice (Christin, 2020; Hillebrand et al., 2025). For instance, scholars have documented how algorithms can create novel forms of organizational control that spark worker resistance, highlighting the social frictions that arise when automated decision-making systems are used to control organizational routines (e.g., Cameron, 2024; Curchod et al., 2020; Kellogg et al., 2020; Newlands, 2021). Along similar lines, scholars have shown how professionals in different industries deliberately integrate ML algorithms into their workflows without sacrificing professional standards,

thereby negotiating algorithmic jurisdiction (e.g., [Faulconbridge et al., 2024](#); [Glaser, 2017](#); [Lebovitz et al., 2022](#); [Pachidi et al., 2021](#)). These real-world adoption challenges underscore that studying algorithms' practical consequences often requires attention to cultural, institutional, and relational factors beyond technical architectures, demanding new frameworks for managing tasks and organizations that defy purely technical solutions ([Hinds & von Krogh, 2024](#); [Stark & van den Broeck, 2024](#)). This organizational focus on algorithms thus sharpens management researchers' attention for a more comprehensive and holistic understanding of the impacts of algorithmic technologies on organizing.

We use the term algorithmic organizing to capture how powerful data-driven technologies – sometimes described as number crunching on steroids on steroids – are deeply embedded within organizational structures, routines, and social practices ([Glaser et al., 2024, 2025](#); [Moser et al., 2022a](#)). Rather than viewing algorithms as purely technical, instrumental, or external add-ons, a perspective that continues to dominate the broader debate around technology in business and society ([den Hond & Moser, 2023](#)), the perspective put forward in this volume draws on socio-materiality ([Orlikowski, 2007](#); [Orlikowski & Scott, 2008](#)) and assemblage theory ([Glaser et al., 2021](#)) to develop theories that appreciate how the technological and the social are co-constituted – an ongoing entanglement of human expertise, culture, and evolving computational processes. By appreciating the different manners in which algorithms can profoundly transform the agency of actors and organizations ([Jarrahi, 2018](#); [Murray et al., 2021](#)), studies of algorithmic processes in situ can reveal unanticipated effects – such as how algorithmic routines create dynamic inertia ([Omidvar et al., 2023](#)) or how opaque AI technologies can spark resistance and adaptation among professionals ([Lebovitz et al., 2022](#)). Taken together, these insights underscore that management scholars must develop theories of algorithmic organizing that incorporate the social, political, and technical contexts shaping how algorithms actually function and transform organizational life.

To illustrate, as algorithms increasingly function as decision-makers or gatekeepers – whether by determining resource allocations, evaluating job candidates, or mediating professional expertise – organizations face profound questions about accountability, transparency, and moral judgment. For instance, algorithmic systems can amplify societal biases if fairness and privacy principles are not explicitly designed into these technologies, underscoring the need for more socially aware algorithmic development ([Kearns & Roth, 2019](#)). In professional contexts, ML adoption can challenge long-standing norms of autonomy, revealing tensions between external AI mandates and professional identity ([Faulconbridge et al., 2024](#)). At the same time, workers often find themselves entangled in opaque evaluation systems – what [Rahman \(2021, p. 945\)](#) described as an “invisible cage” – where experimentation and constrained engagement become coping strategies to navigate uncertain performance metrics. These concerns grow even more pronounced in high-stakes decisions, where delegating moral reasoning to machine calculations can erode essential human judgment ([Moser et al., 2022b](#)) and hamper the development of professional judgment ([Anderson, 2021](#)). Moreover, strict adherence to technical efficiency may inadvertently crowd out broader human values, prompting calls for human oversight to retain a richer plurality of organizational values and goals, and ethical considerations ([Lindebaum et al., 2022](#);

2023). As accountability structures blur and new forms of algorithm–human collaboration emerge, issues of worker autonomy, organizational consent, and responsible adoption rise to the forefront, thus reinforcing that algorithmic organizing is predominantly a sociological, psychological, and political phenomenon rather than a purely technical one.

Since 2019, the Interpretive Data Science (IDeaS) Working Group has convened management scholars interested in algorithmic technologies – initially focusing on how such tools might support new research methods. Over time, the group’s attention shifted toward qualitative explorations of the organizational use of, and engagement with, algorithms, culminating in workshops held in 2023 and 2024 at the University of Alberta. These gatherings underscored the need to investigate algorithmic organizing from multiple disciplinary angles, prompting the collection of studies featured in this volume.

Organized into four thematic sections (see [Table 1](#) for a summary of papers), the volume begins by examining the role of data science in organizations, highlighting the creative, improvisational, and inherently social nature of data science work. In the second section, the volume turns to examine the transformations that organizations need to undergo to leverage algorithmic technologies effectively, highlighting tensions related to legitimacy and professionalism. The third section examines how everyday users encounter algorithms, revealing how user experiences and platform logics intertwine in often opaque or disruptive ways. The fourth section addresses the important topic of methods, providing approaches and techniques for studying algorithmic organizing “in the wild.” Finally, we reflect in an epilogue on our own experiences using AI to augment the editorial review process. By teasing out the differences between a traditional review process and ours, where AI was part of the editorial assemblage, we formulate tentative expectations for the future of academic reviewing.

OVERVIEW OF THE VOLUME

Algorithmic Organizing and Data Scientists

The first section of the volume focuses on the role that data scientists play in algorithmic organizing, building on the introductory discussion of how powerful computational processes are increasingly woven into everyday organizational life. As the introduction highlights, algorithms are no longer confined to the background of technical systems; instead, they have become vital participants in shaping work processes, distributing agency, and mediating decision-making. Data scientists, in turn, serve as translators, tinkerers, and creative problem-solvers – bridging the gap between abstract computational potential and the messy realities of business contexts. The two papers in this section flesh out how data scientists enact this bridging role in practice, showing that these professionals neither use algorithms as static solutions nor rely on prefabricated inputs. Rather, they operate in an improvisational, craft-like manner, perpetually adjusting and assembling the data and tools that become embedded within organizational structures. Below we introduce them in more detail in sequence.

Table 1. A Summary of Papers in the Volume.

Section	Author(s)	Title	Research Question	Methods	Key Findings/Contributions
Algorithmic organizing and data scientists	Hopf, Joshi, Shollo, and Stelmaszak	Data-based craft: How data scientists craft their data, models, and products	How do data scientists iteratively shape “materials” (data), “tools” (algorithms), and “products” (analytics outputs) in a craft-like manner?	65 in-depth interviews across 25 organizations; grounded theory	Introduces “data-based craft,” showing how data scientists continuously rework data, refine algorithms, and deliver products that remain in flux – challenging static views of technical craft
	Valadão, Glaser, and Hannigan	Assembling Frankensteins: How data scientists stitch together provisional artifacts to generate novel insights	In what ways do data scientists create and refine algorithms as evolving “assemblages” or “Frankensteins,” relying on protean tools and communal knowledge?	Multi-method qualitative study (interviews, observation of industry events, archival data)	Depicts how data scientists combine code snippets, libraries, and data sets in improvised ways, emphasizing the ad hoc, iterative nature of building algorithms, rather than a linear, finalized design process
Transforming organizations for algorithmic readiness	Plesner and Justesen	Making organizations algorithm-ready: Algorithmic organizing through techno-organizational scripts	What redesigns and role shifts occur as an organization prepares for and integrates an algorithm, and how do “techno-organizational scripts” evolve in practice?	Ethnographic fieldwork in a public debt collection center	Shows that implementing an algorithm requires iterative “rescripting” of both the technology and existing roles, highlighting tensions between efficiency mandates and professional discretion
	Washington	Machine-readable legitimacy: An ethnography of regulatory technology	How do continuous data flows (RegTech) reshape financial compliance and the process of securing legitimacy from regulators?	Longitudinal ethnography of industry associations and U.S. regulators (2013–2020)	Develops “machine-readable legitimacy,” revealing that real-time data pipelines move compliance from a periodic, document-based event to an ongoing, algorithmic process negotiated among vendors, industry, and regulators
Opening up algorithmic encounters	Kostuj and Trittin-Ulbrich	Making sense of glitches? Exploring cultural producers’ understandings of and interactions with the Instagram algorithm	How do cultural producers (journalists, artists, activists) interpret algorithmic “glitches,” and what do these moments reveal about platform power and user strategies?	Online ethnography (240 hours), semi-structured interviews with cultural producers	Demonstrates that perceived glitches (e.g., shadowbanning) prompt creators to adapt content, self-censor, and mobilize collective resistance, exposing hidden biases and power asymmetries in platform algorithms

(Continued)

Table 1. (Continued)

Section	Author(s)	Title	Research Question	Methods	Key Findings/Contributions
	Sharma and Aristidou	Human-AI coordination in extreme contexts: Overcoming trust and agency concerns	How can humanitarian “super-teams” integrate AI effectively in life-or-death crises while navigating trust (black-box fears) and agency (automation risks)?	Archival data, multi-crisis comparative analysis (Gaza, Kenya, Nepal), process tracing	Identifies paradoxical tensions around trust and human agency; proposes “coordinative divergence” (broad inclusion) and “coordinative convergence” (unified goals) as twin practices that help AI teams function under urgent, high-stakes conditions
Advancing methodologies for the study of algorithmic organizing	Spencer and Kim	Interpreting the inscrutable: Ethnographic approaches to studying the development of machine learning models	How can researchers use a “data work”-centered ethnography to uncover how ML models are shaped by local hierarchies, biases, and resource constraints?	Comparative ethnography in two teaching hospitals (China and the Netherlands); observation of data collection, annotation, and recalibration	Highlights how organizational politics and iterative data labeling processes embed bias and tacit knowledge into ML models, offering a “data work” lens to demystify algorithmic inscrutability
	Timmer, Wrona, and Reimecke	Exploring algorithmic assemblages through multimodal inquiry	Why and how should researchers adopt multimodal methods (verbal, visual, embodied) to study algorithmic organizing and its sociomaterial “folding?”	Proposal of a multimodal qualitative framework; illustration via an IT consultancy case; focus on non-verbal cues, code logs, and emotional dynamics	Provides a 10-principle methodology for capturing the often-hidden interactions (visual, embodied, emotional) that shape how algorithms are adopted, resisted, or transformed in organizational settings

In the first paper, [Hopf et al. \(2025\)](#) develop the concept of “data-based craft,” illustrating how data scientists iteratively refine and reshape their materials (data), tools (ML algorithms), and products (dashboards, predictive models, etc.). Drawing on 65 interviews across 25 organizations, they reveal that data science work diverges from older notions of craft, where artisans transform stable materials with largely deterministic tools into finished products. Instead, the authors show that data scientists’ “raw materials” are malleable, incomplete, and semantically loaded organizational data – often byproducts of other processes – while their “tools” are evolving algorithms that learn and adapt, pushing practitioners to continually tune, train, and monitor outcomes. Their findings emphasize that final outputs (e.g., analytics dashboards) also remain in flux, changing as new data emerge or business needs shift. In foregrounding this ongoing, hands-on interplay among data, algorithms, and products, Hopf et al. highlight the creative and collaborative essence of data science, challenging linear or static depictions of technical work.

In the second paper, [Valadão et al. \(2025\)](#) adopt a complementary lens by conceptualizing algorithm creation as a process of “assembling Franksteins.” Through a multi-method qualitative study based on interviews, field notes, and archival data, they show how data scientists stitch together what they call “provisional artifacts:” improvisational combinations of code snippets, data fragments, and emergent visualizations. In contrast to frameworks that depict algorithms as uniform, finished products, the authors illustrate the messy, iterative journeys data scientists undertake, deploying “protean tools” such as Python and a rich ecosystem of libraries to unearth new affordances and improvisational solutions on the fly. These provisional artifacts, or “Franksteins,” embody both the creativity and the uncertainty of data science; they are continuously redesigned until organizations deem them sufficiently useful or robust. Together, these two papers underscore that data scientists’ work is not only technical, but also profoundly social and contextual, shaped by ongoing negotiation with organizational realities and the ever-evolving capacities of computational tools.

Transforming Organizations for Algorithmic Readiness

The next section of the volume examines how organizations prepare for algorithmic technologies and how continuous data flows reshape regulatory legitimacy. Building on earlier discussions of data scientists’ craft and improvisational work, these papers shift the focus to broader organizational and institutional responses. Rather than treating algorithms as simply dropped into existing work processes, these studies highlight how organizations must undergo structural adaptations to integrate algorithmic tools successfully. They also show how regulatory oversight increasingly depends on ongoing data streams and automated checks, complicating conventional notions of legitimacy and compliance.

In the first paper of the section, [Plesner and Justesen \(2025\)](#) introduce the concept of “techno-organizational scripts” to explain how organizations become “algorithm-ready.” Through an ethnographic study of a public debt collection center, they show that managers and designers embed assumptions about desired

workflows into predictive models, effectively scripting new roles and behaviors for both employees and the algorithm. As the algorithm classifies callers by “readiness to pay,” employees are reorganized into specialized teams, with standardized conversation steps encoded on “pocket cards.” Yet this shift generates tension between efficiency imperatives and professional discretion, illustrating what the authors call *rescripting* – an iterative process of negotiating and realigning the new algorithmic demands with existing organizational values and routines. Their findings emphasize that algorithmic organizing must be understood as an upstream process of design, role assignment, and reconfiguration, rather than a downstream effect of simply deploying a tool.

In the second paper of the section, [Washington \(2025\)](#) conducts a longitudinal ethnography of regulatory technology (“RegTech”) to illuminate how continuous data flows change the timing and locus of legitimacy in financial services. Historically, regulative legitimacy was conferred through periodic, document-based audits that treated compliance as a discrete event. By contrast, macroprudential oversight now relies on real-time anomaly detection and standardized data pipelines, shifting much of the interpretive work from government agencies to industry-vendor consortia. Washington introduces the concept of “machine-readable legitimacy” to capture this new model, wherein legitimacy is constantly recalibrated through algorithmic checks rather than granted solely by a state authority. This account underscores how code, data schemas, and vendor-driven standards can blur the boundaries between public oversight and private standard-setting – revealing that algorithmic infrastructures not only streamline compliance, but also redistribute the power to define what counts as legitimate organizational behavior.

Opening Up Algorithmic Encounters

The next section of the volume turns to how everyday users interact with algorithms and how these interactions shape, and are shaped by, broader platform logics and extreme contextual demands. Moving away from internal organizational changes or the design of algorithmic systems, these papers spotlight on-the-ground user experiences – revealing both the emotional toll that is wrought and the collaborative strategies that emerge when algorithms are opaque, unpredictable, and sometimes critical to crisis response.

In the first paper of this section, [Kostuj and Trittin-Ulbrich \(2025\)](#) explore how cultural producers (journalists, artists, non-profit organizations, and activist groups) make sense of “glitches” in the Instagram algorithm. Analyzing data collected via an online ethnographic approach and interviews, they show how momentary breakdowns – such as sudden drops in visibility, stalled engagement, or hidden posts – unsettle assumptions about platform neutrality and spark collective scrutiny of Instagram’s often-invisible rules. These “glitches” heighten cultural producers’ dependency on the platform and underscore their precarious position: they rely on Instagram for audience outreach, yet frequently suspect discriminatory or censorious logics at work. In response, cultural producers develop ad hoc strategies such as self-censorship or coded language to maintain visibility,