

INTRODUCTION: ALGORITHMIC ORGANIZING

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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

Research in the Sociology of Organizations, Volume 95, 1–15



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ISSN: 0733-558X/doi:10.1108/S0733-558X20250000095001

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 Trittun-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

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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,

and sometimes organize communal efforts to pressure the platform or share tips on circumventing algorithmic constraints. By treating glitches as pivotal moments of revelation, the authors highlight the uneasy balance between creative expression and algorithmic control in platformized cultural production.

In the second paper of the section, [Sharma and Aristidou \(2025\)](#) investigate human–AI (HAI) coordination in extreme contexts, where high-stakes humanitarian crises demand rapid but ethically sound decision-making. Drawing on archival data and process-tracing of AI deployments in locations such as Gaza, Kenya, and Nepal, they identify two paradoxical concerns – trust in “black-box” AI systems and the fear of eroding human agency. Their comparative analysis shows how temporary, ad hoc “super-teams” of data scientists, NGO staff, local volunteers, and affected communities navigate these concerns via two key coordination practices. First, “coordinative divergence” brings diverse stakeholders into the process, incorporating multiple perspectives and contextual insights. Second, “coordinative convergence” unifies goals and norms through shared templates and standardized definitions. The authors demonstrate that alternating between broad inclusion and tighter alignment helps HAI teams establish enough trust to use AI effectively while preserving vital human judgment in life-or-death decisions. This nuanced model of coordination extends our understanding of algorithmic organizing in urgent, unpredictable environments and offers practical guidance for future humanitarian deployments of AI.

Advancing Methodologies for the Study of Algorithmic Organizing

The final section of the volume highlights methodological innovations for studying algorithmic processes, connecting to our call for new ways to capture the social, political, and technical contexts shaping algorithmic organizing. As algorithms become increasingly ubiquitous, understanding how they are built, revised, perceived, and embedded in daily organizational life (i.e., “in the wild”) requires a fresh research toolkit that can illuminate hidden biases in data labeling or trace the multimodal dynamics of everyday interactions. The two papers in this section address this need by focusing on the critical backstage labor involved in ML development and by proposing multimodal strategies for capturing how algorithms become embedded in organizational life.

In the first paper of the section, [Spencer and Kim \(2025\)](#) propose a data work-oriented ethnographic approach to examine how ML models take shape. Drawing on their comparative fieldwork in two teaching hospitals – one in China and one in the Netherlands – they detail how collecting, annotating, and recalibrating data are key phases that reveal organizational politics, hierarchical structures, and domain-specific knowledge. By following junior staff tasked with labeling training data or observing institutional pressures that determine which images or scans are collected, ethnographers can demystify ML’s so-called “black box.” Their approach underscores that biases and blind spots often arise long before a model is deployed, shaping the tool’s ultimate functionality and performance.

In the second paper of the section, [Timmer et al. \(2025\)](#) broaden the methodological lens even further by introducing a “multimodal inquiry” framework.

Building on an assemblage perspective, they argue that algorithms, data, and humans continuously co-constitute new organizational forms, yet traditional methods often overlook the non-verbal, emotional, and material dimensions of this process. By advocating for the collection and analysis of gestures, diagrams, code logs, and emotional expressions – alongside conventional interviews – the authors show how researchers can capture the iterative “folding” of algorithmic technology into everyday workflows. Their 10-principle multimodal design offers a practical guide to studying algorithmic organizing in context, illuminating how tensions, negotiations, and emergent forms of power unfold across various modes of communication.

CONCLUSION

Collectively, the papers in this volume illustrate that algorithmic organizing involves much more than simply implementing predictive models or digital platforms. From data scientists’ craft-like improvisations to organizational transformations and new modes of regulatory legitimacy, each study shows how algorithms shape – and are shaped by – deeply social, political, and institutional contexts. At the same time, our exploration of user encounters with opaque platforms and high-stakes humanitarian crises, alongside the development of multimodal methodological approaches, underscores the constantly evolving nature of algorithmic practices. Taken together, these contributions emphasize that understanding algorithms “in the wild” requires close attention to the interplay among technological affordances, organizational structures, and broader societal concerns. The two papers in the last thematic section offer empirical approaches to studying those affordances, structures, and concerns.

Taken as a whole, the work in this volume thus points to substantial opportunities for future research. The key message of this volume is that algorithmic organizing matters, and that studies must be explicitly designed to capture the entanglement of the social and the technical in comprehensive and holistic ways. Every paper provides evidence of this entanglement, unpacking the mechanisms, processes, structures, and affective human behaviors that are part and parcel of algorithmic organizing. While technology, including algorithms, continues to be approached by many management and organization scholars as an instrument or tool (e.g., den Hond & Moser, 2023), this volume reveals the limitations of such an instrumental perspective. Future studies need to move beyond the limits of this perspective and include a sociomaterial understanding of algorithms to prevent future theories from being overly simplistic, shortsighted, or plain wrong.

One fruitful avenue for future research lies in paying more attention to algorithmic assemblages. These assemblages, with their various subtle, dynamic processes should be thought of as units of study, just like platforms or ecosystems. This means that the scope of inquiry in studies of management and organizations should be expanded to include the entire assemblage, instead of only its constituent parts (i.e., humans and non-humans) or specific processes. Importantly, researchers need to pay attention to the “institutional values, norms, and rules” that are

changing in response to the digital transformation (Orlikowski & Scott, 2023, p. 1). Such attention to overarching structures and structural dynamics may aid in examining how organizations can sustainably and ethically integrate algorithmic and organizational designs. Such knowledge is clearly needed: “invisible cages” can constrain workers to the anxiety and confusion around platform “glitches,” suggesting that potential tensions arising from working with algorithms or automated or AI-enabled systems can be profound (Rahman, 2021). Future studies could build on existing theories of power and control more profoundly, updating them to include new insights into how humans perceive, contest, and adapt to algorithmic power. These findings, in turn, would inform organizational leaders and policymakers who are seeking to balance efficiency with safeguarding workers’ well-being and moral agency, and to design organizations sustainably and ethically.

Another insight from this volume is that researchers might need to update their methodological toolkits and take a more holistic approach to studying algorithmic organizing. Recent critiques by Bechky and Davis (2025) caution that algorithmic tools can undermine the craft and community vital to organizational scholarship. While acknowledging these legitimate concerns, our volume suggests that careful methodological choices can help reveal not just threats but also constructive possibilities for algorithmic organizing (see also the final Epilogue paper). For example, longitudinal studies or comparative designs might be useful to explore how organizations iteratively transform job roles, incentive systems, and feedback loops as algorithmic tools mature. By studying processes and practices over time, scholars can shed light on the co-constitution of technology, leadership, and organizational culture in dynamic environments – including how human values can be preserved, and maybe even be enhanced, alongside computational capabilities. Similarly, adopting mixed methods and multimodal methods designs, particularly interdisciplinary ones, can be useful in future research. An example of such an approach is topic modeling, where the focus is on “researcher interpretation in a world of computer-driven textual analysis” (Hannigan et al., 2019, p. 586). Interdisciplinary approaches are useful because algorithms are in the realm of computer science, a natural sciences discipline, yet understanding algorithmic *organizing* demands a social science approach. Bringing together the two disciplines is crucial if we want to truly understand the new phenomenon of algorithmic organizing.

In parallel to the need for a more comprehensive methodological toolkit, there is a growing need to connect the study of algorithmic organizing with concepts in broader interdisciplinary fields, from computer science and engineering to anthropology, biology, and legal studies. Indeed, as Moser and Phillips (2024, p. 26) argued, “symbolic machines [digital technologies that manipulate symbols] are beginning to participate directly in processes of symbolic production and dissemination” which is at the very heart of human organizing. As the papers in this volume show, the shifts in our understanding of organization and organizing cannot be comprehensively approached with a single disciplinary lens. We see at least two fruitful directions for future research in this regard. First, the in situ informal nature of algorithms as biographies (Glaser et al., 2021) requires attention to the

assemblage of non-humans and humans and their practices. To develop an in-depth understanding thereof, it is imperative to investigate producers *and* users of algorithms in their daily practices. Second, encounters between non-humans and humans are composed of moments of exceptions. These exceptions, counterintuitively, may not be problems that need to be solved. Instead, they may require considerable textured work of framing and incorporating different needs and practices that together constitute organizing, thereby transforming systems in unpredictable ways. The cross-boundary scholarship resulting from these interdisciplinary approaches would not only offer richer theoretical explanations but also help surface overlooked dynamics, such as how code, legal statutes, and cultural norms simultaneously influence the real-world deployment of algorithms.

Beyond these theoretical and methodological considerations, the occupational ecosystem of AI merits closer attention in future research. In many organizations, coders, data scientists, and software engineers operate under strong pressures toward neoliberal, efficiency-first solutions, yet their improvisational practices also inject creative possibility. This tension reflects competing institutional logics that shape how algorithms are developed and deployed (Thornton et al., 2012). As institutional scholars have shown, market-based efficiency logics often conflict with professional and community logics that prioritize contextualized judgment and social welfare (e.g., Lounsbury, 2007). When market-driven logics predominate, other values – including contextual sensitivity, social relations, and political considerations – often get sidelined (Kellogg et al., 2020; Lindebaum et al., 2023). To mitigate these risks, mindful design practices and deliberate checks (e.g., auditability, algorithmic ethics boards, participatory “co-design”) can help ensure that technical systems remain aligned with broader organizational and societal goals (Lebovitz et al., 2022). Such approaches leverage the creative tension between competing logics to produce more balanced outcomes (Smets et al., 2012). In this way, building reflexive capacity around coding activities – including open dialogue on the moral and political trade-offs of algorithmic choices – can reconcile efficiency gains with the human values and professional discretion vital to healthy, sustainable organizing.

By charting these new directions, we see algorithmic organizing not as a temporary or isolated phenomenon, but as an ongoing, evolving force that will continue to transform the nature of work and society. Researchers, practitioners, and policymakers must engage in sustained inquiry – paying close attention to how algorithms are developed, deployed, and resisted at multiple levels of analysis. Additionally, we reflect in the Epilogue on our experiences engaging with AI in the editorial review process. If AI is part of the editorial assemblage (see the paper for a visualization of such an assemblage), some – but not all – processes and practices change, as we demonstrate. Such experimentation and subsequent reflection are needed if we want to understand imminent changes and future developments in the review process. The future research directions that we have charted above sensitize us to examine key algorithmic organizing processes in various ways: they provide a valuable point of entry into a fast-moving space to better understand the deeper processes through which algorithms shape social life around us. The research in this volume offers both a snapshot of current

challenges and a blueprint for exploring the multi-layered intersections of technology, organization, and society as the impact of artificial intelligence continues to expand.

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