Mapping data-driven management in accounting: the premise and promise of the debate and how to move beyond

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Abstract

Purpose – This paper aims to point to the shift in the temporal orientation, going from reporting on the past to creating insights about the future, which might be suggestive of perennial managerial attempts to push the boundaries of bounded rationality.

Design/methodology/approach – In this essay, the authors want to critically engage with the concept of "data-driven management" in the context of digitalization. To do so, they sketch the edges of current discourses around the emerging idea of data-driven management and its relationship with the inner workings of organizations from an accounting perspective. They question the often-times supposed objectivity and increased rationality of the concept and instead introduce the idea of becoming "data-curious" (before being data-driven).

Findings – The authors observe that this push also seems to be accompanied by trends of individualized decision-making and prevailing hopes of technology to solve organizational problems. They therefore suggest that it is valuable for current debates to take a moment to give attention, in practice and in research, to the role of temporality, benefits of collective decision-making and changes in professions (of accountants).

Originality/value – The aim of this paper is to spark curiosity and engagement with the phenomenon of data-driven management by outlining a novel set of potential future pathways of research and point towards methods that might help studying the questions arising for a data-curious approach.

Keywords Organization, Rationality, Digitalization, Data-driven

Paper type General review

Introduction

The opportunities and risks of digital technologies are shaping organizations and societies at a rapid pace (Berlinski and Morales, 2024). The concept of digitalization captures the emergence of these technologies (Moll and Yigitbasioglu, 2019; Rautiainen *et al.*, 2024) and highlights the ways in which they reconfigure socio-technical structures and question underlying assumptions of organizational conduct (Knudsen, 2020). In this context, digitalization may be understood as an umbrella concept, including other *en vogue* concepts such as big data, AI and data-driven management (DDM). In this essay, we focus primarily on the concept of DDM – a concept that is receiving increasing attention across disciplines, such as information systems (Fischer *et al.*, 2023), organizational studies (Schildt, 2020) and accounting (see e.g. Sundström, 2024; Lassila, 2022; Goretzki *et al.*, 2023; Nikidehaghani *et al.*, 2023).

The emphasis on DDM seems to be associated with an intensified focus towards predictive, and even prescriptive analysis (Appelbaum *et al.*, 2017) – thus signaling a reconfiguration in the temporal orientation of research and practice alike. From an accounting perspective, DDM may produce the answer to organizations' desire to move from a focus on reporting on the past to creating insights about the future, thereby forging a shift in attention from value preservation to value creation. As the concept of DDM is infused with notions of objectivity, rationality and predictability, the broad organizational adoption of DDM (Capgemini Research Insititute, 2021) is suggestive of perennial managerial attempts to push the boundaries of bounded rationality.

Attempting to better understand and scrutinize this emerging notion of DDM from an accounting perspective, the aim of this essay is to reflect on – and hopefully spur a debate about – the following:

How and why does the notion of data-driven management challenge and change established conceptualizations of accounting and management control?

To do so, we will critically engage with the idea of DDM and reflect on its relationship to organizations' inner workings. First, we will outline the rationale of DDM and highlight the main arguments for its merits. In the second section, we will critically discuss DDM's rationality and problematize its logic. In response to the supposed objectivity of DDM we introduce the idea of becoming "data-curious". In the final section of the paper, we will propose an alternative set of questions that is designed to help make sense of the phenomenon, its strategies of action, its power effects as well as its intended and unintended consequences. We suggest rethinking specific aspects of DDM to understand which questions to ask – and how to study these questions in the future. Thus, paraphrasing Hirschman (1958), the aim of the paper is not to bring closure to the debate but to spark curiosity for more engagement with the phenomenon.

Mapping data-driven management in accounting: the premise and promise of the debate

Defining "data-driven" resembles the task of catching a jellyfish with a knitting needle in a moving boat, as Gilbert Ryle (1971) quipped. In the broader management and the practitioner literature (Provost and Fawcett, 2013; Cavanillas *et al.*, 2016; Accenture, 2019; Kayabay *et al.*, 2022; Fischer *et al.*, 2023), there has been a sea swell in discussions about the concept of DDM. This nascent literature suggests understanding DDM as an organizational attempt to push the boundaries of bounded rationality, as a means to overcome inherent

human limitations. Mapping the contours of the debate, we can identify at least three specific aspects that characterize what is meant by DDM.

First, becoming a data-driven organization entails a new normative mindset. Schildt (2020, p. 9) describes that this "new normative mindset, […]'the data imperative', is pushing managers to prioritize digital data flows over human observations, algorithms over human intuition, and smart automation over human work." This new managerial mindset implies a change in the socio-cognitive and cultural make-up of the organization. Following this view, a data-driven culture influences who can use data, what information can be shared, and how resources are allocated – all of which are central in DDM (Anderson, 2015).

Second, DDM claims to transform the ways in which decisions are made in organizations. The concept of DDM is often clothed with an aura of factuality, afforded by the possibility to provide data-driven "insights" to decision-makers. According to Schüritz *et al.* (2017), a data-driven company is an organization that heavily relies on data to make decisions and take actions. Such data-driven decision-making is based on the analysis of data, rather than on intuition (Provost and Fawcett, 2013) or expertise (Grant and Nilsson, 2022), an idea promoted by notions such as "data wisdom" (Goriunova, 2017). Highlighting the agentic dimension of insight-driven decision-making, Halper and Stodder (2017) argue that many organizations engage in data analytics activities, but to a lesser extent act on the basis of those activities. Concrete actions should emerge as derivatives of data-driven insights and are understood as a critical dimension of DDM in an organizational setting.

Third, DDM suggests a new category of strategic assets – i.e. data itself (Kayabay *et al.*, 2022) – and a new temporality of strategy-making. The view that there was a need for "assetization" of data was echoed in *The Economist* (2017) much cited article, which claimed that "[T]he world's most valuable resource is no longer oil, but data". In turn, a host of commentators, primarily contributing to practitioner literature, have seen DDM as synonymous with treating data as a strategic resource. For example, the *MIT Sloan Management Review* (2016) holds that DDM requires treating data as a core asset making it an essential element of strategy. According to *MIT Sloan Management Review*, data-driven organizations should rethink their business model according to the insights they can derive from data. Echoing this view, Kayabay *et al.* (2022) stress that data is a fundamental asset for businesses to stay competitive and refer to this as a paradigm shift for contemporary organizations. In a similar vein, Accenture (2019, p. 4) advocates that "[d]ata-driven businesses embed […] data and predictive analytics at their core. They are characterized by optimization, prediction, continuous learning, and an insights-driven culture". This definition encapsulates all three outlined characteristics at once: DDM involves a reconfiguration of mindsets and culture; it entails a shift in decision-making processes; and data should be understood as an essential and new strategic asset.

This broad-brush sketch of DDM invites problematizing the concept (next section). While the accounting-technology literature often has put an emphasis on technological affordances, future studies could borrow insights from adjacent disciplines, such as organization studies, to complement our understanding of the reciprocal relationship between human agents and technology (see e.g. Volkoff *et al.*, 2007; Orlikowski and Scott, 2008; Bailey and Barley, 2020). An open and broad investigation of DDM may provide opportunities for a new set of research questions for accounting scholars which we will discuss in the final section of this paper.

Problematizing the concept of data-driven management

In this section, we share four critical observations on the current discourses of DDM. First, we will question the kind of "knowledge" that DDM creates, including its promise to push the boundaries of bounded rationality further out. We argue that this critique is foundational for questioning the notion of DDM. Second, we will reflect on the individualized perspective that is primarily taken when looking at the responsibilities of data-driven decision-making in

theory and practice. Third, we will problematize trust that organizations and decision-makers place in technology, pinpointing the high hopes in technology to solve a variety of organizational and societal challenges. Finally, we will challenge the implications of real-time data and immediate responses by highlighting an important temporal extension to the (long-term) future. In taking these steps, we critically interrogate some of the assumptions of the ongoing debate on DDM and move it from a mere individual focus on rational decision-making to a more collective and long-term focus on organizational strategizing.

Pushing the boundaries of bounded rationality?

At its core, the promise of DDM is that data-driven decisions are "evidence"-based. The assumption underpinning this idea is that data allows for more rational and therefore better decisions. In this sense, data-driven technology is supposed to *push the boundaries of bounded rationality* (Simon, 1982; Kahnemann, 2012). This begs the question:

To what extent is the narrative of DDM a new chapter in the book on Weberian rationalization?

In the accounting literature, it is well established that quantification in general, and statistically driven analysis in particular, has become "the tool of the social reformer *par excellence*"; in short, quantification has come to be "the hallmark of 'science'" (Robson, 1992, p. 687). The rise of a number of interconnected digital technologies in recent years has enabled organizations to operate – at least seemingly – in even more scientific ways by mobilizing the power of big data and data analytics (Warren *et al.*, 2015). The presence of data in organizational environments has increasingly become engines of trust (Pink *et al.*, 2018) instilled to assure evidence-based decisions (Goretzki *et al.*, 2023).

In the wake of the shift towards data-driven and evidence-based decision-making, organizations create a new form of knowing – a form which we call "insight". The literature on digitalization in accounting has previously operated with the traditional separation between data, information and knowledge (see e.g. Bhimani and Willcocks, 2014). Departing from this categorization, proponents of DDM stress the importance of producing "insights" to make data-driven decisions. Insight is not just knowledge, information, or data. Neither is it an intuitive response to information presented, but rather a form of knowing where something gleaned from the unknown offers an opportunity for intervention before others are able to capitalize on it.

Lending from studies in accounting, this new form of "knowing" through data-driven insights seems to be driven by an "inductive approach to knowledge practices" (Sundström, 2024, p. 2). This approach involves a fundamental epistemic shift (Berlinski and Morales, 2024) from predefined prioritizations about organizational values and visions, to a neutral state in which data ideally should "speak for themselves [to] reveal their inherent truth" (Kitchin, 2014, p. 3)". At large, both the underpinning ideals and practices associated with DDM are indicative of an organizational campaign to overcome cognitive biases. To draw on the language of rhetoric, this new form of "knowing" gives credence to a view which resembles "logos above all", while ethos and pathos seem nearly relegated from contemporary forms of organizational decision-making. This shift, we argue, reveals the core of DDM, namely the desire to push the boundaries of bounded rationality. However, while technical rationality (i.e. logos) always has been central to organizational decision-making, even present-day research has demonstrated the importance of experience and expertise (i.e. ethos – see Grant and Nilsson, 2022), as well the affective aspects of organizational conduct (i.e. pathos – see Boedker and Chua, 2013). Does DDM represent an attempt in pushing the boundaries of bounded rationality too far? As Quattrone (2016) reminded us, the goal of organizational decision-making was never purely rational choices but reasonable ones.

Moreover, DDM brings important changes to the temporal dimensions of organizational conduct and decision-making practices. Beer (2017, p. 21) has noted how data-driven approaches are associated with "general perceptions of cultural speed-up" that frame understandings and assumptions of organizational life. In the contemporary organizational environment, where most organizations have continuous access to real-time data, they can – and may even be expected to – account for the future by mobilizing insights produced in the present (i.e. real-time data). In other words, when viewing data-driven decision-making as a strategic tool that allows us to make evidence-based decisions, operate with quick feedback loops, and utilize real-time data (Schildt, 2020), organizations thus tend to focus on the recent past to make decisions in and for the present (or merely the immediate future). This makes strategizing through technology more into a practice of "nowcasting" (Arnaboldi *et al.*, 2017) instead of "forecasting".

Taken together, the temporal aspects of DDM serves to cultivate a rationality of a "need for speed" (Beer, 2017, p. 21) in organizational decision-making, which also poses relevant questions as to how far we can push the boundaries of bounded rationality.

However, this stance towards data-driven decision-making appears to simplify matters. Despite an increasing amount of available data points, we want to challenge the assumption that more data makes for better, more rational, decisions. Rather, we argue that there needs to be awareness in acknowledging and handling the increased potential of challenges in the emerging relations and complexities that arise from ever larger amounts of data. When organizations consider data as "facts" for "fact-based decision-making" (Elragal and Klischewski, 2017) they risk facing a "paradox of transparency", where absolute truth and knowledge is assumed when it is possibly more limited. As Wildavsky (1983) noted, more data absorbs uncertainty.

Insights are statistically derived from data and supposedly suggest evidence-based strategies of action. This assumes that questions answered through data-driven insights ought to be narrowly defined in time and space (Schildt, 2020). However, strategic issues are often long-term issues, consisting of a wide array of issues to consider. Understanding data as a strategic asset may thus lead organizations into what Schildt (2020) labels "digitally induced myopia", because the imperative in data-driven organizations is to make statistically optimal and evidence-based decisions. More long-term strategic decisions, in turn, are likely to be too complex to become evidence-based in a statistical sense.

We argue that organizations, through focusing on statistically optimal decisions today, face the risk of opting for choices that are optimal in the short-term (i.e. time) and within a narrow domain (i.e. space). In doing so, they could end up in "optimization traps" by giving credence to what is optimal through a myopic lens (Schildt, 2020). This dynamic might create tensions in the attempted operationalization of long-term strategies. Specifically, temporal dimensions are rarely addressed (Conboy *et al.*, 2018), making time collapse in the present instead of addressing different points in time separately and specifically.

Individualizing decision-making?
A second problematization that we want to put forward concerns viewing and enacting DDM as a primarily individual task. Often, "insights" arrive at the individual level of a decision-maker within the organization. This bears potential threats within the decision-making process (in the form of generally known traps of individual decision-making in accounting as well as specifically in the context of DDM), but possibly also holds consequences for power dynamics stemming from information and knowledge.

Problematizations of individualizations do not only apply to DDM but are also known in a broader sense to be a reoccurring challenge of and in decision-making in accounting, relating back to ideas of incomplete information and potential threats due to limitations of the individual decision-maker's ambiguity and subjectivity (March, 1987; Miller and Power, 2013).

As put forward by Miller and Power (2013) accounting is often an individualized and individualizing practice in organizations. This tendency is constantly growing within new tools and techniques (Miller and Power, 2013). Building on the increased hope and expectation of pushing the boundaries of bounded rationality, we argue that this trend of individualization is also occurring in and through new methods of DDM in MACS (and maybe even faster and stronger than throughout the introduction of other techniques). With this comes not only increased pressure on the individual, but frames accounting as a responsibilizing practice, where the individual decision-maker faces novel expectations (Miller and Power, 2013).

We argue that it is important to recognize and address this new responsibility and to deal with it, there needs to be an enhancement of skills and tools for the individual to be equipped to act accordingly as well as mechanisms that allow for connecting insights and responding on the collective level.

An important additional dimension to consider within this novel emergence and increase of responsibility and responsibilitization connects to potential consequences of information flows and related power, which should not stay unrecognized. "Nowcasting" places responsibility mainly on the primary receiver of information and expects this accountant to decide and act on it immediately. This makes it necessary for us to actively address and question who the producer and receiver of knowledge really are in practices of DDM, and how power gets (automatically) allocated respectively (Miller and Power, 2013; Foucault, 1980). Accountants' roles are often attributed and are closely related to the value of "truth and knowledge" of the information produced by them, which has important implications for decisions and actions within the organization (Lambert and Pezet, 2011). Considerations of sensemaking, shaping organizational processes and accountability in the context of information and informational tactics (Järvenpää et al., 2023; Goretzki et al., 2018) change fundamentally if much of the generation of knowledge and "insights" is mainly done through big data and algorithms. By producing knowledge and "insights" through such opaque processes, the production process remains "blackboxed" to many organizational actors, leaving them in the dark as to how knowledge and "insights" for decision making were produced – and which knowledge and "insights" that were *not* produced, and why.

Accordingly, we should question where these new responsibilities lie and how they shift power dynamics between roles and within the organization. We want to propose to deal with these questions of individualized processes through stressing the importance of a collective sphere of decision-making in emerging DMM.

Solving organizational problems with technology?
Our third point of critique questions to what extent DDM is able to solve organizational and social challenges. This question echoes a re-occurring dream that an investment in means will facilitate the accomplishment of desired ends. In this reading, technology is neutral and, depending on its use, it will help to achieve its master's objectives. A critical stream of literature questions this neutrality thesis and suggests that technology is inextricably entangled with politics (Winner, 1980). Verbeek argued that "[W]hen technologies co-shape human actions, they give material answers to the ethical question of how to act. This implies that engineers are doing "ethics by other means": they materialize morality" (Verbeek, 2006, p. 361). Thus, there are values (and prejudices) built into DDM that have to be critically examined as they play a substantial role in shaping our ethical understanding of how we *do* ethics (Bottausci et al., 2024). Moreover, it also means that technology has unintended consequences that may create new problems while attempting to solve old ones (Bottausci et al., 2024).

This touches upon the related question of trust that we place in data-driven technology. Usually, we think of trust as something gained through personal experience. Trust means to assume that one's

expectations are met in the absence of information that could be used to predict or control behavior. In contrast to this personal notion of trust, Giddens (1990) introduced the idea of an "abstract system of trust" that is based on people's belief in expertise which is the hallmark of modernity with its focus on science. For instance, Jeacle and Carter (2011) discuss how calculative regimes (Miller, 2001) contribute to establishing such abstract systems of trust. In a similar vein, Kornberger *et al.* (2017) showed how evaluative infrastructures build trust in the context of platform organizations in which sellers and buyers engage with each other without knowing each other. These calculative regimes and the abstract systems of trust they co-constitute are a facet of what Power (1997) conceptualized as the audit society. In this view, DDM is but the latest instantiation of a society that seeks "trust in numbers" (Porter, 1996) and is caught up in an ever-increasing demand for transparency and accountability.

Opening up perspectives for future research: from data-driven to data-curious investigations

Instead of taking the term and field of DDM for granted, in the previous section we problematized its underpinnings. In this final section we want to propose new areas for investigation, stressing the usefulness and insightfulness of an interdisciplinary approach.

A critical point in accounting for the future is the uncertainty accompanying decisions, making organizations often reluctant to (try to) predict too far into the future (Wenzel *et al.*, 2020). Uncertainty and risk, respectively, play a re-occurring role in decision-making in management control. Decisions made by and through technology and big data often promise to reduce this notion of uncertainty, afforded by its aura of factuality (Quattrone, 2016). We want to question this notion, potentially opening up novel ways, concepts and pathways to addressing and dealing with uncertainty in the (far) future. Beyond its general desirability to increase corporations' abilities, an increasing importance to do so rises in the light of societal challenges – the consequences of which are mainly to play out in the distant future. Therefore, organizations face new responsibilities and requirements to address these by strategizing for the long-term, where technology and data can be of help but need to be temporally extended. Instead of taking the term and field of "data-driven" for granted, we argue that we need to shed light on several dimensions first. Therefore, in the following segment, we want to outline three specific areas of investigation to improve our notion of data-driven management as well as its implementation in and through management and control systems by being "data-curious" first (much aligned with Busco and Quattrone (2018) proposition of viewing accounting as a maieutic machine, e.g. seeing accounting as an important part of generating (organizational) knowledge through asking questions). By this we suggest taking a step back and question some of the more fundamental assumptions around the concept, that – as outlined above – might not be as straightforward in its definition as commonly assumed. Giving room to these dimensions, and being curious in regard to data sources, analysis techniques, methods as well as theoretical underpinnings, could allow for a more holistic and sustainable approach to DDM.

Temporality

First, from our examination of the concept of DDM, the notion of temporality re-emerges in several ways. We suggest that the temporal dimension is a critical vantage point for future studies of digitalization in general, and DDM in particular. Both our mapping of the still nascent debate on DDM, and the critical outlining of the concept, suggests that there are inherent tensions built into the current understandings of the concept.

On the one hand, a data-driven approach seems to entail a mobilization of the real-time possibilities afforded by digital technologies: data-driven insights are produced and delivered to decision-makers in real-time, and decision-makers are expected to take action on these insights immediately, under the assumption that the speed is an essential quality in the modern business

landscape. Quattrone (2016) has voiced critical concerns about this "speeding up" of accounting and decision-making, as he understands "digital accounting" (p. 3) as a worrisome compression of the time from information acquisition to decision-making. On the other hand, DDM is simultaneously associated with a strategic dimension, suggesting a long-term orientation. This apparent duality of temporal orientations latent in the concept of DDM invites a host of critical questions pertinent to accounting: Is it possible for data-driven organizations to find an operating model where decisions driven by and anchored in data-driven insights are optimal in a narrow (short-term) sense, and simultaneously navigate long-term strategic concerns? From an accounting perspective, what are the concrete formats of accounting devices that make the future visible and valuable? And what are the concrete, material evaluative infrastructures (Kornberger et al., 2017) that bring the future into the present?

Moreover, past studies on the role of technology in organizations have demonstrated the importance of power effects (Orlikowski, 1992). What are the power effects of the emerging digital technologies enabling DDM? DDM is seemingly the latest technological answer to organizations' quest to deal with an uncertain future. And, as Crozier (2010) has shown, controlling uncertainties is a key source of power. Thus, questions concerning what these new technologies make visible, what or who do they silence become important, as they will shape power dynamics in a changing organizational landscape.

Such questions could also open up debates concerning the "the moral effects of accounting [that] are variously hidden, eroded, or displaced by technologies […]" (Bottausci et al., 2024, p. 3). We encourage future studies to examine the inherent ethical components that come with such an approach. Often, ethics and the ethicality of such considerations are neglected, or at least not addressed explicitly in processes of quantification (Espeland and Lom, 2015). The fast and vast process of data-driven decision-making does not necessarily address the inherent ethical commitments that are being made within sufficiently (Bottausci et al., 2024). However, these play a crucial role in decision-making that influences intertemporality (Honey-Rosés et al., 2014). Specifically in the context of the (long-term) future and future-oriented action, there is a need for addressing not only the ethics within (the process itself) but also considerations of responsibility toward the future with such considerations (Jonas, 1979). This poses yet another important perspective to consider, especially in light of grand challenges and fast-paced changing environments that are brought about by digitalization. It is therefore important to include aspects of ethics in decision-making itself and enhance necessary capabilities within the processes and professions.

The collective
First, we suggest shifting the focus from individual decision-makers to collective decision-making processes. As critically outlined above, DDM infers to a stylized rational manager as *locus* of decision-making. This subject of decision-making is not caught up between experience, expertise and evidence, but derives its decisions from insights that are in turn suggested by data. The decision-maker seems a mere passenger in this data-driven cockpit. Instead of this idea(l) of disembodied decision-making we put emphasis on the collective nature of decision making in organizational contexts. Decisions are often means for the discovery of new alternatives, (March, 1979), arenas for engaging in micro-politics (Pettigrew, 1977) and mechanisms of identifying past patterns and strategic pathways that led to the present condition (Mintzberg, 1987). Even more critical, Karl Weick's oeuvre has advocated for a shift from decision-making to sense-making, which "is about the interplay of action and interpretation rather than the influence of evaluation on choice. When action is the central focus, interpretation, not choice, is the core phenomenon …" (Weick et al., 2005, p. 409).

These seminal contributions serve as gentle reminders that decision-making is a collective accomplishment that has to be understood in organizational contexts. It is as much about judgment as it is about invention and imagination, framing and storytelling, sensemaking and agenda-setting, politicking and gaming. Hence, the concept of data-driven decision-making is not about an individual and its insights; rather, data-driven decision-making is thrown into organizational arenas characterized by politics, cultures and a myriad of social dynamics, being a new chip in an old game that is played collectively.

Change of professions
The interplay between the evolution of accounting technologies, information system integration (i.e. ERP systems), and implications for the accounting profession opens up a plethora of potential research avenues. As trust and judgments shift from expertise and experience (Grant and Nilsson, 2022) toward evidence-based data-driven insights, the professional responsibilities of accounting may change. Future research may benefit from revisiting the accounting function and its interactions and relationships with other professional groups within the organization. Questions include: How will the quest for data-driven decision-making change the identity of the accounting profession? Will the move marginalize accountants and controllers, or will it demand that they acquire new skillsets and work more closely with other experts (such as data scientists) to remain relevant in contemporary organizations? Just as Burchell and his colleagues posited more than 40 years ago, we uphold that once new accounting technologies are operational, they become organizational phenomena and "mechanisms around which interests are negotiated, counter claims articulated and political processes explicated" (Burchell *et al.*, 1980, p. 17). The question today is what these interests are, and who (which professions) they represent, as well as how the promise of data-driven insights will change organizational decision-making going forward. Some authors have started exploring the roles and identities of controllers and data scientists (e.g. Goretzki *et al.*, 2013; Goretzki and Messner, 2019; Goretzki *et al.*, 2023) but we call for more research on the interprofessional interactions and relationships that arise when data science enters management control, as well as how the accounting profession changes in data-driven contexts.

Finally, we want to point towards potential methods to study the questions arising for a data-curious approach. In light of big societal shifts, such as digitalization and climate change, and their (long-term) impact and consequences, we need to establish new methodologies (or maybe resurrect forgotten ones) to address this uncertainty (Gümüsay and Reinecke, 2022). Big data does not only foster change in organizations, but also holds potential, and the necessity, to investigate and use novel methodological approaches (Bhimani, 2020; George *et al.*, 2014). Especially interdisciplinary approaches, that iterate between quantitative and qualitative methods, can allow for addressing and studying the (deep) uncertainty that accompanies studies of the future (Wenzel *et al.*, 2020). Novelties rise in regard to types of data, novel dimensions of studying different units of analysis and their interplay, and new strategies of analysis and theorizing (Bhimani, 2020; George *et al.*, 2014).

Concluding remarks
In this paper, we have aimed at opening up new conceptual considerations that we consider essential in reflecting and acting on DDM. In sketching DDM as a culturally influenced, collective strategic asset, we can identify various critiques of current discourses and points of focus. We argue that it is important to question hopes of researchers and practitioners towards problem-solving capabilities of data, that we need to make distinctions between data-driven, evidence-based, insights and claims of rationality, and finally that we need to recognize the (in time and space) situated nature of data-driven practice. In doing so, we hope to spark interest in further research on collective collaboration on DDM, extending decisions from the immediate

to the long-term and specifications on what this entails for the profession of accountants should be studied more extensively in the future. If our paper helps to ask better questions and makes research and practice more data-curious, we have achieved our objective.

As Weber (1904/2001) identified, rationalization is a key component in societies' – and organizations' – progress toward modernization. As contemporary organizations increasingly turn to DDM in their quest to modernize, the means and procedures of organizational conduct become increasingly rationalized – attempting to push the boundaries of bounded rationality. However, as Weber (1904/2001) also demonstrated, rationalization processes ultimately create an iron cage in which individuals are trapped by the system. Is it so that algorithmically, black-boxed decision-making processes are forging new bars to the iron cage in an era of DDM? Or is DDM rather what will enable an organizational trajectory of more predictive and thus improved decision-making for the benefit of organizations and society? Accounting scholars are advised to prepare their knitting needles and attempt to catch the DDM jellyfish to increase our understanding of the turn toward this concept in contemporary organizations.

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