

Exploring the dark and unexpected sides of digitalization: Toward a critical agenda

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Abstract

Digitalization has far-reaching implications for individuals, organizations, and society. While extant management and organization studies mainly focus on the positive aspects of this development, the dark and potentially unexpected sides of digitalization for organizations and organizing have received less scholarly attention. This special issue extends this emerging debate. Drawing on empirical material of platform corporations, social movements, and traditional corporations, eight articles illuminate the various negative implications of the digitalization of work and organization processes, particularly for workers, employees, and activists. In this introduction, we contextualize these valuable contributions that underline the dangers of the ubiquity and simultaneity of digitalization and begin to sketch out potential avenues toward a comprehensive critical agenda of digitalization in organization studies.

Keywords

Digitalization, digital technologies, digital transformation, dark side, organizations, platforms, technology

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Introduction

This special issue engages with the dark and unexpected sides of digitalization for organizations and organizing. It was motivated by our observation that, despite a growing number of activists, scholars, and journalists warning of the dangers of digitalization, including the proliferation of precarious work arrangements, the surveillance potential of digital technologies, and the rise of monopolistic internet and platform firms (e.g., Bridle, 2018; Galloway, 2017; Gray and Suri, 2017; Kessler, 2018; Lanier, 2013; Zuboff, 2020), mainstream management and organization research (in line with corporate practice) generally celebrates digitalization as a socio-technological process that has many organizational and social benefits.

Scholars from various fields of management research, including strategic management (Adner et al., 2019) or marketing and consumer research (Chi-Hsien and Nagasawa, 2019; Dahan and Hauser, 2002), hail digital technologies for their capacity to create efficient ways of working and organizing, to develop new products and services, and to address and influence users, customers, clients, and the broader public (e.g., Brynjolfsson and McAfee, 2014; Constantiou and Kallinikos, 2015; Mount and Garcia Martinez, 2014; Varian, 2014; Yoo et al., 2012). As pointed out by Google's chief economist, Hal Varian (2014), digital technologies can make transactions and interactions observable and controllable in real-time, which ultimately lowers transaction costs as well as costs of production. Arguably, this leads to benefits to producers, workers, consumers, and users of these technologies. Digitalization also enables businesses to develop new markets and business models, helps firms to expand the scope of their activities, and can enable organizations to become internally more efficient (e.g., Adner et al., 2019; Schildt, 2017). Mainstream research further underlines the benefit of collecting and analyzing data for corporate gains by leveraging data to enhance consumer experiences and to predict not only consumption patterns (Morgan-Thomas et al., 2020) but behavioral patterns in general.

Some authors go beyond such a business- and profit-centric perspective to claim that digital technologies can also benefit governmental organizations, non-governmental organizations (NGOs), and other forms or social or hybrid organizations with various social or public good objectives (e.g., Bentley et al., 2019; Kolk and Ciulli, 2020; Loudon, 2010; Wilson and Hayhurst, 2009). For example, digital technologies have been used by civil society groups such as Human Rights Watch and Amnesty International to address human rights violations, by environmental groups such as the World Wildlife Fund to protect animal species and maintain biodiversity, and by developmental organizations such as UNAID to organize food production/distribution and fight global hunger.

Beyond these sorts of specific, or issue-focused benefits, digitalization also enables new forms of organizing that have potential positive consequences for democracy. Digital technologies help to create whole new "arenas of citizenship" in which people can express their voice, disseminate information, and organize against established powers (Whelan et al., 2013). Indeed, digital technologies can be used to organize and protest against the use, or the implications of, digital technologies themselves. Thus, the whistleblower Edward Snowden—whose revelations encouraged other citizens to "increasingly question . . . American high-tech companies' cozy relationships with governments" (van Dijck, 2014: 204), and the privacy and surveillance issues they give rise to—has a prominent social media presence that he uses to discuss and critique these very same issues. Other prominent critics such as Shoshanna Zuboff (2019, 2020), who has more than 40,000 Twitter followers, are also inclined to voice their concerns regarding big tech and surveillance capitalism in 'arenas of citizenship' that the internet and social media have enabled (Whelan et al., 2013).

As these examples suggest, the implications of digitalization are nuanced and textured. They are rarely entirely negative or positive for individuals, organizations, or society. The mainstream management and organization studies literature, however, has, in its concern to celebrate the positives of

digitalization, tended to ignore digitalization's more negative implications. It is to restore some balance, then, that this special issue is specifically focused on highlighting the manifold problematic and unexpected effects of digitalization for organizations and organizing.

With this objective in mind, we use this, the special issue's introductory essay, to showcase and contextualize the other eight submissions it contains. In doing so, we use the following section to define what digitalization is and why it matters for the study of organizations and organizing. We then review how scholars have so far addressed the dark sides of digitalization. On the one hand, we note that by enabling new forms of activism, enterprise, and democratic will formation, digitalization can contribute to developments that are broadly conceived as socially beneficial, but that are potentially very negative for specific incumbent powers in the worlds of business, culture, politics and so on. On the other hand, we identify several issues, such as concerns relating to privacy and surveillance, that state agencies and big tech corporations can benefit from, but that can have hugely negative implications for society at large. With these extant perspectives detailed, we then provide a thematic overview of the special issue's other eight papers and conclude by suggesting that future research could follow a number of paths in seeking to address or minimize digitalization's more negative implications for organizations and organizing, as well as society.

Digitalization: What is it, and why is it important?

The term digitalization has garnered much attention in recent years in management and organization research and practice. Similar to other buzzwords, however, the debate lacks an encompassing definition. We conceive of digitalization as a societal transformation process that uses ubiquitous digital technologies to connect ever larger social spaces. It submits more and more social and economic interactions to the simultaneous collection, analysis, and manipulation of digital data in real-time, and consequently influences individual or collective behavior in significant ways. So conceived, digitalization relates to, or can be considered inclusive of, various other terms, such as digitization, which refers to transforming analog into digital information (Karsten, 2021; Plesner and Husted, 2020: 7); and datafication, which similarly relates to how phenomena can be recorded and analyzed in digital and quantifiable forms (Mejias and Coudry, 2019).

To understand why digitalization is important, it helps to put things in a temporal perspective. While many other developments could be mentioned, it suffices for our purposes to note that modern computing only really began with the seminal work of Alan Turing and John von Neumann around the middle of the twentieth century (Asprey, 1992); that the internet, whose origins are generally traced back to the 1960s, only began to transform daily life around the turn of the twentieth century (Naughton, 1999); and that deep learning, which is currently enabling massive advances in such domains as image recognition and language translation, only began its most recent ascent around 2005 (Bengio, 2016). Further to this, we note that cloud computing and the internet of things increasingly allow an increasing number of individuals and artifacts to be digitally connected. Subsequently, increasing amounts of information can be collected, analyzed, and manipulated (Zuboff, 2019). In light of these technological advances, we determine two key characteristics relevant for understanding the organizational and social implications of digitalization:

First, digitalization is (more or less) *ubiquitous*. The speed at which extant technological developments have transpired has resulted in digitalization quickly becoming widespread. Consequently, it can now prove difficult to identify any organizational activity in which automated decision-making and problem-solving technologies do not support, influence, or displace human (inter) actions (von Krogh, 2018). Indeed, we are now so accustomed to digital technologies and the convenience and utility they have for organizations (on both their inside and outside), that we can often forget that such technologies are even there (Beverungen et al., 2019). The ubiquity of digital

technologies is also suggested by their impact on a range of industries and sectors as diverse as agriculture (Wolfert et al., 2017), manufacturing (Chryssolouris et al., 2009), retail (Srnicek, 2017), or tourism (Gretzel et al., 2015). Not surprisingly, wide-ranging impacts mean that digital technologies are often conceived as general purpose technologies that improve efficiency and effectiveness across industries (Cockburn et al., 2019; see also Rosenberg and Trajtenberg, 2004).

Moreover, it means that neither the positives nor the negatives of digitalization—which can be conceived in terms of their impact on “the process at the core of all processes”: that is, on how we “produce, distribute, and communicate” (Castells, 2010: 38)—can realistically be confined to any particular society, industry, or organization. Because of its ubiquity, digitalization is an issue that concerns not just individual organizations or specific industry sectors, but global civil society as a whole. Digitalization embraces a great deal of human life, making it rather difficult, and in some cases, close to impossible, to escape to, or find, isolated spaces that are not (yet) digitalized and connected with the internet. Digital technologies facilitate a fundamental societal change toward, what Alaimo and Kallinikos (2017: 177) call a ‘computed sociality’, by allowing for the quantification and manipulation of how any societal actor (individuals or organizations) orientates themselves to others. Individual privacy thus, for example, has become effort-full, in the sense that it requires individuals’ continuous and conscious efforts to protect themselves from surveillance technologies (Martin, 2016).

The aforementioned containment problems (or benefits) are further exacerbated by how digital technologies are increasingly being used to enable the real-time collection, analysis, and manipulation of data. Hence, to us, the second key characteristic of digitalization is a high degree of *simultaneity*, as digital technologies enable any entity in real-time to collect, analyze, and manipulate data along with almost any social or economic interaction. Data collection is no longer the separate and costly process that it used to be. Rather, it is an (automatic) process that is deeply embedded in and tied to, almost any movement we make or interaction we engage in (e.g. communications, contracting, online and credit card payments, physical movements, etc.). For example, analytic tools provided by YouTube enables video posters to monitor when viewers stop or start watching videos (Whelan, 2019a: 62). And Google—which, like YouTube, is now a subsidiary of the megacorporation Alphabet (Whelan, 2021)—is famous for conducting, and for enabling others to conduct, a whole host of scientific experiments, and to make use of real-time data (Varian, 2010: 4–6).

Such embedded, experimental and real-time data analytic capacities can obviously be used in many positive ways. But as the title of a recent piece by Zuboff (2020) suggests, many are concerned that such tools mean we are increasingly being “remotely controlled”, regardless of whether we personally use these technologies, or not. Particularly, internet and platform firms such as Facebook or Google and their advertising customers make use of algorithms to collect, analyze and manipulate the data to influence individual platform users in their attitudes, decisions, and behaviors for economic or political purposes (Lanier, 2018). And as the constraints on obtaining and storing data are becoming less geographically constrained, the prospect that people are being manipulated, in real-time, by people or machines situated well outside the national borders within which they live, is very real (Timberg et al., 2019).

These traits of digitalization—namely it’s ubiquitous and real-time nature—have led to an ambiguity of the role of political actors, and of internet and platform firms that provide digital products and services in particular (see also, Flyverbom et al., 2019). This role ambiguity is not necessarily specific to the issue of digitalization but becomes particularly crucial in the light of the potential societal impact of digitalization. In democratic rule of law states, governments act as representatives of their citizens and for the benefit of society and thus possess an obligation to curtail the harmful activities undertaken by private companies. Yet, in the context of digitalization, state agencies are not able or willing to act as unbiased mediators between companies and

individual citizens, because they are generally acknowledged as having a vested interest in obtaining sensitive data about their populations for various reasons: e.g., social planning, national security (Kim et al., 2014).

The case of the U.S. government debating whether to implement the Do Not Track Me Online Act to limit the power of businesses in 2011, while repeatedly requesting that Google hand over private user data in the same year (Halliday, 2011) highlights the ambiguous and somewhat paradoxical relationship between governments, citizens, and companies with regards to digital advancement. This ambiguity reached a climax after the Snowden revelations which revealed widespread corporate complicity in global mass surveillance programs that violated civil liberties like the right to privacy, the right to know, or related considerations of due process (Munro, 2018). This resulted in the publication of an open letter signed by Apple, Google, Microsoft, and other Silicon Valley giants objecting to the intrusive state surveillance of their customers and demanding greater protections against warrantless surveillance and privacy for their clients (AOL et al., 2013).

To summarize, digitalization is an important phenomenon for the study of organizations and organizing because of its ubiquity and simultaneity. Aligned, the roles of political and economic actors become increasingly ambiguous, which heightens the need to critically study the organizational involvement with digitalization. In the light of these considerations, and motivated by the observation that the COVID19 pandemic and the forced move to ‘working from home’ acts as a catalyst for many organizations to rapidly come to terms with digital technologies (George et al., 2020), the study of the problematic organizational and social implications of digitalization is timely and relevant. Given as such, and to contextualize the contributions of this special issue that we describe in this introduction’s concluding section, we now briefly detail the emerging and growing debate that addresses the dark implications of this development.

The dark sides of digitalization of, and for, organizations and organizing

As has previously been suggested, digitalization can be perceived in both a positive and a negative light (Etter et al., 2019; Whelan et al., 2013). Given our concern to redress the tendency of mainstream organization and management scholars to focus on the commercially favorable implications of digitalization, however, this special issue is focused on digitalization’s darker implications. In their turn, these dark implications are themselves more nuanced and varied than is sometimes recognized. In seeking to avoid the risks of an overly flat ontology, then, we explicitly acknowledge that the risks and the benefits, the downsides and the upsides, of digitalization, are, in general, unequally distributed. In particular, we emphasize that digitalization can have different *subjects* (drivers, providers, or beneficiaries) and *objects* (targets, victims, or recipients) in different situations or contexts. Before addressing how the digitalization of organizations and organizing can have very negative implications for society at large, we first discuss how digitalization impacts more specifically incumbent (organizational) powers.

Dark implications for established economic, political, and cultural powers and elites

In noting that digitalization enables new forms of (democratic) organizing, various scholars also acknowledge that information and communication technologies can have negative implications for, among others, economic and political actors. Castells, 2012, for example, has proposed that digital technologies can enhance the capacity of individuals, activists, social movements, and so on, to confront incumbent powers, and enhance the public good in new, alternative ways. In the

business context, digitalization may enable internal and external stakeholders, including employees, activists, and consumers, to monitor, and become actively involved in, corporate concerns. Digital communication channels and tools like Facebook or Twitter have become parts of new public spheres, that enable internal and external stakeholders of businesses to raise their voice and engage in open dissent and relatively equalized, non-hierarchical, interactions (e.g., Castelló et al., 2016; Maltseva et al., 2019; Whelan, 2013; Whelan et al., 2013). Digitalization thus facilitates the emergence of a growing number of actors involved with corporate concerns (e.g., Castelló et al., 2013; Trittin and Schoeneborn, 2017).

Simultaneously, a growing number of studies underlines how digital technologies not only enable the betterment of established organizational structures, but may also lead to the replacement of incumbent businesses through new business models. The emergence of the music file-sharing service Napster in the 1990s marked the beginning of the end for the monopoly of established record labels (Hensmans, 2003), and is often taken as the archetype for the digital destabilization of the media content industries in general. As digitalization's spread grew, it became possible to not just digitally access music, but to access film and television shows too. It also became increasingly simple to access content produced by the news media and popular press. Consequently, many suggest that the internet is driving newspapers out of business (e.g., Cho et al., 2016), and that internet distributed television services (e.g., Netflix) are radically transforming, if not entirely undermining, legacy service providers (e.g., broadcast, cable and satellite) (Lotz et al., 2018; Park, 2017). Importantly, it is not just media companies that have paid a heavy price for digital advances. Cramer and Krueger (2016: 181), for example, suggest that the taxi business is confronted by a strong ridesharing challenge given their finding that "the capacity utilization rate is 38% higher for UberX drivers than for taxi drivers". These works indicate that the digitalization poses a threat to established and incumbent organizations and industries through the creation of new digital business models.

Beyond the business context, the ubiquity and simultaneity of digital technologies allow individuals to connect across time and space, increasing the potentiality of digitalization to constitute new forms of the social, which are alternative to existing (capitalist) institutions, including hacker (e.g., Massa, 2016) or bike commuting collectives (Wilhoit and Kisselburgh, 2015). A range of studies have investigated how digital technologies can contribute to the furthering of liberal and democratic ideals: e.g., accountability, equality, freedom (e.g., Etter et al., 2019: 936; Whelan et al., 2013: 778–779). Civil society actors, including social movements and activists, can make significant use of social media and citizenship arenas to communicate, disseminate information, and organize, against established hierarchies (Castells, 2012; Munro, 2016). For example, Edward Snowden (2019), who famously revealed the role played by the likes of Google, Facebook, and Apple in the US government's PRISM surveillance program, currently has a very prominent social media presence with more than 4 million followers on Twitter.

In a similar vein, the idea of citizens being active users of internet platforms (van Dijck, 2014) also acknowledges that civil society plays a profound role in shaping digitalization, and in terms of holding economic and political actors to account more generally. A great deal of research has already been done in other fields on the role that NGOs, social movements, and concerned citizens play in raising concerns about the dark side of digitalization, particularly for society (e.g., Benkler, 2014; Burkart and McCourt, 2019; Castells, 2012; Doctorow, 2014; MacKay and Munro, 2012; Sifry, 2011). Digital rights advocacy groups such as the Electronic Frontier Foundation and human rights groups like Amnesty International and Liberty are working to hold both corporations and governments to account for routine violations of our digital rights related to privacy, freedom of expression, the right to know, and the freedom of association. In his commentary on the emergence of the WikiLeaks network, Yochai Benkler (2013) coined the term "networked fourth estate" to refer to new network organizations and forms of citizen journalism that create decentralized and

distributed forms of media to reveal corporate and government corruption and bypass the traditional forms of media censorship. These new forms of networks are very much at the heart of the emergence of a “global transparency movement” (Sifry, 2011).

Another aspect that some studies bring to the fore is the societal shifts that occur as incumbent power elites, including cultural elites, are being threatened, destabilized, and potentially replaced. Elites are those individuals or groups of individuals who assume power and authority in societal subsystems either by status, office, entitlement, or achievement and thus have the actual or potential capacity to enforce their will on others by influencing their decisions and behaviors. While elites can be the subjects or profiteers of digitalization (see below), they can also be its objects or victims. Like other forms of hashtag feminism, the #MeToo movement is a largely digital phenomenon and has empowered many victims of abuse, largely women, to speak up and tackle issues that can prove difficult in material spaces. In particular, we note that digitalization has played a significant role in this movement by ensuring that various cultural elites (i.e., many powerful (mainly white) men) have taken significant falls (e.g., Harvey Weinstein, the founder of the influential Miramax film studio, is currently serving 23 years for a series of sexual crimes) (Mendes et al., 2018: 244).

Taken together, these works acknowledge that individual citizens, bottom-up political collectives, or social movements, can be the subjects, and extant economic, political and cultural power elites the objects, of digitalization. In such circumstances, digitalization enables the co-constitution of society alongside established structures and procedures of corporations and states in ways that are perceived positively (from liberal- or social-democratic perspectives). Yet, these posited benefits are not universally enjoyed, with someone, somewhere, having to pay a price. Indeed, a key argument is that digital activism or new digital business models result in established power elites (e.g. economic, political, cultural), including businesses and political organizations, being threatened, destabilized, and potentially replaced.

Dark implications of digitalization for individuals, organizations, and society

Further noting that digital technologies can give rise to various societal and organizational dysfunctions when used “for irresponsible, criminal and hateful ends by various actors” (Whelan et al., 2013: 785), a growing number of studies suggest that a great deal of present day digitalization—e.g., the various processes associated with data (West, 2019) or surveillance capitalism (Zuboff, 2015, 2019), might be better conceived as inherently problematic. In reversing the order detailed in the prior section, these problems are generally associated with those situations in which the subject of digitalization is society (e.g., employees, social movements, citizens), and in which the object of digitalization is long established or rapidly emerging organizational elites with an interest in financial return or maintaining power (e.g., national security organizations, big tech corporations, platform capitalists).

In this fashion, it has been noted that the proliferation of digital technologies within organizational contexts facilitates new forms of exploiting users’ ‘free’ labor (Beverungen et al., 2015; Fuchs, 2010) and their ‘excess’ resources and capacities (e.g., Bauer and Gegenhuber, 2015; Ritzer and Jurgenson, 2010). It has also been suggested that digitalization promotes an illusory sense of resistance that counteracts genuine forms of resistance (e.g., Ossewaarde and Reijers, 2017), and that it has contributed to a whole range of new workplace conflicts (e.g., Upchurch and Grassman, 2016). Rather than applying digital technologies for positive social and organizational transformation, the organizational use of these technologies is often driven by instrumental profit concerns (e.g., Trittin et al., 2019). The basic idea is that the digitalization of organizations and organizing processes appears as a threat and harm to liberal and democratic citizenship rights (Matten and Crane, 2005; Vaidhyathan, 2018).

Internet and platform companies—who hold powerful monopolistic positions in the global market and who generate extraordinary rents—are often seen as the key drivers of, and profiteers from, digitalization. These corporations constitute ‘information empires’ (Wu, 2011) as they control large parts of the internet, and have thus gained unprecedented hegemonic economic and political power (Flyverbom et al., 2019; Whelan, 2019a). Consequently, there now exists a major power disparity between these big tech entities and most other organizational entities (who commonly depend on the services they provide), constituting a new form of the economic elite.

Various works within the humanities and social sciences, including organization studies, have noted that the monopolistic political and economic position of internet and platform firms has dark and unexpected consequences for workers, consumers, and citizens. Studies indicate that these companies make increased use of a low paid precarious labor force without adequate worker’s rights, where workers have been surveilled and actively punished for attempts to restore such rights (e.g., De Stefano, 2019; Newlands, 2020; Rosenblat and Stark, 2016). This is clearly the case for Uber, who has attempted to avoid labor-related costs by defining its apps’ users as ‘independent contractors’ rather than as employees; Amazon, who has sacked a number of their workers who raised concerns about working conditions at the large warehouse; Facebook, whose outsourced content moderators have sometimes suffered post-traumatic stress disorder from watching murders, suicides and other graphic content on the platform; and Apple, whose outsourced workers at Foxconn in China suffered a spate of suicides due to their appalling working conditions.

Additional concerns have been raised about the role of fake news and targeted advertising in the emotional manipulation (Bakir and McCord, 2007; Lanier, 2018) of, and the extraction of a “behavioral surplus” (Zuboff, 2019) from, social media users in particular. Several commentators have noted that the kind of emotionally charged content that is a key characteristic of fake news is not an unintended consequence of social media, but a central part of social media business models and a key source of revenue (Gustafsson and Weinryb, 2020; Lanier, 2018). As such, these organizations are often keen to avoid government regulation, and instead prefer to work with ‘fact checkers’ to ward off the risk of governments becoming more involved in censoring their activities. There are also genuine concerns about how definitions of fake news could be agreed upon in a politically neutral manner given the politically charged nature of this debate.

Moreover, the design techniques employed by internet and platform firms such as Facebook or Twitter have been subject to devastating criticism for their harmful psychological effects on users (Seymour, 2019; Wu, 2019). Richard Seymour, for example, has observed that in common with other forms of addiction, the rise in social media addiction has been associated with a rise in depression, suicide, and other harmful effects such as cyberbullying. Seymour (2019: 51) explains that addiction is designed into these new technologies, describing the ‘like’ button as, “the pivot of the Skinner box model—the administration of rewards and punishments—in the struggle for the attention economy. It is the economic organization of addiction.” The introduction of the like button to a range of social media platforms has led to a dramatic increase in user engagement and has intensified user addiction alongside all its harmful consequences.

Finally, and in acknowledging that many other ‘social good’ concerns could be identified, it will suffice for our purposes to note that a growing number of scholars have found that existing forms of discrimination such as racism and sexism are being amplified within the growing algorithmic economy. Algorithms deployed may have dark implications as they “unintentionally produce data that encode gender, ethnic and cultural biases.” (Zou and Schiebinger, 2018: 2). Research into such biases suggests that the reinforcement of racist and sexist stereotypes by algorithms are closely tied with their programming, and with the databases that they are trained or built upon. It has also been suggested that such biases may serve to encourage outrageous content that boosts advertising

revenues (Noble, 2018). Digital technologies thus reproduce and amplify existing social and organizational inequalities.

Contributions of the Special Issue and avenues for future research

Extending the growing scholarly debate concerned with the social, ethical, and political implications of digital technologies in organizations and organizing, we invited scholars to submit their works on the dark and the unexpected sides of digitalization, that is, issues that have been (so far) overlooked, ignored, or suppressed in regards to the digitalization of organizations and organizing (see Linstead et al., 2014). Responding to our call, many scholars were specifically interested in digitalization's negative impact on platform workers, employees, and activists. In this special issue, the reader will find a collection of eight intriguing empirical papers that investigate contemporary, and critically important, dynamics of how organizations, employees, or platform workers experience the digitalization of work and organization processes. In the following, we identify several common themes that emerge from these contributions and point out avenues for future research on the dark side of digitalization.

The changing world of work

The first theme that we detect among the collected papers is that the platform economy is negatively transforming work and the roles that workers fulfil. In extending prior research concerned with platforms, Walker et al. (2021) use Foucault's concept of biopower to investigate Uber's new techniques of worker control and its management and exploitation of 'life processes'. They find that power operates by dehumanizing and distancing techniques of control through Uber's App, making collective resistance against worker exploitation very difficult.

Bucher et al. (2021) study digital work on the platform Upwork. The authors detail how workers try to anticipate the decisions of deployed algorithms on the platform, and the practices they engage in to adapt to the assumed automated decision-making, to remain successfully employed. Their study underlines how the application of compliance practices aiming to 'pacify' the algorithm leads to workers engaging in additional tasks aimed at safeguarding their relationship with the algorithm and their clients.

Both articles extend the scholarly debate on the transformation of work. At the present juncture, platform workers tend to be independent sub-contractors of platforms, which means that they miss out on any potential benefits of stable employment. As self-employed 'entrepreneurs', they are subjects to opaque algorithmic control, which leaves many of them, as shown by the study by Bucher and her colleagues (2021), with little insight into how their work is evaluated, what competition they face, and why they receive a work assignment or not. This ultimately leaves them to resort to additional efforts to stay on top of the algorithm, and equally minimizes their ability (and will) to collectively resist these practices, as stressed by Walker et al. (2021). These works thus show how contractual autonomy and the transparency of employment markets, are currently being eroded by the platform economy. As platforms that allow on-demand labor to be contracted by the task continue to spread across industries, future research could further study the implications of this "Uberization" (Davis, 2016), or the emergence of a "gigged" economy (Kessler, 2018), for other types of workers or contractors in precarious work conditions, including outsourced content moderators of social media platforms or product delivery services. Scholars could also further investigate the implications of algorithmic control, evaluation, and ranking schemes for working conditions in the platform industry, and how, if any, resistance among workers and/or other stakeholders is organized.

Scholars could also pay further attention to the governance and regulation of big tech firms and platform capitalism, and the dynamics between political and economic actors in this context. The fact that Uber has been banned in various countries, for example, suggests that in some cases, states cannot only direct and regulate, but can also outlaw, certain types of platform organizations. Nevertheless, Uber is yet to go down without a fight and has demonstrated a significant capacity to mobilize the general population in ways that many politicians and political parties can only dream of (Whelan, 2019b). Likewise, Google has significant form when it comes to mobilizing the masses and making sure that the types of legislation and regulation it has to conform to are in alignment with its own business interests (Whelan, 2019a). Such capacities, suffice it to note, are the result of the data and technical capacities that such firms possess (Srnicek, 2017; Vaidhyathan, 2018; Whelan, 2019a, 2019b).

Given the limitations of state-centric approaches to the governance of big tech and the platform economy, some have called on voluntary self-regulation, proposing that private companies, particularly internet and platform firms, should designate experts in the field with the task of implementing and monitoring, for example, ethical data practices (e.g., Martin, 2016; Richards and King, 2013). Accordingly, there is merit in analyzing whether and if so, under what conditions, the designation of external experts, or the development of multi-stakeholder initiatives such as the Global Network Initiative—which is focused on encouraging the likes of Facebook, Google, and Microsoft to address privacy and free speech concerns worldwide—can prove effective in regulating the platform economy. Once again, however, there are good reasons to be skeptical about the efficacy of such self-regulatory initiatives. Why, in short, would one presume that big tech firms would ever help establish, let alone comply with, private regulatory norms that limited their growth or profitability over the medium to longer-term? Whenever firm profitability does not align with some broader social good concern, then, private regulatory initiatives face significant hurdles. In this sense, future research could profit from a close look at the strategies these firms deploy to forgo any state-centric regulation. Scholars could also study how stakeholders, including unions of incumbent industries, react and respond to the proliferation of platforms in various industries. Likewise, research should explore alternative forms of corporate governance and the inclusion of external stakeholders in corporate boards as potential answers to the governance challenges in state regulation and corporate self-regulation (Scherer and Palazzo, 2011; Scherer and Voegtlin, 2020).

Digital technologies and the limits of digital activism

Another theme that relates to the submissions of this special issue is how technology hinders or counter-acts efforts at digital activism and new forms of organizing. Etter and Albu (2021) conduct case studies on social movement organizations in Tunisia to explore the effects of social media algorithms on the ways social movements organize. The authors identify the negative effects of social media due to the economic logics that are designed into these systems and that affect activist's affordances. Specifically, algorithms constrain and distort by information overload, opacity, and disinformation with the social activists largely being unaware of the ways social media organizations influence their behavior.

Importantly, this study alludes to the pitfalls of the use of digital technologies in the context of civil protest and activism, and thereby extend existing literature concerned with digital activism. The activism of individuals or collectives today often rests on digital technologies. Their ubiquity and simultaneity allow individuals and groups to globally connect, communicate, and mobilize for social or political causes, creating a digitally enabled global public sphere. However, digital technologies are often invented along with a particular business case. In the context of social media, the commercial imperative of platforms such as Twitter (which is in the center of the study by Etter and

Albu), clearly shapes user engagement. In this sense, the digitally enabled public arena of citizenship is distorted as the underlying technologies are not designed to facilitate a public discourse, but to attract the attention of users by curating the content that they are exposed to in a way that it serves the interests of those commercial or political actors who buy access and data from the social media firms. The study by Etter and Albu (2021) thus provides an important empirical underpinning for how commercial and political interests clash, and the resulting negative implications are for digital activism, new forms of organizing, but also society in general. Future research could study more carefully how the underlying commercial logic of different tech firms shapes the different public arenas of citizenship they construct, and the types of digital activism and collective organization they enable (Whelan et al., 2013).

The inefficiencies of digital public organizations

Another two studies focus on the problematic implications of digitalization for governmental public organizations. Taken together, they indicate that the digital transformation of organizations may ultimately be less efficient as desired and ultimately potentially harmful for the public good. Karsten (2021), draws on longitudinal anthropological fieldwork of fire safety professionals in the Danish architecture, engineering, and construction industry. Her study reveals how these professionals are concerned about the digitization of fire safety and the potential dark results that may come from digitized information being misunderstood or interpreted incorrectly. Karsten (2021) demonstrates that resistance and apprehension toward digitalization, are best understood as concerns that capture professionals' engagement with technology which is driven by competing knowledge forms, and by a concern with the public good and public safety.

In drawing on a longitudinal case of another governmental organization, Lammi (2021) analyzes the implications of the attempt to automate work processes and increase managerial control in a large government bureaucracy. The author shows how the automation of work practices led to pragmatic forms of resistance among employees, particularly an increase in informal team working practices. This study highlights how the digitalization of some work processes introduced new bureaucratic dysfunctions which ultimately required additional efforts to work around the inflexible digital system. While digitalization may permit greater managerial control, it also introduced new bureaucratic inefficiencies in the labor process, which might bring the whole logic of digitalization into question.

We detected also another dark side of the digitalization of organizations: It directs public organizations and their personnel toward strategies and behaviors that potentially harm, rather than benefit society. Professionals, including doctors, lawyers, firemen and -women, or public servants, as well as the organizations they work for (e.g., public organizations like hospitals, fire departments, or governmental agencies) generally have the responsibility to serve the public good. Yet, Karsten (2021) and Lammi (2021) show how digitalization distracts and somewhat distorts professionals and governmental organizations from their mission to serve the public. While the work of Karsten (2021) indicates that professionals realize and aim to resist this development, the work by Lammi (2021) suggests that such resistance comes at a cost for the involved professionals (in the form of additional, somewhat inefficient efforts to organize work).

Future research could study more carefully the implications of digitalization for professionals, as well as public organizations (see also Plesner et al., 2018), as well as the effects of the increasingly digital public sector organization on the provision of public goods. In which ways, for example, do digitally enabled open data or open government initiatives (e.g., Meijer et al., 2012) shape or change the professional sense of responsibility for serving the public interest among public servants? And in light of the increasing use of algorithms for automated decision making in public

organizations (O'Neil, 2016), scholars could also pay attention to questions such as how can public organizations be held accountable for the negative societal effects of automated work, and how to develop more transparent public organizations.

The unexpected implications of digitalization for organizations

The final theme emerging from this special issue relates to the unexpected effects that the introduction of digital technologies can have on organizations. Three papers address, albeit in different ways, how digitalization creates various subject and object constellations that can have unexpected implications for those individuals and organizations involved. Hensmans (2021) conducts a longitudinal case study at an alternative bank (1963–2019) that has introduced new information and communication technologies. The application of these technologies follows a 'fantasmic logic' of alternative ideals of organizations promoting democracy and non-financial goals that have been part of a Silicon Valley inspired utopia. Yet, his case study shows that the digitalization process leads to an 'ideal reversal' and explores the underlying mechanisms of fantasy work along three co-evolutionary phases. The author embeds his analysis in a wider societal critique based on post-Marxist critical theory, new spirit of capitalism, and the technicist society. Importantly, this study indicates that organizations and their members can become unexpectedly the objects or victims of digitalization if digitalization is tied to utopian and unrealistic expectations. Digitalization projects in organizations often start with optimism and enthusiasm based on the promise that technological progress will benefit not only investors but all organizational stakeholders and will help to reconcile economic and social goals. Yet, as the tensions between these goals tend to persist, there is always the danger that economic logic will finally dominate the organizational change process at the expense of non-financial goals. This may demotivate both managers and employees and lead to cynicism and obstruction which makes it even more difficult to balance between the conflicting social and economic demands.

Elmholdt et al. (2021) study the introduction of a sleep tracker program in a Scandinavian energy corporation. Their study focuses on how the sleep trackers program challenges management and employees in unexpected ways. It demonstrates the ambiguous implications for the politics between management and employees emerging from the use of devices that allow the documentation (and potential manipulation) of the sleep behavior of employees. In particular, the study highlights how sleep trackers act as manifestations of corporate health aspirations that strengthen managerial normative power over employees. Yet, simultaneously and somewhat surprising, it also reveals that sleep trackers enable the employees' discretionary control. Consequently, this study provides a nuanced view on the ambiguity of digitally enabled normative control and how, unexpectedly, (some) employees seem to profit from the introduction of the technology, while the management's expectations are not met.

Finally, Grigore et al. (2021) theorize how managers of non-tech businesses address the manifold dark sides of digital technology for individuals (e.g. for themselves, as well as for their friends, families, and colleagues), organizations (e.g. their employer) and society at large through the rhetoric of balance. The authors demonstrate how corporate responsibility professionals rhetorically create a 'false balance' that legitimizes the organizational use of technology of their firms while acknowledging the dark implications for society of such technologies, and the specific rhetorical devices of temporal, spatial, and level displacements of responsibility. The authors find that managers, designated to managing corporate social responsibilities on behalf of their firms, attempt to ensure positive personal identification with business, family, and society by talking their firms' responsibility for digitalization 'out of existence'.

Hensmans (2021), Elmholdt and colleagues (2021) and Grigore and colleagues (2021) study different phenomena related to the digitalization of organizations. Yet, notably, unitedly they all point toward the fact that subject and object roles are not fixed in the context of digitalization. In certain circumstances, subjects of digitalization, that is those seeking to profit from digitalization, may finally be the victims of this transformation process, or, at least, may not profit from the digitalization as expected. As the studies by Hensmans (2021) and Elmholdt and colleagues (2021) suggest, the victims of digitalization can even be the organizations and managers that decided on the introduction and diffusion of digital technologies in the first place. In other circumstances, as outlined by Grigore and her colleagues (2021), actors ought to shape the digitalization process in ways that social harms are minimized, may act in ways that direct responsibility away from themselves, but also their organizations. Arguably, it is a common phenomenon in the context of corporate responsibilities that businesses refrain from taking on social responsibility. Yet, notably, in the study of Grigore and colleagues, responsibility professionals, which previous studies have identified as particularly committed to facilitating responsible business practices (e.g., Risi and Wickert, 2016; Wickert and de Bakker, 2018), reject, somewhat unexpectedly, the idea of organizational responsibility for the social harm of digitalization. These insights should encourage future research to pay further attention to the various and interchangeable subject and object constellations that digitalization creates, and to develop an empirical sensibility for the potentially unexpected ways how and where digitalization's dark sides come to the fore. We believe these papers attest to such sensitivity.

In sum, the contributions to this special issue explore various dark and unexpected implications of digitalization for organizations and organizing. By contextualizing these works, identifying common themes, as well as outlining future research opportunities, we aim to facilitate with this essay the emergence of a cumulative and systematic body of literature that advances our understanding of digitalization in new ways.

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