Digital Organizing for Social Impact: Current Insights and Future Research Avenues on Collective Action, Social Movements, and Digital Technologies

Abstract

Digital technologies such as social media have drastically transformed the contexts and processes associated with collective action. New actors have gotten involved in efforts at changing the societal status quo, existing actors have adjusted to new ways of organizing digitally, and original forms of social movements have emerged and grown. All these developments do not, however, hold the potential for unequivocally positive societal impact. New forms of abuse and many unintended consequences have also multiplied. It is high time to take stock of the insights from current scholarship on these important issues.

Here we bring together major findings from existing scholarship and introduce the papers of this special issue. We also propose an agenda for future research by highlighting ongoing debates and issues that require further consideration. Questions associated with the increasingly intricated participation of human and technological agents deserve attention, for instance. Careful considerations of the actual impact of digital organizing at different levels (e.g., individual, group, organization, society) also require further scholarship. We finally caution researchers to be ethical and to remain careful of the potential for use and misuse of their scholarship on these important and often polemical topics.

Digital technologies, and in particular applications such as social media, have played key roles in contemporary collective actions. Their growing availability has transformed the resources, processes, and outcomes of collective action and social movements. We have been witnessing changes not only in how different actors approach protest and resistance but also in what it means to *be* organized. This fundamental shift in the very nature of collective organizing, beyond the formal boundaries of established organizations, demands a renewed effort to question and make sense of organizing in its new incarnations. This is no small task. On the one hand, digital technologies bring unprecedented opportunities to organize masses of people in democratic actions, lower participation costs, and foster new information and action repertoires that go beyond offline communities (Kavada, 2018; Oh, Eom, & Rao, 2015; Selander & Jarvenpaa, 2016). On the other hand, questions remain regarding the actual impact of technology-enabled collective organizing, the ethical implications of ideologies championed through collective action, and the possibility of unintended negative consequences and new forms of domination and harassment (Dolata & Schrape, 2016; Kavada, 2018; Ortiz et al., 2019).

Interestingly, with the increased presence of digital technologies, both SMOs and grassroots movements experience fundamental changes in the ways they seek to solve social and political issues (i.e., their practices), in how resources are allocated, and in how information flows in these organizations and surrounding networks. On the one hand, grassroots organizations are becoming increasingly professionalized. For example, in the U.S., the Women's Movement has a President, Board and Secretary, much like a corporate organization. The mantra "from a moment to a movement" signals the long-term vision leaders have for the Women's Movement. Such prolonged organizational effort necessarily requires structure and formal organization. On the other hand, some corporations have adopted practices that resemble those of traditional social

movements organizations. They blend market logics with social logics (Mars & Lounsbury, 2009; Pache & Santos, 2013) as they pursue different, and at times conflicting, objectives associated with, e.g., sustaining shareholder value while also supporting objectives of societal well-being.

The consequent increase in hybrid organizing, and the blending of logics that these developments illustrate, necessitate new conceptualizations of organization and organizing for this digital age. Research into digital technologies and collective action holds some keys to understanding new ways of organizing and new organizational forms (Puranam, Alexy, & Reitzig, 2014). Information Systems (IS) research has, for instance, examined antecedents, consequences and challenges of collective action online (Ghobadi & Clegg, 2015; Selander & Jarvenpaa, 2016). Social movements processes developed online have been investigated (Seo, 2019; Tye, Leong, Tan, Tan, & Khoo, 2018; Yetgin, Young, & Miranda, 2012; Young, 2018), as have many other aspects of large group collaboration (Nan & Lu, 2014; Shaikh & Henfridsson, 2017; Vaast, Safadi, Lapointe, & Negoita, 2017).

Foundational research on these topics provides a basis for the development of original theories of digital organizing, such as those associated with connective action (Vaast et al., 2017). By digital organizing we refer to the use of digital technologies to engage in political or social conflicts in order to initiate, resource, and grow collective action (Selander & Jarvenpaa, 2019). To bring more structured insights to these exciting research areas, in what follows we elaborate on three dimensions of digital organizing for social movements and collective action; *actors, digital technologies* and *information flows.*

Actors – Crowds, Organizations, Individuals and Bots

Crowds – Crowds have long been considered important for the growth of social movements and collective action. In the literature, crowds are often characterized as diffuse, spontaneous and

amorphous collectives (Oliver, 1989; Stohl, 2014). Crowds are essentially non-organized collectives with few "distinct coordination and identity structures that go beyond a given moment" (Dolata & Schrape, 2016, p. 5). Over time, however, with the formation of social rules and collective identities, the volatile nature of a crowd can consolidate into a social movement. Braccini et al. (2019) add to the understanding of the role of technology in shaping crowds into organized collectives throughout three stages in social movement development. However, questions remain about how such consolidation happens, and the organizing role of digital technologies in such transformation.

Organizations - Social movement scholars have long emphasized the role of social movement organizations (SMOs) in growing and sustaining collective action (George & Leidner, 2019; Zald & Ash, 1966). SMOs are key to mobilizing resources, developing action repertoires and identifying political opportunity structures – i.e., knowing when any particular action is appropriate. SMOs have played a major role in transforming individual discontent into collective action by framing particular issues so that they resonate with individuals. Recent work on contemporary social movements has advanced a theory of "connective action" (Bennett & Segerberg, 2013) that explains how with digital technologies, and social media in particular, collective organizing relies less on the involvement of formal organizations. Digital technologies enable individuals to come together and act jointly, even without necessarily developing a shared identity. Such joint actions include sharing personal grievances and sentiments, engaging proximal others and self-selecting what group of actors will see any particular message. Though SMOs may play a role in social movement development, Cardoso et al. (2019) explain how SMOs can be constrained in grassroots movements as ICTs empower and constrain the agency of collective action organizers.

Individuals – The aggregated sentiments and entrepreneurial actions of individuals are essential components of contemporary collective action (Bennett & Segerberg, 2013; Ghobadi & Clegg, 2015; Leong, Pan, Bahri, & Fauzi, 2019). Though often studied at the collective level, collective action frames usually originate from individual thought leaders who sponsor interpretive packages of meanings which are then diffused throughout a movement (Miranda, Young, & Yetgin, 2016). In Ghobadi & Clegg's (2015) study of the 2009 post-election crisis in Iran, the bravery of a few individuals posting YouTube videos was found to significantly influence and shape the protests of the broader public. Stewart & Schultze (2019) illustrate the impact of individuals who protested against compulsory hijabs by publishing hijab-less photos on the MyStealthyFreedom Facebook page. The aggregate number of shared images directed the movement forward and contributed to the escalation in movement activities, such as publishing hijab-less pictures taken outside politically significant and dangerous places. In the Facebook group, individuals recognized this act of bravery, which further fueled the movement.

Bots - Notably, not all actors engaged in digital organizing are human users. Increasingly, bots and other autonomous agents play a significant role in collaborative communication online. Though most early research on digital organizing took only human users into account, researchers are beginning to understand the importance of considering other types of actors as well (e.g., Ross et al., 2019; Seo, 2019; Young, Wigdor, & Kane, 2018). George & Leidner (2019) reviewed the literature on digital activism and noted the increasing salience of bots in digital organizing. Like human actors, bots engage as individual actors, e.g., "botivists," or as part of a larger network of human and/or bot actors (George & Leidner, 2019). Botivism may distort public discourse as bots are used to inflate protests for monetary or political gain (Salge & Karahanna, 2018). Bots may also be part of a human-bot (cyborg) partnership wherein contributions from one account are made

by both bot and human actors at different times, or as part of a joint construction. It is likely future innovations will increase human-bot entanglement, making it increasingly difficult to discern where the human ends and the bot begins – both in social media contexts and beyond. The technological, political, social, cultural, economic, health and business consequences of cyborg actors engaged in digital organizing – and organizing in the material world – will be an important topic for years to come.

Digital Technologies

Digital technologies play a central role in contemporary collective actions. The growing reliance on microblogging applications such as Twitter (Oh et al., 2015), social networking applications such as Facebook (Etudo, Yoon, & Yaraghi, 2019) and video-sharing applications such as YouTube (Ghobadi & Clegg, 2015) has contributed to the emergence of new forms of collective actions. Relative to traditional media, digital media technologies have greater emancipatory affordances which enable social movements through decreased constraints on authorship, influence, and shared emotion; yet, diffusion of diverse social movement frames is more constrained on digital than traditional media (Miranda et al., 2016). That is, what is being discussed through digital media can be paradoxically relatively restricted, even as traditional technical constraints of diffusions have lifted. Research has identified other aspects of digital technologies which contribute to the emergence of new forms of organizing including interactive affordances (Kallinikos, Aaltonen, & Marton, 2013; Leonardi, 2011), the ability for individuals organically take on interdependent roles (Vaast et al., 2017), and affordances for socializing (Zheng & Yu, 2016), solidarity (Stewart & Schultze, 2019), and empowerment (Leong et al., 2019). Increasingly, digital organizing is taking place across multiple platforms and/or using multiple

social media applications. These multiple, complementary and concurrent channels are making all the dynamics of digitally-enabled new forms of collective action even more complex.

Information Flows

Information sharing is crucial for coordination and collective actions. Just as prior generations of innovations such as radio and television changed the diffusion and reception of information, so too have digital technologies. Miranda et al. (2016)'s model of information flows during the digital organizing of an online social movement explains how digital technologies change the way information is shared. When coordinating parties are not collocated, information flows must traverse the traditional boundaries an organization, which requires modular architecture "that enables different individuals to work in parallel without having to explicitly coordinate their actions" (Puranam et al., 2014).

Special issue on Digital Organizing of Collective Action and Social Movements

One objective of this editorial is to introduce the Special Issue on Collective Action, Social Movements, and Digital Technologies. We were excited to propose this special issue of *Information and Organization* to develop further the understanding around the roles of digital technologies in collective actions and social movements phenomena and to add theoretical insights related to organizing in the digital age. We thank Editor-in-Chief Elizabeth Davidson as well as numerous anonymous reviewers for their invaluable help in this process. They made this special issue stimulating by generously sharing their insights through detailed, developmental feedback. We received 18 submissions in total. From a rigorous and selective process, four fascinating papers were included in this special issue. Each tackles important theoretical questions and provides thought-provoking insights. We briefly present the papers of this special issue.

Jordana George and Dorothy Leidner, in their paper "From clicktivism to hacktivism: Understanding digital activism", provide an overview of descriptions, definitions and categories of digital activism. In an organizing literature review, George and Leidner identify ten digital activism activities which fit into a typology of activities. This research includes a rich discussion of digital activism actors (e.g., organizations and individuals, activists and targets) and impacts (i.e., cognitive, emotional, financial, operational, reputational, and power).

Alessio Maria Braccini, Øystein Sæbø and Tommaso Federici, in their article "From the blogosphere into the parliament: The role of digital technologies in organizing social movements" describe an exploratory case study of the Italian Five Star Movement. The objective of this research is to explain the role of digital technologies in shaping how social movements organize over the social movement lifecycle. Drawing on Bennett & Segerberg (2013) discourse on the logics of connective and collective action, Braccini and colleagues develop a process model of how logics, organizational structure and technology use changes throughout the stages of an online social movement.

Maya Stewart and Ulrike Schultze, in their article "Producing solidarity in social media activism: The case of My Stealthy Freedom", investigated two types of activist's communities protesting the compulsory hijab (the MyStealthyfreedom and WhiteWednesday campaign) in Iran. They pay particular attention to how social media influences and mediates solidarity (i.e. an individual's feelings of devotion and commitment to others) in a collective. They explore new forms of solidarity and explain how solidarity is manifested in practice in contemporary social movements.

Ana Cardoso, Marie-Claude Boudreau, and Joao Alvaro Carvalho, in their article "Organizing collective action: Does information and communication technology matter?",

describe the use of multiple ICTs (ICT ensembles) in consensual collective action. The authors detail the use of ICT ensembles in two successful civic movements and conclude that while the use of ICTs might well empower collective action, human factors (such as individual capacity and intents) are, to a great extent, implicated in the success of ICT enabled collective action.

Future research directions

Our engagement with this special issue has brought to our attention several ongoing debates as well as gaps in understanding in this field of research. While the papers in this special issue and other scholarship have added to our understanding of digital organizing and new forms of collective action and social movements, many important questions remain to be addressed. To facilitate future research we articulate several particularly puzzling research directions below.

For one, innovations in actor types, technologies and information flows have transformed the landscape of digital organizing. This raises big questions and requires original theorizing, but such theorizing can be overwhelming. Where should researchers begin? To aid researchers interested in tackling phenomena associated with digital and collective organizing, we outline some questions that could fruitfully be raised in Table 1. These questions particularly highlight the interplay of and shifting boundaries between human and technological agents in collective organizing.

Table 1: An Agenda for Future Research		
Innovation	**New Phenomena**	**Sample of Questions Raised**
Actor Types	Human users are no longer the only actors involved in digital organizing. In some contexts, human users may even be the minority contributors.	-How should actors be classified? -Do actor types act in fundamentally different and predictable ways, and who should be held accountable for the actions of non-human actors? -How can digital organizing be designed to prevent human users from being shut-out of digital organizing?

		-Do existing human-machine task typologies need to be revisited? -How can insights from the study of social media cyborg accounts be generalized to provide insights into cyborgs on shop floors and in other business or manufacturing contexts?
Technologies	Digital technologies enable and constrain digital organizing in idiosyncratic, and sometimes unpredictable, ways.	-How does technology design subvert or subdue the agency of humans and other types of actors? -How can uncontrollable crowds be governed within and across digital technologies? -What ethical and social responsibilities do platform owners have when supporting digital organizing? -How should digital technologies be classified? What typological distinctions can we make to aid theorizing and measurement? -What are the limits of digital technology for collective action?
Information Flows	Rather than simple two-step flows of information, we see multi-directional flows of information across multiple actors and actor types across multiple technologies and technology types.	-How can framing theory, and other existing or new theories, be used to classify information types for better understanding of diffusion outcomes? -What types of content packages are most impactful in motivating digital organizing? -To what extent, and in what ways, does technology design shape actors' interpretations of information and consequent actions? -How can information freedom and control be balanced to emancipate political participation without aiding terrorism?

In addition to the future directions pointed to in Table 1, researchers should be concerned with how digital organizing impacts society. More work is needed to develop sophisticated explanatory, predictive, and design theories that take into consideration the participants and

technologies of digital organizing. Of particular interest would be a consideration of the temporal processes through which digital organizing and collective action emerge and unfold (Vaast et al., 2017). Other research could devise original ways to measure social movement impact given that there are challenges with causality in large-group and society-level studies. Digital activism has been referred to cynically as clicktivism (Karpf, 2010; Miller, 2017) since individual involvement through, for instance, "liking" and "sharing" posts has low cost and perhaps low impact as well. Could it be that clicktivism pacifies people into not taking *real* action in the physical world? Miller (2008, 2017) argued for the establishment of clear distinctions between "*phatic*" communications with digital technologies and actual engagement in collective action. Yet, such skepticism does not fully take in consideration that digital activism may inspire, rally, and promote self-organization of like-minded people in organized collaboration. We thus need to understand better the complexity and heterogeneity of engagement and impact of new forms of collective action with digital technologies.

As technologies evolve to become more autonomous and have learning capabilities (Faraj, Pachidi, & Sayegh, 2018), research will be needed to understand how autonomous agents, artificial intelligence systems, and machine learning algorithms change the nature of organizing and organization in subtle and dramatic ways. Process theories are needed to understand how these new technologies alter existing processes. The autonomy and unpredictability of autonomous agents may contribute to unexpected ethical dilemmas (Demetis & Lee, 2018), necessitating the early development of normative theories and ethical guidelines for autonomous agent design and implementation in digital organizing contexts.

It would also be important for researchers to dig more deeply into the dark side of digital organizing and collection actions. The boundaries between digital activism and online bullying

can appear thin at times (Marwick & Caplan, 2018; Marwick & Lewis, 2017; Siapera, 2019). Moreover, there is growing concern about the fast and damaging spread of misinformation, rumors and "fake news" via digital technologies and the implications for individuals, groups, nations and society broadly. Researchers could for instance investigate how misinformation arises and spreads, and the impact of misinformation on digital organizing. Even when information is accurate, widespread diffusion online may cause more harm than good. Micro-activism around isolated incidents has, at times, resulted in negative impacts for people (Ortiz et al., 2019) and organizations (George & Leidner, 2019). This raises questions about how to protect vulnerable individuals and marginalized groups from the potential fallouts of digital organizing. In complex cases involving moral ambiguity, subjective judgments of what a positive outcome is may be culturally biased.

Finally, we caution that research projects and researchers themselves may be at risk of becoming weaponized against marginalized groups and individuals. Insights about technology design associated with digital organizing could, for instance, become appropriated by a totalitarian regime to design technologies that thwart grassroots organizing online. Research resulting in practical strategies for empowerment of marginalized groups through digital organizing might also end up adopted instead by terrorist organizations. We thus caution researchers to exert mindfulness and to address the urgent need for new ethical, critical, design and practice-oriented research projects. We look forward to the next generation of such responsible scholarship.

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