

## Participatory Governance in the Digital Age: From Input to Oversight

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Digital technologies are now an integral part of citizen-state encounters. This article surveys the interaction of four such technologies with four modes of public participation: knowledge transfer, collective decision making and action, choice and voice, and judgment and oversight. It enquires how different modes of participation are shaping the adoption of digital technologies and how digital technologies can amplify, challenge, or reshape modes of participation. The comparative approach enables a nuanced account of the ambivalent mixture of potentials and risks that sensing technology, data analytics, governance platforms, and social media represent for each participation mode. It also guards against a determinist mindset that overstates the transformative effect of technology, instead arguing that digitalization is less likely to create something radically new than recalibrate the composition of participatory activity, shifting emphasis from inputting expertise and preferences before a decision to oversight and judgment of decisions and implementation.

*Keywords: citizen participation, digital technology, participatory governance*

Digital technologies have become an integral part of citizen-state encounters. It is now common for citizens to be encouraged to contribute their expertise on policy wikis, to use online platforms to propose and vote on projects for public spending, and to deploy their smartphone cameras and social media to denounce abuses of power by public officials. Ongoing processes of datafication of public administration have also been bound with the digitalization of citizen-state encounters. They have entailed drawing both citizens and public officials into new forms of data production, whereby citizens use online platforms to rate local public services as they might rate a local restaurant, and governments use digital tools to profile and track citizens to predict service demand and optimize delivery. Several articles in this Special Section address the problem of how citizens can gain more control over these datafication processes. This article complements them by exploring the implications of broader processes of digitalization for the project of increasing public participation in policy making. It surveys the interactions between four key digital technologies—sensing technology, data analytics, governance platforms, and social media—and four modes

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of participation in policy making: participation as knowledge transfer, collective decision making and action, choice and voice, and judgment and oversight (Dean, 2017, 2019).

The comparative approach is intended to address two problematic tendencies within the existing literature on digital participation. The first is a lack of systematic comparison of how different digital technologies interact with different ideas of participation. As Lember, Brandsen, and Tönurist (2019) have argued, "to speak about THE effects of THE new technologies on THE involvement of citizens is to mirror the errors of the techno-optimists" (p. 1; emphasis in original). We should not expect uniform relationships between distinct technologies and distinct modes of participation. This article, therefore, does not ask about the effect of digital technology on participation as a singular phenomenon. By comparing interactions between four technologies and four modes of participation, it instead enquires how the affordances and constraints of the different technologies can amplify some modes of participation while challenging or reshaping others. Moreover, it examines how different ideas of participation shape the ways digital technologies are adopted, which brings us to the second issue.

A flavor of technological determinism appears to characterize existing works in this field, which focus on the way that technology "affects," "impacts," or "transforms" participation (e.g., Fung, Russon Gilman, & Shkabatur, 2013; Lember et al., 2019; Lindgren, Madsen, Hofmann, & Melin, 2019; Peixoto & Steinberg, 2019), forgetting the ways that cultures of participation can shape which technology gets adopted and the ways it is deployed and adapted. As such, digital innovations in participation, such as policy wikis (Noveck, 2010), can often be treated as if they appeared *sui generis*, unmoored from the predominant cultures of participation that characterize citizen-state encounters. The application of the typology of modes of participation is thus intended to better integrate our understanding of digital forms of participation with their analog antecedents. It enables an assessment of whether digital technologies are being used to radically reimagine participatory practice or being adopted to fit well-established modes of operation.

#### **Four Key Technologies in Digitalizing Governance**

Public participation cannot be separated from the governance context in which it is situated. Analyzing the relationship between digitalization and participation thus requires understanding the relationship between digitalization and this governance context. This section introduces four key digital technologies: sensor technology, data analytics, governance platforms, and social media. These technologies encompass a range of prominent innovations in digital infrastructures and practices that are increasingly adopted into systems of public value creation in ways that intersect with the possibilities for participation. The definitions of each technology and its role within public administration are then followed by a discussion of the implications of these developments for the participatory governance context.

##### ***Sensor Technology***

Sensor technology is broadly interpreted here as any means for capturing digital data at source and in real-time. Digital sensors have been a fundamental building block of the "smart city" by instrumenting urban infrastructure to produce a stream of real-time environmental data. Public services increasingly deploy sensors that can track people; for instance, Transport for London has begun trying to optimize passenger flows through the London Underground by tracking passenger journeys and using these data to send individualized travel

advice to avoid certain stations at certain times. There are sensors that attempt to identify problem behaviors, such as the gunshot-recognition microphones employed in some U.S. cities to automatically alert police to a potential crime (Morozov, 2013), and there are sensors that monitor features of the environment, such as air quality. It is not only governments and public services that can deploy sensors to track populations. Citizens can undertake *citizen sensing*, for example, by deploying their own sensors to monitor pollution (Zandbergen & Uitermark, 2020) or using their smartphone cameras to expose police violence.

### ***Data Analytics***

There are two components to data analytics. First is the construction of data systems. These data systems can be created to contain the aforementioned sensed data, but this is not the only method. Public agencies increasingly share traditional administrative data, combining it into “data warehouses” with the aim of achieving a “golden view” of citizens that is simultaneously extensive, integrated, and granular (Dencik, Redden, Hintz, & Warne, 2019). The result is citizens become data subjects—an assemblage of data points to be governed through optimization (Lupton, 2015). The second component is the analytics applied to these data. Algorithmic decision-making tools are increasingly used by governments to inform decisions on a wide range of policies, from scoring eligibility for public benefits to predicting future behaviors, such as recidivism. Dencik and colleagues (2019) have shown these practices are widespread across U.K. local governments and used across a set of policy fields as diverse as housing, health, child protection, tax and benefit, and youth crime. It is the application of these analytics that has provoked the most criticism of the datafication of government, with particular concerns about the effects for marginalized communities of hiding discriminatory logics behind a veneer of objective computer code (see Eubanks, 2018).

### ***Governance Platforms***

The emergence of governance platforms has a more obvious direct relationship with citizen participation than the previous two technological developments. Whereas the initial Internet provided a means for mass dissemination, Web 2.0 was heralded as a transformational opportunity for mass collaboration, a shift from “e-government to we-government” (Linders, 2012). Although in public debate the initial determinist optimism that the Internet would create a new kind of citizen, engaged in radically decentered self-government (Katz, 1997), has been replaced with a determinist pessimism that platform capitalism will destroy democracy (Bartlett, 2018), governance platforms have become a ubiquitous part of modern government, providing citizens with opportunities to engage in petitioning, policy making, and participatory budgeting. Recent articles by Ansell and Miura (2020) and De Blasio and Selva (2019) map the scale and scope of this rapid development. There is now a crowded field of open source, collaborative decision-making software that can be used by anyone, with standout examples being the Decidim platform, which came to prominence as a component of Barcelona’s experiments in municipal socialism, and the Your Priorities platform, which underpinned Reykjavik’s digital participatory budgeting.

### ***Social Media***

Unlike the other three technological developments, social media are not intentionally driven by governments or citizens themselves but are a change in the broader social context of their communicative relationship. As more and more of our communication occurs on social media, so does communication between

citizens and their government (DePaula, Dincelli, & Harrison, 2018). This has often been viewed as a shift toward disintermediated communication (Margetts & Dunleavy, 2013). However, social media are mediated. Facebook, for instance, has frequently altered its platform to restrict the ease with which activists access audiences (Peixoto & Steinberg, 2019). The question we should therefore pose is what it means for citizen-state interaction to be mediated by privately owned social media platforms. This is particularly vital in the Global South, where Facebook is also a leading Internet provider, only providing access to a limited set of websites through its Free Basics program, which often does not include government consultation platforms (Peixoto & Steinberg, 2019). More attention has been paid to how the data trails that citizens leave through their social media activity could be harnessed by government agencies, as a form of distributed intelligence in emergency situations and for sentiment analysis to judge public opinion on existing policies and services (Kavanaugh et al., 2012) or even predict future preferences (Peixoto & Steinberg, 2019).

### ***Implications for the Governance Context***

Taken together, the adoption of these four technologies has two important implications for the broader governance context within which participation occurs: These technologies blur boundaries between public and private and erode the discretionary decision-making spaces of public officials. The reconstituting of boundaries between public and private is complex. There is a double dynamic whereby both the public is privatized and the private is publicized. Sensing technology, data analytics, and social media, which are mostly provided by private companies, increasingly draw these private actors into the business of the state (see Dencik et al., 2019). Decisions that were previously made by public officials based on publicly owned and acquired data increasingly become supplemented with privately produced data and mediated through proprietary, black-box algorithms (see O'Neil, 2016). This fragments responsibility and accountability, making it harder for citizens to know where to direct participatory energies when they want to redress failure.

As public encounters between citizens and officials move onto social media, they similarly draw the private provider of the social media platform into an intermediating role between the two. Nevertheless, social media simultaneously make these encounters more public in some ways. Public encounters were named such because the encounter is with a public institution (Lindgren et al., 2019), yet, when face-to-face, they normally remain private conversations between a single official and a single citizen. Public encounters on social media, contrariwise, have an audience. This also creates pressures to mirror the performative dynamic of the platform on which they take place, potentially transforming the nature of these interactions. As Finlayson (2019) has argued, digital culture erodes the distinctiveness of different discursive activities. Rather than retaining unique discursive conventions, public encounters begin to resemble other online activities, for example, with citizens adopting the communication styles that they use as private consumers (Shen & Wang, 2021) and government agencies engaging in symbolic political messaging (DePaula et al., 2018).

The erosion of decision-making spaces is a more straightforward dynamic and concerns the adoption of data analytics and governance platforms. As policy design and intervention are increasingly informed by proprietary algorithmic decision aids, we move toward what Pasquale (2015) has called a "black box society," characterized by opaque technocratic managerialism. Though, in theory, these remain aids to a human decision maker (Dencik et al., 2019), it is not difficult to imagine that the technology becomes the de facto decision maker, as overburdened public officials accept their judgments without question, especially if rejecting their results requires lengthy justification and form-filling.

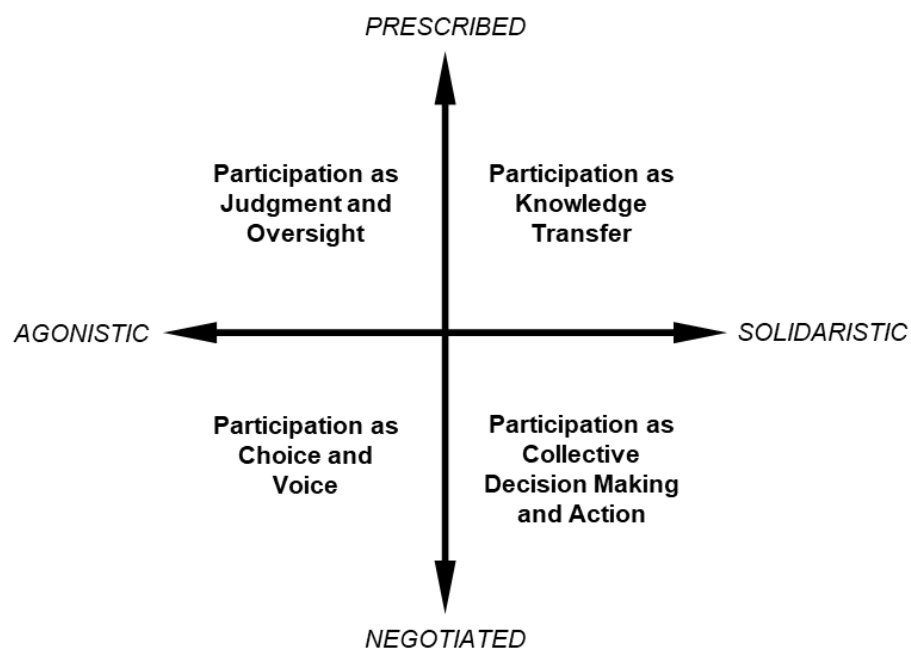
This development particularly affects street-level bureaucrats, such as the police, welfare officers, and healthcare professionals, who have the most contact with the public (Bovens & Zouridis, 2002; Busch & Henriksen, 2018). The discretion of street-level bureaucrats to shape policy delivery in a different direction to the intentions of policy designers in the political center is often viewed as undesirable by the latter. Data systems and governance platforms can provide means for the center to keep those who deliver the policy on a tighter leash. The policy center may simply be able to replace the street-level bureaucrat with an ICT system (Bovens & Zouridis, 2002) or use central control of ICT systems development to design constraints into ICT-based and ICT-facilitated interactions (e.g., by using fixed fields that cannot be transgressed). Much citizen participation has traditionally taken place in this discretionary space of street-level bureaucrats. A prominent example is Chicago's community-policing initiatives (documented by Fung, 2004), wherein residents worked with police officers to inform and direct their policing. When this discretionary power is eroded, it can no longer be shared with citizens and communities in co-governance initiatives. Accordingly, the ways that digital technologies are being adopted in public administration, eroding discretion in citizen-state interactions and increasing private intermediation, alter the governance context in ways that eat into potential spaces for practicing participation.

Do these developments add up to a new governance paradigm, requiring the development of a new paradigmatic form of digital participation? There is an influential argument that digital technology is driving a new quasi-paradigm of digital-era governance, ousting the formerly dominant new public management; that the demands of large-scale digital infrastructures create pressures for reintegration and re-governmentalization, reversing prior trends of fragmentation through agencification and outsourcing (Dunleavy, Margetts, Bastow, & Tinkler, 2006; Margetts & Dunleavy, 2013). This would have significant implications for public participation, which has proliferated alongside this fragmentation, since fragmentation created a range of new public bodies in need of public legitimation (Dean, Boswell, & Smith, 2020; Haber & Heims, 2020; Syrett, 2006). Nevertheless, paradigms tend to have a self-disequilibrating character, making it impossible for one to achieve total hegemony (Hood, 1998); even those who have coined new paradigms seem to accept that they coexist with other modes of governing (Margetts & Dunleavy, 2013; Rhodes, 2007; Torfing & Triantafillou, 2013). Digitalization has been similarly ambiguous in its directions. Whereas, for example, digital-era governance has stressed pressure toward re-governmentalization, others have shown how datafication has resulted in greater integration of private companies into the design and delivery of policy, deepening previous trends of outsourcing. The local authorities surveyed by Dencik and colleagues (2019), for example, used private providers for their data analytics rather than developing these in-house. As such, it remains important to examine the dynamics between digitalization and participation from a multi-paradigmatic perspective. The typology of participation introduced in the next section provides a lens through which to explore digitalization in relation to multiple conceptions of participation, each linked to different administrative traditions.

### **Digital Technology and Four Modes of Participation**

To explore the interaction between digitalization and different forms of participation, this article employs Dean's (2017, 2019) typology of four modes of participatory policy making: Participation as *knowledge transfer*, *collective decision making and action*, *choice and voice*, and *judgment and oversight*. The four modes are structured along two dimensions: *Sociality* and *negotiability* (see Figure 1). The sociality dimension refers to the extent to which the participatory space constructs social relations as agonistic or solidaristic, and the negotiability dimension concerns how much the conditions of participation—such as the agenda and rules of

engagement—are prescribed from outside or negotiated among participants. These dimensions cut across many of the key points of contestation in both democratic and public administration theory. Rather than defining a single conception of what good participation looks like and ranking forms of participation in relation to this single normative perspective, as in Arnstein's (1969) still hugely influential ladder of participation, the typology here attempts to take account of the contestation over what is meant by citizen participation by developing each mode from a distinct governance paradigm. This means that its modes capture a range of alternative good-faith visions of how participation can produce public value, from those that demand relatively little commitment from the public and require little adjustment of the institutional status quo of existing liberal democracies to those that contain a fundamental challenge to these arrangements.



**Figure 1. A typology of four modes of participation.**

Deploying this typology to understand developments in the digitalization and datafication of participatory governance has two primary objectives. First, it enables a nuanced examination of the risks and opportunities that the four digital technologies pose for different notions of participation. As several contributions to this Special Section outline, datafication can be deployed to disempower, and the same is true of participation (Cooke & Kothari, 2001; Lee, McQuarrie, & Walker, 2015), but this article does not explore the risks of the digital and participatory intersecting as means to deceive, deflect, or dominate. The focus is on genuine efforts at the participatory creation of public value, with the risks and opportunities conceived of in terms of how the affordances and constraints of the four technologies amplify, restrict, or reshape the capacities to practice the four modes of participation. Second, the four modes correspond to long-standing governance practices that predate the digital revolution. Situating digital developments within these analog theoretical categories enables their contextualization: Are digital technologies adopted as a

continuance of these older analog practices, or are they precipitating a radical break that requires a reconceptualization of modes of participation for the datafied society?

### ***Digital Participation as Knowledge Transfer***

Participation as knowledge transfer is a way for the public to furnish public-spirited, expert policy makers with information that better enables them to perform their functions. It is linked to hierarchical conceptions of government, which justify the division between governors and the governed based on the former's privileged access to rationality and specialist expertise. It is thus compatible with classical conceptions of public administration. Participation is grounded in a post-Weberian critique of the expert state: The increasing heterogeneity of society means policy-making elites cannot claim a monopoly on expertise. The public is particularly valued for its experiential knowledge of situations that elites rarely encounter, such as poverty. This mode of participation, therefore, suggests digital technology will be adopted to the extent that it either opens up channels for citizens to contribute lay expertise to the policy-making process or provides means to integrate that information with other sources of technocratic evidence in a rational decision-making process.

Governance platforms undoubtedly simplify the input dimension of knowledge transfer for citizens and government. If we take government consultation as the archetypal knowledge-transfer process, then Web-based consultations make it easier for governments to provide and distribute information and consultation opportunities to relevant stakeholders, and online submissions and discussion groups make it easier for those stakeholders to contribute to the consultations. There are even examples where the potential for anonymous discussion has enabled governments to hear from groups who would find it difficult to submit otherwise, such as women at risk of domestic abuse (see Smith, 2009). Governance platforms have also facilitated a range of new experiments with the format of consultation, for example, the creation of policy jams and policy ideas competitions (see Mergel & Desouza, 2013; Noveck, 2010). One example is the Challenge.gov platform, where "members of the public compete to help the U.S. government [*sic*] solve problems big and small" (U.S. Government, n.d.).<sup>2</sup> Other platforms like FixMyStreet make it easier to report problems, helping the government to direct its services. Nevertheless, while there is much evidence that digitalization offers more opportunity for citizens to input their knowledge into policy making, there remains a question concerning the additional analytical capacity to process increased inputs. These developments have occurred at a time when, in most countries, public budgets have been constricted by austerity. Increasing inputs through digital technology while public officials are too overwhelmed to adequately process those inputs prevents the knowledge contained within the inputs from being *transferred*.

These capacity problems point to a probable direction for the development of digital knowledge transfer: greater automation within the decision-making process through the use of data analytics. This automation could connect with citizen intelligence in three ways. The least transformative for participation as knowledge transfer would be to connect governance platforms with algorithmic decision-making tools (e.g., predictive policing software) to integrate the intelligence that citizens actively contribute to these platforms into the calculations. The most transformative would be if sensor technology and data analytics enable public organizations to engage in preemptive analysis of user needs and public values (Margetts & Dunleavy, 2013) as this could simply make knowledge transfer redundant. For instance, citizens would not

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<sup>2</sup> This was for several years the strapline of the Challenge.gov website.

need to use FixMyStreet if the local authority has already detected the problem through algorithmic scanning of video feeds from its waste-disposal trucks (Peixoto & Steinberg, 2019). Datafication in this form can thus be seen as a threat to participation as knowledge transfer.

The third sits between these two. Data analytics can be used to actively search for citizen intelligence, rather than citizens actively contributing to it for a specific purpose. There are already some embryonic attempts to engage in what Dave Karpf (2016) has termed "digital listening." The DEEP Linking Youth project, for example, attempted to use young people's social media posts to understand their views about the Erasmus student mobility scheme (Participedia, n.d.), and the NHS Citizen project likewise proposed using artificial intelligence to aggregate social media and other data to inform public priorities for health policies in the UK National Health Service (NHS) (Dean et al., 2020). There are fears that these kinds of automation could prove problematic; because of the loss of the demonstration effect, "the nexus between the citizen's voice and the government's response tends to disappear" (Russon-Gilman, as quoted in Peixoto & Steinberg, 2019, p. 44). Yet the lack of the demonstration effect is already a perennial issue in relation to knowledge transfer, where there is rarely any feedback about how citizens' contributions have influenced policy. If automated listening can be combined with automated tracking and feedback that notifies citizens when their data are reflected in policy or legislative texts (in a kind of civic manifestation of what the technologist Jaron Lanier [2014] has proposed for an Internet economy of automated micro-payments), it may help citizens to better assess whether the government is responsive. Nevertheless, an automated, digital listening-tracking-feedback system would be a fundamental shift, turning knowledge transfer from an active into a passive activity with uncertain implications for its democratic character as well as raising the question of whether it could still be called participation.

### ***Digital Participation as Collective Decision Making and Action***

Participation as collective decision making and action is linked to the participatory democratic tradition, as espoused by Carole Pateman (1970). The participatory society is a society of interdependent equals collectively (usually consensually) taking decisions to which they are all equally subject, and where participation in political, social, civic, and economic decision making is woven into the fabric of a citizen's everyday life. This mode of participation is therefore linked to a much more radical transformation of governance, based around the redistribution of decision-making power as well as community-development perspectives more focused on collective actions than collective decisions (Dean, 2019). Digital tools will be adopted within this mode of participation to the extent that they can open up decision-making processes to citizens or enable them to engage in collective actions. This could be to take decisions and create public value autonomously as a community or to coproduce decisions and public value as equal partners with the government.

Though the initial techno-optimism that the Internet (or more recently Blockchain) would precipitate radically decentered self-government has not come to pass, governance platforms have facilitated the creation of some inspiring new projects to open up public decision making. The most widespread use has been for participatory budgeting, which is practiced in thousands of municipalities across the world, now largely conducted through platforms that give residents opportunities to submit and comment on ideas and vote to prioritize the allocation of funds. The adoption of large-scale, city-wide participatory budgeting processes in, for instance, Madrid, Paris, and Reykjavik, is almost certainly linked to the fact that these online platforms make participatory budgeting significantly cheaper and more tractable. There have been various experiments to enable



citizens to collaboratively draft policy or legislative proposals online. One example is the “policy wikis” documented by Noveck (2010). Finland’s *Avoin ministeriö* (Open Ministry) enabled citizens to crowdsource ideas for new legislative initiatives and then supported them to turn these ideas into legislative proposals (Lastovka, 2015). The most ambitious project in this vein is arguably Iceland’s attempt to crowdsource a new constitution (Hudson, 2017). On the more action-oriented side, civic crowdfunding platforms enable citizens to pool resources to create public value (Porter & Veenswijk, 2018).

Despite this plethora of examples, digital forms of collective decision making and action remain marginal. In one respect, the prospects for their expansion are sharpened by the austerity of recent years. As the state offloads responsibilities for services onto communities, tools that help them to decide and act collectively become increasingly vital. Collective decision making is also not as vulnerable to passivization as knowledge transfer, because collective decision making concerns the consent of autonomous agents, which is more controversial to passivize. The aforementioned reduction of decision-making discretion through datafication does have implications for collective decision making’s more coproductive form though. If the agency of bureaucrats to take decisions is increasingly outsourced to algorithms, then their agency to share decisions is also constrained.

Another potentially concerning aspect of digitalization for participatory democrats is how the move toward digital collective action potentially results in a more individuated experience of the process. This echoes the Internet’s role in broader social shifts from public to private spheres (Papacharissi, 2010) and from local solidarities to networked individualism (Wellman, 2001). The particular affordances of digital governance platforms—the ability to operate remotely, and engage in asynchronous, often anonymous, discussions—do not lend themselves to collective experience in the same way as an in-person meeting and discussion. Rather than engaging in a collective experience, participants make an individual contribution to a collective product. This is starkly apparent in the online manifestations of participatory budgeting. The form that they have taken—broadly, some citizens raise ideas for public projects, small groups work up the ideas into practicable projects, then people vote on which projects are to be funded—loses some of the community mobilizing and deliberative components of the initial Porto Alegre model. There is a risk that participatory budgeting is experienced by the majority of the participants as a sort of civic online shopping—one where the products are designed bottom-up but still an individuated experience in which you buy your preferred services with votes. This individuation is not inevitable, however. The COVID-19 pandemic forced many deliberative initiatives online, demonstrating the possibilities for doing synchronous deliberation digitally (Afsahi, Beausoleil, Dean, Ercan, & Gagnon, 2020), and civic crowdfunding can be more than just a donation, fostering deeper participation that connects across online and offline environments (Porter & Veenswijk, 2018). Future attempts at digital collective decision making need to be attentive to whether they foster or undermine the collective bonds that make this form of organizing sustainable over the long term.

### ***Digital Participation as Choice and Voice***

Participation as choice and voice is linked to economic theories of democracy (e.g., Downs, 1957) and market-based approaches to public administration (e.g., Le Grand, 2008). It is characterized by a liberal individualistic attitude in which politicians and public service organizations compete for utility-maximizing voters and service users. There are thus two ways in which digitalization can facilitate this mode of participation. The first is to enable choice and competition, for example, through the creation of platforms

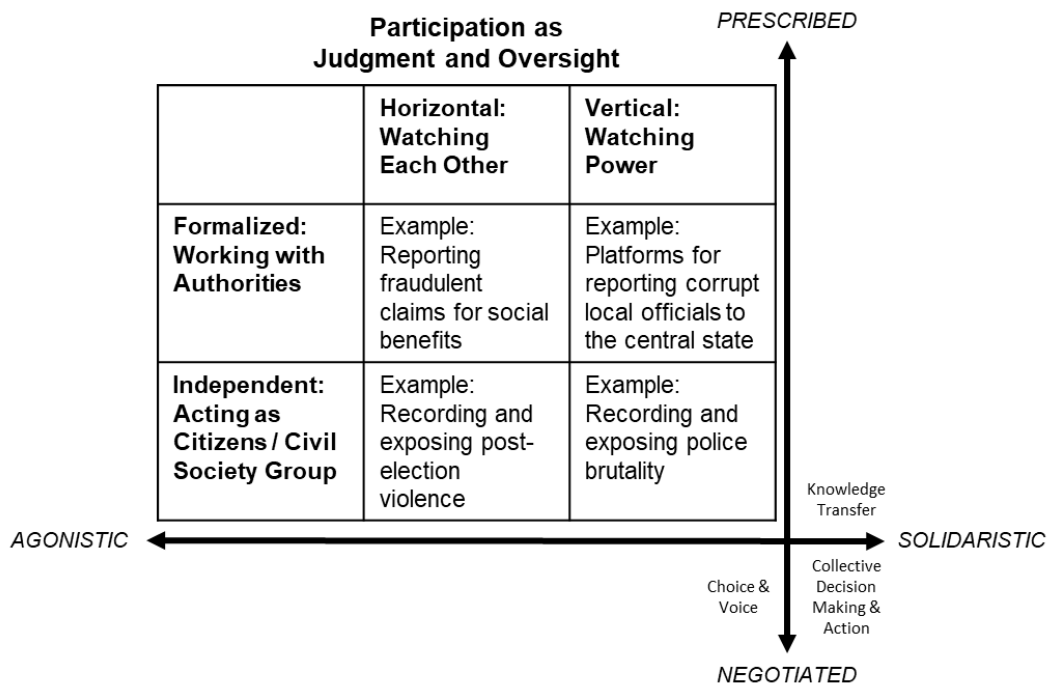
on which people can assess competing providers and make choices. The second is to provide new mechanisms through which service users can voice their consumer preferences. There is an obvious affinity between voice and knowledge transfer, but the difference lies in knowledge transfer's focus on understanding what citizens know that can contribute to common good decisions, whereas voice is oriented to finding out what consumers want, so as to tailor services to their preferences as individuals. In addition, unlike citizen expertise, voice is not just one input that needs to be weighed against other evidence in a decision-making process. Voice is *the* information that competitors must respect if they do not want consumers to exert their power to exit.

The similarities between voice and knowledge transfer mean that voice encounters many of the same opportunities and pressures from digital technology that were discussed in relation to knowledge transfer. Online platforms similarly make the process of obtaining consumer input into service development as well as feedback on services received much simpler. However, the development of sensor technology, data analytics, and social media potentially poses a deeper threat to voice than knowledge transfer, increasing the likelihood of passivization through automation. The concept of "citizen expertise" admits the possibility that citizens are a source for something that policy officials do not possess, whereas the idea that individuals are the best source of information about their own preferences is increasingly being challenged by technologists. A kind of big-data behaviorism—which claims the data analyst, armed with our online searches and clicks, knows more about our "real selves" than we do (e.g., Stephens-Davidowitz, 2017)—is becoming increasingly influential. These ideas enter a policy environment where the rising influence of behavioral public policy in recent years means that skepticism of stated preferences in favor of revealed preferences is already widespread. They are further compounded by the fact that the business model of the major social media platforms, such as Facebook, Twitter, YouTube, and Instagram, are specifically designed to measure our preferences to deliver targeted advertising—they all have a "Like" button, they do not have an "Expertise" button. There is thus both a greater ideological openness to passivizing consumer voice and a greater technological capacity to do so.

Governance platforms are now a key component of systems for facilitating choice in public services, both in providing an informational basis for consumer choices and drawing citizens into the production of this information. This has solved a substantial problem of the market approach to public service provision. For a long-time, governments' quasi-market making was hampered by the problem of providing information to service users on which they could base their choices. It is now easy for regulators or other relevant bodies to provide extensive data profiles of public organizations' performance online, which can be used to inform such choices. Web 2.0 added another important facet to these data profiles. Quasi-markets were intended to be a solution to problems of government target setting (see, particularly, Le Grand, 2008), yet consumers had to rely on government-mandated and -produced metrics (such as New Labour's star ratings for hospitals in England) to inform their choices. This made quasi-markets a de facto system of targets and rankings, thus subject to similar dysfunctions. In contrast, Web 2.0 platforms enable performance data to be created bottom-up. Service users can embellish the data profiles of public organizations by publicly voicing their own feedback, which then informs the choices of other users. Service users can now rate public services in the same way they rate hotels and restaurants on TripAdvisor or products on Amazon. This development has drawn citizens into the practice of market making—for example, it is now patients, rather than the government, that provide star ratings for doctors' practices.

**Digital Participation as Judgment and Oversight**

Judgment and oversight are about working to uphold customary norms and intervening to punish transgressors. Though we may view the expression of preferences and the authorization of representatives as the primary democratic acts in contemporary liberal democracies, oversight and judgment have always been integral to democratic citizenship from its inception in ancient Athens, through medieval city states, to today (see Keane, 2011; Manin, 1997; Rosanvallon, 2008). Digital technology can contribute to participation as judgment and oversight to the extent that it enables citizens to engage in practices of monitoring and exposure of any violations of community standards. Debates about the monitory capacity of digital technology have concentrated on how it enables surveillance of citizens, but a number of scholars have also noted how it creates a "sousveillance" capacity to watch from below (e.g., Fung et al., 2013; Ganascia, 2010; Keane, 2011; Lupton, 2015). Despite the name, sousveillance should not simply be viewed as the opposite of surveillance—that is, citizens watching power. Ganascia (2010) instead offers an account of the sousveillance society as one where everyone is continually monitored by everyone else. It is possible to therefore elaborate on four forms of digital oversight. Oversight can be vertically directed, toward government activity to expose abuses of power, but it can also be horizontally directed, toward the community itself. In addition, it can be conducted independently or in conjunction with formal surveillance practices (summarized in Figure 2).



**Figure 2. Four forms of citizen oversight.**

The most significant developments for citizens to independently monitor and expose abuses of power are sensor technology to record the problem and social media to publicly expose it. The most high-profile example of recent years is the way the Black Lives Matter movement has combined camera phones

and social media to expose police brutality. There are a range of other projects that similarly use either sensors, social media, or both to pursue decentralized oversight. There are citizen science projects that record environmental data and use these to challenge governments who, for example, misrepresent air pollution levels (Paulos, Honicky, & Hooker, 2009). Disabled people's movements in the United Kingdom, such as Spartacus and Disabled People Against Cuts, have been effective in using blogs to record and publicize the harm (in many cases deaths) caused by changes to the social security system (Harris, 2018). Governance platforms have also played a role as an alternative venue to social media for aggregation and exposure—for example, Promise Tracker has enabled students and parents in Brazil to monitor whether the government is delivering on a policy to improve the quality of school meals (Noveck, 2018). The same dynamic is observable for horizontal forms of independent community oversight, where both social media and governance platforms have been used as tools against police transgressions of community norms through large-scale social shaming. Naming and shaming of those who engaged in post-election violence was, for instance, carried out through the Ushahidi platform in Kenya (Emmer & Kunst, 2018) and on mainstream social media platforms following the storming of the Capitol in the United States.

Governance platforms, particularly their affordance for anonymous reporting, have been more central in encouraging participation in formalized oversight processes. This is true both of state oversight of the population and regulatory oversight of other parts of the state—for example, in England, similar online forms have been developed to allow citizens to anonymously report suspicions that their neighbor is fraudulently claiming social benefit payments and concerns that their child's school is underperforming. Moreover, in countries with endemic corruption problems, such as India and Sierra Leone, central governments have established online platforms on which citizens can anonymously report bribes paid to public officials (Dean, 2018). There is also an interesting story about data analytics facilitating bottom-up regulatory oversight. One promise of the worldwide "open data" movement has been that making government data accessible and interoperable would create opportunities for civil society data analytics to audit public organizations and hold them publicly accountable, particularly on public procurement (see Open Government Partnership, n.d., for a number of examples). The perception that citizen auditors could substitute for central control even underpinned the abolition of some regulatory agencies in the United States and the United Kingdom according to Margetts and Dunleavy (2013). Judgment and oversight are therefore the only mode of participation for which all four digital technologies have largely been viewed as unambiguously positive developments.

### **Discussion: Recalibration and Passivization**

This survey of participatory governance in the digital age suggests any claims that digitalization is radically transforming participatory practices should be treated with a healthy dose of skepticism. Vast swathes of digital participation can be understood through conceptual categories developed to understand analog participation, with digital technology largely being used as a tool to pursue established modes of citizen-state interaction. This is not to say that digitalization has had no impacts, only that these impacts are nuanced and better understood comparatively. The comparison of how a range of technologies intersect with different modes of participation enables a fine-grained insight into the implications of each technology on each mode, an aggregation of their combined implications for a particular mode, and each technology's implications across the four modes (see Table 1 for an overview).

Judgment and oversight emerge as the only mode where all four forms of technology provide opportunities for expansion. The other modes were all challenged in some way by at least one technology. This could have significant consequences for the composition of participatory activities. Participation still tends to be predominantly viewed as an input that happens before decision making and action (e.g., see Fung et al., 2013). However, a combination of the passivization of input and expanding opportunities for oversight may shift this balance so that forms of “counter-governance” (Dean, 2018) that take place after decision making and action become the norm. This echoes John Keane’s (2011) argument that digitalization is facilitating a shift toward “monitory democracy.” It would be a substantial recalibration in the balance of participatory activity, from a primarily solidaristic vision, in which citizens should trust public authorities to use their inputs in the service of public value, to a more agonistic conception, where participation begins from a position of suspicion of public judgments.

**Table 1. Primary Interaction Between Participation Modes and Technologies.**

	<b>Sensing Technology</b>	<b>Data Analytics</b>	<b>Governance Platforms</b>	<b>Social Media</b>
<b>Knowledge Transfer</b>	Risk of replacement or passivization of citizen expertise by sensed data.	Risk of passivization but also potential for integration of citizens’ expertise into decision making systems.	Substantial expansion of breadth and reach of opportunities to contribute expertise.	Some risk that social media posts replace active contribution of expertise, but less important than sensing technology and data analytics.
<b>Collective Decision Making &amp; Action</b>	No substantial relationship.	Reduced scope for collective decision making through reduction of bureaucratic discretion	Increased capacity to organize collective decisions/actions on a large scale, but risk of individuation.	Increased capacity for citizen self-organization for collective actions
<b>Choice &amp; Voice</b>	Risk of replacement of voice by revealed preferences in sensed data.	Risk of replacement of voice by revealed preferences in administrative data.	A new means of drawing citizens into public service market making.	Risk of passivization of intentional voice by revealed preferences in social media posts.
<b>Judgment &amp; Oversight</b>	Increased capacity for monitoring both power and each other.	New object for monitoring and judgment (e.g., algorithmic bias).	Increased capacity for reporting corruption/fraud to the responsible authority.	Increased capacity for distribution of judgment.

It also became apparent through the analysis that governance platforms are the only one of the four technologies with positive affordances for all four participation modes, with the possible exception of collective decision making and action, where the tendency to individuation makes it more ambivalent. The differential implications of the four technologies for the alternative participation modes demonstrate how the risks and opportunities that digitalization presents for different conceptions of participation can only be understood with reference to the normative presumptions underpinning each mode. The same technology can be interpreted as an affordance for one form of participation while being a constraint for another. Governance platforms' capacity to render individuated judgments is, for instance, problematic for the collective decision-making mode of participation because it is centered on an ideal of solidaristic collective action, but this capacity is what makes it so useful as a market-making tool for the choice-and-voice mode, based in an ideal of the participant as an individual consumer.

The same dynamic applies to the notion of passivization, identified as an important theme across the participation modes (see also Lember et al., 2019; Peixoto & Steinberg, 2019). Passivization presents a question of whether the modes need to be updated with their passivized forms. Nevertheless, this should be interpreted differently in relation to the different modes. From the collective-decision-making perspective, passive participation is an oxymoron since it is missing the key feature of collective negotiation of power. However, this is not so for the more prescriptive participation of the knowledge-transfer mode, which does not require that participants hold decision-making power. There are certain forms of automated responsiveness that, even from this perspective, would likely be considered a replacement of participation rather than passivized participation, for instance, when public organizations simply analyze the big data that are created as a by-product of service use without consultation. Nevertheless, passivization forces us to update the categories of knowledge transfer and voice to better understand the line between participation and analysis in a datafied governance system.

One dividing line could be *participant intention*. Take, for example, the COVID-19 tracking apps, where there is an intentional act on the part of the citizen to convey uniquely personalized information to inform public health interventions. This could be construed as a form of passive knowledge transfer. Similarly, there is an element of intentionality at the base of scraped social media posts that may constitute a form of passive voice. Though social media erode the difference between public and private speech (Finlayson, 2019), and scraping gives public authorities significant power to interpret meanings and set terms of relevance, scraping does not eradicate intentionality completely. Particularly on platforms like Facebook, where there is an option to toggle among different levels of privacy for posts, users can make active choices about when they are posting for public purposes. This functionality could even be developed to include an option for posts that users think should be considered for the kinds of governmental preemptive needs analysis that Margetts and Dunleavy (2013) theorized about, introducing an element of user curation.

Passivization may, however, ultimately turn out to be more of a theoretical than a practical problem. Data analytics systems have been plagued with problems with data quality (Dencik et al., 2019). After much initial hype, predictive policing algorithms are increasingly being abandoned by U.S. police forces due to their lack of added value. NHS Citizen's plan for automated detection of social sentiment on health policy was quite quickly abandoned (Dean et al., 2020). Fears over the inexorable growth of public service data analytics may therefore be a form of what Vinsel (2021) has called *criti-hype*, in which critical

scholarship reinforces technology companies' public relations hyperbole. Rather than passivizing participation, data analytics systems may simply be discarded as they fail to live up to the hype or open up new avenues of participation, for instance, new forms of knowledge transfer to ensure data quality or oversight to monitor bias in algorithmic outputs.

### **Conclusion**

This article has explored the interaction between four digital technologies and four modes of public participation: Participation as knowledge transfer, collective decision making and action, choice and voice, and judgment and oversight (Dean, 2017, 2019). The comparative approach has demonstrated the relationship between digital technology and participation is complex. We cannot speak of a uniform impact of digitalization on the generalized concept of participation, or even on a single mode of participation. The four digital technologies represent an ambivalent mixture of potentials and risks for each mode—for example, providing new tools with which to increase active voice while also generating data that could make active voice redundant.

The contextualization of new digital practices of participation within the four modes of participation, based on longstanding analog practices, provides a necessary update to the modes of participation by exploring how they should be interpreted in relation to an increasingly digitalized governance context. It also acts as a guardrail against both an overinterpretation of novelty as well as a determinist mindset that only considers the impacts of digital technology on participation and not how technological developments may be shaped to fit with existing ideas of participation. Much of the benefit of digitalization has not been in the transformational creation of new forms of participation that would reconstitute citizen-state interactions but in providing new tools to carry out existing practices more effectively or on a greater scale. This is not to say there are no effects of digitalization. However, the most prominent effect of the combination of affordances offered by sensor technology, data analytics, governance platforms, and social media is less likely to be the creation of something radically new than a recalibration in the composition of participatory activity—shifting emphasis from inputting citizen expertise and preferences before a decision to oversight and judgment of decisions and implementation. The comparative approach, working across multiple technologies and participation modes, is thus essential to understand the nuanced ways that participation is developing in the digital age.

The more conceptually oriented approach of this article raises several questions that open up new vistas for future empirical research. There are hypotheses concerning the relationship between the technologies and modes that require robust empirical investigation, such as whether governance platforms result in a more individuated experience of collective decision-making and action projects, or whether open data are genuinely increasing the number of actors engaged in decentralized oversight. In addition, the article not only focuses primarily on the modes of participation in isolation but also hints at the potential interplay among them—for example, that the datafication of forms of knowledge transfer and voice creates an impetus for participatory oversight. These complex dynamics thus require more attention if we are to make a comprehensive assessment of prospects for digital participatory governance.

The examination of different forms of participation through different dimensions of the digital also provides a useful lens on participatory interventions to address the main theme of this Special Section: the governance of datafication. It can first help with problem definition, then with identifying which participatory interventions are well-suited to addressing different problems. Do data analytics, for example, challenge democratic citizenship because they weaken individual or collective control of public data? The former might be best solved with a choice-and-voice intervention, the latter with a collective decision-making intervention. Is the unequal impact of these systems on different communities more an issue of incomplete data or an issue of willful domination? The first problem could be solved with a knowledge-transfer intervention, whereas the second would require a more agonistic judgment-and-oversight intervention. The approach thus provides a toolbox of options for the participatory governance of datafication that straddles ideological divides among different governance paradigms.

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