The Case for a Broader Approach to e-Participation Research: Hybridity, Isolation and System Orientation

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Abstract. Two decades into the young history of e-participation research, we aim to take stock of the state of this field in the light of three developments that we argue have substantial implications for research on electronic participation: (1) dissolving boundaries between online and offline spheres of political participation; (2) academic isolation of e-participation research from other research fields related to political participation; and (3) the systemic turn in research on political participation. In relation to these developments, we discuss the potential role of the field in the future and make the case for a broader approach to e-participation research.

Keywords: E-participation · Hybridization · Academic isolation · Political systems · Democratic innovations

1 Introduction

At the start of the new millennium "electronic participation" or "e-participation" gained increasing attention within government as a concept delineating processes of citizen participation in politics aided by or administered through ICTs [1, 2]. As the internet and ICTs in general diffused across the developed world, visions for how these technologies could aid and even revolutionize democratic practices [cf. 3] materialized in the form of processes that took advantage of novel ICTs to aid citizens' participation in politics. Some of these simply transferred "offline" models for political participation into the digital sphere, while others created new forms of political participation [4].

In concurrence with the increased utilization of ICT-enabled or aided processes of citizen participation, a new academic field arose related to the concept of e-participation. In its infancy, the field of e-participation research was viewed as a sub-field of "electronic democracy" or "e-democracy" [5], which was understood as a wider field encompassing

questions related to how "ICT-supported communication processes can facilitate democratic goals" [6, p. 373]. However, the popularity of e-participation rose steadily in the 2000s and soon became the more widely used concept in academic research (see Fig. 1 below).
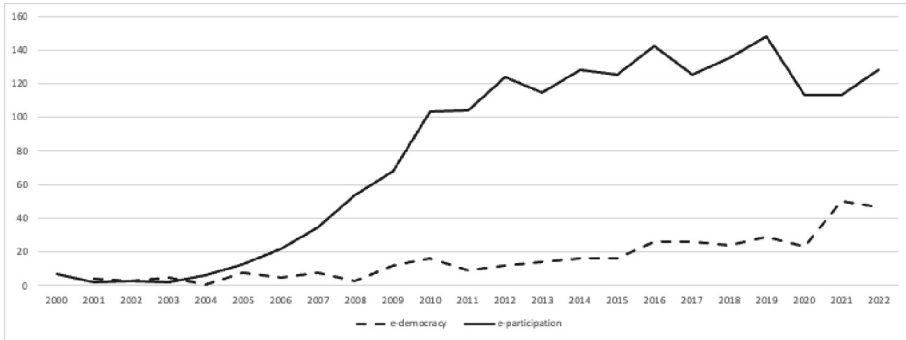

Fig. 1. Number of articles with e-democracy and e-participation in title, as author keyword or in abstract, 2000–2022 (Scopus).

While there are various definitions of e-participation available in the literature, one of the most often cited definitions comes from Macintosh [43] who argues that e-participation is focused on the use of ICTs for online dialogue, deliberation and consultation between citizens and government. In this paper we will focus specifically on e-participation in the context of political decision making. We will for instance therefore not consider e-participation in the realm of e-service development. Further, we will focus specifically on "invited spaces" for e-participation [7], that is, government-initiated processes of political participation, rather than bottom-up forms of citizen participation (e.g. social movements, protests, activism).

Lindner and colleges [8] underscore three pivotal factors for the onset of e-participation practices at the turn of the millennium. (1) *A crisis of democratic legitimacy* that gave rise to a discourse highlighting the need for democratic renewal [see also 9]. This discourse can be seen as a window of opportunity for democratic renewal and experimentation with new democratic practices. (2) *Technological affordances of new ICTs* offering unprecedented possibilities for effective and interactive communication. (3) *New normative ideals for democratic government* as deliberative and participatory democracy gained broad support not only in academia but also in governmental institutions [10, 11].

Two decades into the young history of e-participation research, we aim to take stock of this field in the light of three developments that we argue have substantial implications for research on electronic participation: (1) dissolving boundaries between online and offline spheres of political participation; (2) academic isolation of e-participation research from other research fields related to political participation; and (3) the systemic turn in research on political participation. In relation to these developments, we discuss the potential role of e-participation research in contemporary societies. What

new research questions arise? What theoretical and methodological development is warranted?

2 Dissolving Boundaries and Hybridization

The pace of technological development within the area of ICTs is matched by the speed by which these technologies inhibit more and more aspects of our lives and societies [12]. One central dimension of this societal immersion in ICTs is the blurring of the lines between the online and offline spheres, not least facilitated by the development and diffusion of mobile technologies. Diamankati [13] has defined our current relationship to ICTs as a "post-desktop paradigm" characterized by a detachment of the internet from place. As we no longer access the internet from a computer statically located at a definite place, but as De Souza E Silva and Sheller [14, p. 4] write, "carry it with us", our transports between online and offline spheres are more frequent and less noticeable. According to Šimůnková [15, p. 49], this has blurred and undermined distinctions such as "[a]bsence/presence, here/there, close/far, public/private, real/virtual". At its essence, this relationship with technology presents a state of hybridity, as clear distinctions between online and offline are not only becoming harder to make but also less valuable.

2.1 The Hybridization of Politics

These changes are also obvious in the political sphere. Today, information about political processes and developments, political debate and discourse, as well as channels for political influence, are primarily found online or in hybrid settings [11, 15]. The state of hybridity in politics has been most authoritatively defined by Chadwick [16], who investigates how political actors function within an environment that is hybridized between new and old, online and offline and tailor their repertoires of action based on this hybridity. For instance, Chadwick and others [e.g. 17] have studied the repertoires of action of what they call "new hybrid mobilization movements". These political movements utilize new as well as old media logics to effectively mobilize supporters and influence policy-making. New media (meaning ICTs in general and social media in particular) is utilized to monitor the views of their member base and coordinate action. However, offline political protests or manifestations are often the forms of political action preferred by these movements, and old media is the target of these actions [16]. Other movements, such as the "Fridays for future" climate movement, organize localized offline political actions, not least "climate strikes", and utilize social media to boost the impact of such actions [18].

There are also indications of a hybridization of invited spaces for political participation online. This trend is illustrated through an analysis of cases in the Participedia database [19] (in Fig. 2 below). Participedia consists of global reports on processes of political participation. While the database consists of both invited spaces for participation as well as bottom-up organized participatory processes, there is a clear skewness towards the former. In Fig. 2, the number of cases in the database with instances of online participation is plotted by year from 2000 to 2022. The number of cases in the

database has grown intensely over the last two decades. However, the growth is disproportionately leaning towards hybrid participation cases, meaning combinations of face-to-face and ICT-enabled participation. At the same time, the number of participation cases exclusively facilitated online has been relatively stable. Seemingly, hybridity has increasingly become the norm in e-participation, according to the database. The only exceptions to this rule are the years most clearly affected by the Covid-19 pandemic and the lockdown policies that accompanied the pandemic in many countries, which meant that participatory processes had to go online.
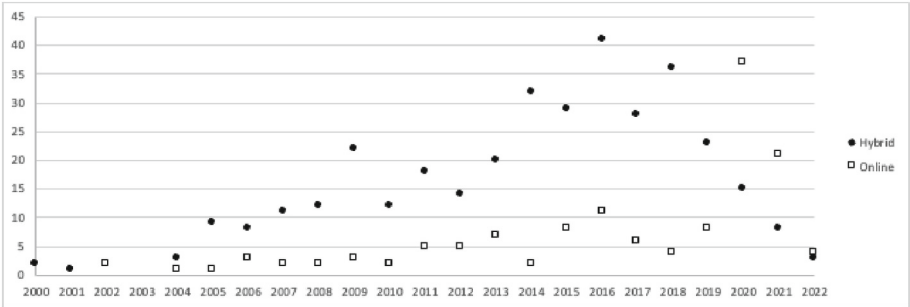

Fig. 2. Number of cases of citizen participation characterized as "Hybrid" and "Online" in the Participedia database 2000–2022.

To the extent that the cases reported in the Participedia database are representative of the implementation of e-participation processes in the world, this trend has strong implications for e-participation research. It indicates that the dissolving boundaries between online and offline are also evident within the field of invited spaces for political participation. This development immediately raises questions: To what extent has e-participation research adapted to this changing reality? To what extent does this research field engage with theories of hybridity and empirical cases of hybrid participation?

Misinikov and colleagues [20] suggest that the e-participation field has engaged with these aspects to a limited extent; they argue that "e-participation scholarship lacks sufficient conceptual consolidation to reflect upon the fundamental changes in digital technology that occurred over the past decade or so". There are, however, notable exceptions in individual research contributions analyzing hybrid cases of e-participation and engaging with questions related to this hybridization [cf. 21, 22]. Further, the hybridity concept is present in e-participation research [cf. 23], although with a different meaning. In this context, hybridization is used to connote e-participation processes that combine web 1.0 and web 2.0 technology.

Hybridization presents an important role for e-participation research. Farrell argues that paradoxically, the increasing integration of ICTs into all aspects of political interactions will lead to fewer rather than more political scientists specializing in the internet [24]. As the intersections between the internet and politics become more plentiful and diverse, this relationship becomes the business of all political scientists rather than a specialized sub-field. However, according to Farrell, hybridization requires more rather than

less specialization. As the internet becomes "both ubiquitous and invisible," its interme-diating role risks being taken for granted [24, p. 47]. He argues that political science is in need of "unbundling the Internet into discrete (yet sometimes mutually reinforcing or undermining) mechanisms" [24, p. 47]. This call for unbundling the internet can be seen as naive given the pace and diversity of technological development and utilization; however, it could potentially point to an important focus area for e-participation research. For the broader fields of research focused on political participation to fully understand participation in contemporary societies, there is a great need for better theorization of the mechanisms related to technology that affects participation.

3 Academic Isolation

Academic isolation is one potential risk of organizing research on the intersection of political participation and ICTs in a distinct research field (e-participation) with field-specific concepts, publication outlets and conferences. Academic isolation can be defined as a state of a research field characterized by relative disconnection to adjacent research fields that share commonalities in terms of themes, research objects, theories, and methodologies. Isolation is problematic for at least two reasons: (1) isolation can mean that the field takes fewer research perspectives into account in theorizing and empiri-cally studying its object of research (influence from), and (2) it can also mean that the research in the field has less influence on other adjacent research fields (influence on) [25, p. 1672]. Thus, academic isolation may be detrimental to knowledge production within the field as well as its impact in other fields of research.

Academic isolation may be especially detrimental for academic fields that produce knowledge about the intersection between fields of knowledge. Drawing inspiration from and producing knowledge relevant to adjacent fields is essential for such intersecting fields of research. This can be argued to be the case for e-participation research that is not only a multidisciplinary field of research but also a field that addresses a thematic area at the intersection between information technology and political participation.

We will consider the level of isolation of e-participation research from other research fields related to political participation. The degree of academic isolation of e-participation research is measured through a bibliometric network analysis of research publications using the network analysis software VOSviewer [26]. The analysis focuses on cross-citation (citing other publications within the sample) and co-citation (citing the same references as other publications within the sample) between research publications in research fields related to political participation. The sample of publications analyzed is the 1632 most-cited English language publications in the Web of Science database with author keywords including e-participation, democratic innovations, deliberative democ-racy and political participation. This list of keywords is not comprehensive but chosen to reflect central concepts within the field as well as relatively new developments within the research field (democratic innovations and e-participation). The network visualiza-tion (Fig. 3 below) indicates ≥ 10 cross- or co-citations as a tie between publications; it represents the number of citations of a publication as the size of a node. In total, 345 publications had 10 or more cross- or co-citations with other publications and were thus included in the network map. Clusters of publications were created based on the smart

local moving algorithm [27] with a threshold number for clusters of a minimum of 20 nodes (i.e. publications).

Four clusters were identified, which, based on our review (focused on the most central publications within each cluster), are labelled: *e-participation* (red), *communication studies* (green), *political participation* (yellow) and *deliberative democracy and democratic innovations* (blue).

The e-participation cluster is most isolated from the other clusters, sharing the fewest co- and cross-citations with publications in the other clusters. There are articles in the e-participation cluster, not least some of the most well-cited articles [e.g. 28], that share connections to articles in two of the other clusters (green and blue). Overall, however, the analysis indicates that the e-participation literature is largely disconnected from the research literature in adjacent fields within research on political participation. This is true to a lesser extent for the other clusters, as the number of cross and co-citations between publications in these clusters are magnitudes greater.

The furthest distance between clusters in the analysis is identified between the clusters named e-participation (red) and political participation (yellow). The political participation cluster consists largely of seminal works within political science, that develop and evaluate theories explaining variations in citizens' participation in politics [e.g., 29]. While such central nodes in the political participation cluster share strong connections to other clusters, they are largely absent in the e-participation cluster.

Given that such publications precede the formation of the e-participation field, such disconnection could be interpreted as representing what has been termed above as a lack of "influence from" such research. In other words, e-participation research, to a small extent, has been influenced by central works within the field of research on political participation.

Turning to the "influence on" side of the coin, to what extent does e-participation research have an influence on other fields of research related to political participation? According to this analysis, it is hard to find instances of "influence on", meaning that few publications in the e-participation cluster have 10 or more connections to publications in other clusters they precede (are published before). Here, we should remember that the bar set for connections within the network map is quite high (at 10 or more co- and cross-citations). However, it cannot be seen as a good sign for the influence of e-participation research that few candidates for cross-cluster influential studies emerge from the analysis.

This analysis indicates the academic isolation of e-participation research in relation to other fields of research related to political participation. Such isolation may be detrimental to knowledge production as well as the impact of e-participation research. However, the network analysis presented above gives only a superficial picture of the connectedness of e-participation research to adjacent fields based solely on co- and cross-citation. There is a need of more research investigating the transfer of theories and concepts between these adjacent field, for instance through systematic literature reviews.
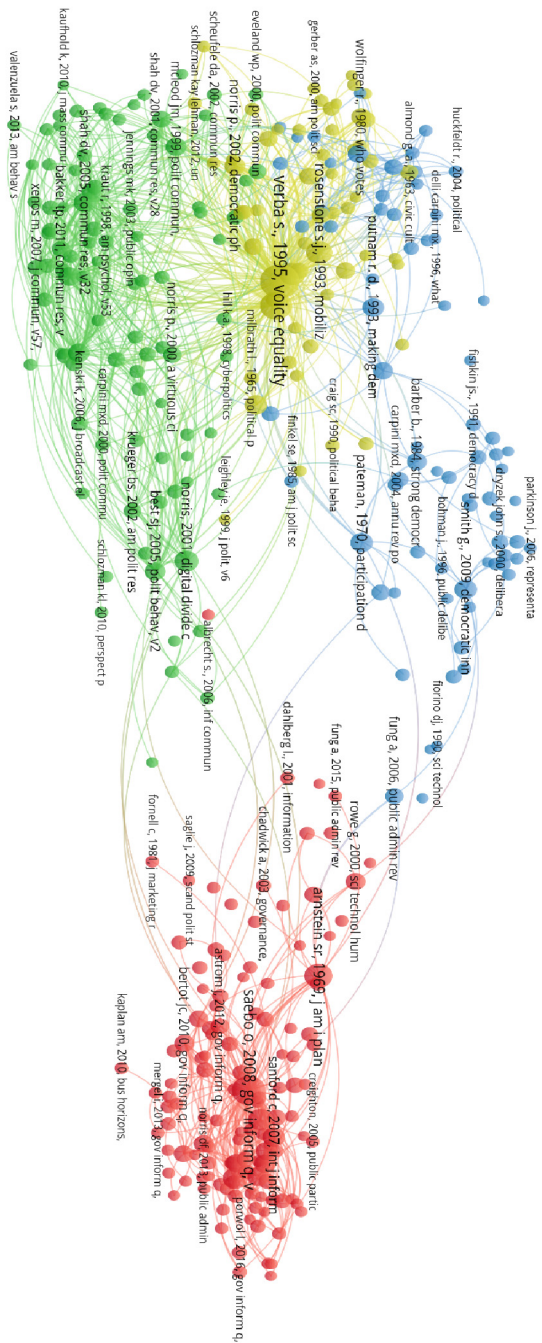
Fig. 3. Cross and co-citations between top cited articles using the keywords: E-participation, democratic innovations, deliberative democracy, deliberation, political participation, citizen participation and participatory democracy. (Color figure online)

4 Democratic Innovations and the Systemic Turn in Participation Research

As described in the introduction, one central factor for understanding the rise of e-participation in the early 2000s is the participatory shift in normative democratic theory at the end of the 20th century. From the late 1960s onward, participatory, direct and deliberative democracy arose as central normative ideals for democratic government. These ideals have heavily influenced research on political participation, not least on "invited spaces" for participation, often conceptualized as "democratic innovations" [30]. These ideals have also had a great influence on how democratic innovations have been evaluated. The normative democratic theories have created yardsticks for evaluation leading to a value-driven evaluation focused on the extent to which a participatory process lives up to central values within a specific normative theory of democracy [31]. One example is the discourse quality index, used to evaluate the extent to which deliberative democratic innovations live up to deliberative values such as justification, universalism, constructivism and respect [32].

In recent years, value-driven evaluation and normatively driven research on political participation have been critiqued on two essential accounts. First, value-driven evaluation risks the development of a solely micro-level focus of evaluation. As the central question of such evaluation is the extent to which the participatory process lives up to normative criteria, its evaluation may be biased towards focusing on internal aspects of the participatory process (e.g. who participates, how participants communicate, and participants' satisfaction). Thus, broader consequences or effects of such processes (macro aspects) may be disregarded [31, p. 46]. Second, value-driven evaluation has been criticized for not being context-sensitive enough. As the evaluation criteria are set by general normative theories, they are not developed or adapted in relation to the contextual setting in which the participatory process is implemented [33].

In relation to this criticism, there has been a systemic turn in research on political participation, spearheaded by the development of the concept of "deliberative systems" within research on deliberative democracy [34]. This research direction falls back on systems theory within political science, identifying political systems as the sum of all political actions and interactions that relate to the policy- and decision-making process in a political unit (e.g., a nation-state, or a local government) [35]. The systemic approach to research on political participation is characterized by a functional perspective on political participation. The central question in this research is what functions political participation performs within the political system. In this strand of research, the evaluation of political participation is functionality-driven and hence, focused on the consequences or effects of participation on the political system. These outcomes can, for instance, be effects on and changes in political trust [36], political knowledge [37], political institutions [38] and decision quality [39].

4.1 The Systemic Turn and e-Participation Research

Critique of normative bias and value-based evaluation is, to some extent, echoed within the e-participation literature. Pratchett and colleagues [40, p. 190] argue that "[m]uch of the literature focuses on exploring particular normative accounts of deliberative or

representative forms of democracy". Grönlund [5, p. 13] argues that e-participation research rests on the assumption that "direct democracy is the ideal value for eParticipation" and that e-participation processes may lead societies towards direct democracy. However, theoretical and methodological tools to transgress this normative orientation have not been developed within e-participation research. There are, however, constructive contributions that share elements of the system-oriented research on democratic innovations.

For instance, Kubicek and Aichholzer [41] argue for a "relativity theory" for evaluating e-participation processes, meaning that criteria and methods of evaluation are tailored to the type of e-participation process evaluated, rather than striving for a unifying, one-size-fits-all, evaluation framework. This constitutes a step in the right direction, as it facilitates an adaptation of evaluation frameworks to the character of the e-participation process. However, the systemic perspective offers a second important insight that the characteristic of the political system in which e-participation processes are implemented must be taken into account to understand what systemic functions this process can and does play. One example of such an analysis is offered by Åström and colleges [42]. Through a comparative analysis of e-participation processes in Sweden, Estonia and Iceland, they illustrate that institutional and circumstantial factors in political systems strongly influence the role and impact of e-participation processes.

We argue that e-participation research could benefit from a "systemic turn", characterized by a greater focus on macro aspects of e-participation processes and a functionality-driven evaluation. Such a direction of e-participation research could be a way to overcome the critique of normative bias and facilitate a better understanding of the functions e-participation performs in political systems. A first step would be to connect the research fields by harvesting the knowledge produced in the research fields visible in Fig. 3.

5   Concluding Discussion

In this paper, we have discussed the state of e-participation research in relation to three developments with important implications for the field. In this short conclusion, we aim to sketch out suggestions for future directions of e-participation research in relation to these developments.

The dissolving boundaries between online and offline spheres imply that the scope of political practices and events relevant to e-participation research may be broadened. ICTs hold a central or complementary role in many (if not most) forms of political participation today. Therefore, the knowledge and expertise within e-participation research are arguably applicable and valuable in relation to a wide variety of participatory practices. Further, as Farrell [24] argues, the immersion of politics on the internet may make technological aspects of political participation less noticeable or be taken for granted by researchers. Hence, specialists in the area of e-participation may have much to contribute to the understanding of contemporary forms of participation in various stages of hybridization between online and offline.

However, indications of academic isolation of e-participation research suggest that specialized knowledge from e-participation researchers is not transferred to adjacent

fields to any substantial extent. Isolation, however, goes both ways. The lack of connection between democratic innovation- and e-participation research also indicates that Farrell might have been right in predicting that political scientists disregard the importance of unbundling the mechanisms of the internet and thus do not seek to draw lessons from the e-participation field.

We see several benefits of strengthening the connection between these fields. As stated above, such connections could strengthen the understanding of technological aspects of political participation in an age of technological hybridization. Further, e-participation research could draw inspiration from the systemic turn in research on political participation, which creates an avenue for grappling with the issues of normative bias in e-participation research that have received criticism [5, 6, 40]. There are some studies that have started to investigate e-participation in similar ways, e.g. Wirtz et al. [44], but this approach needs to broaden. The systemic turn in general and functionality-driven evaluation in particular are directions that may advance the field towards a greater understanding of macro-level aspects of e-participation and more context-sensitive research of e-participation processes.

All in all, we have made the case for a broader approach to e-participation research. We argue that the field should broaden its empirical focus to include the variety of participatory practices that have been technologized in this era of hybridization. Further, the e-participation field should be more open to adjacent research fields related to political participation. Lastly, the field should broaden its theoretical and methodological scope to better encompass macro aspects and systemic functions of e-participation processes.

References

1. OECD: Citizens as Partners: Information, Consultation and Public Participation in Policy-making. OECD Publishing (2001)
2. OECD: Promises and Problems of e-Democracy; Challenges of Citizen On-line Engagement. OECD Publishing (2003)
3. London, S.: Teledemocracy vs. deliberative democracy: a comparative look at two models of public talk. J. Interpersonal Comput. Technol. **3**(2), 33–55 (1995)
4. Oser, J., Hooghe, M., Marien, S.: Is online participation distinct from offline participation? A latent class analysis of participation types and their stratification. Polit. Res. Q. **66**(1), 91–101 (2013)
5. Grönlund, Å.: ICT is not participation is not democracy–eParticipation development models revisited. In: Macintosh, A., Tambouris, E. (eds.) ePart 2009, LNCS, vol. 5694, pp. 12–23. Springer, Heidelberg (2009). https://doi.org/10.1007/978-3-642-03781-8_2
6. Susha, I., Grönlund, Å.: eParticipation research: systematizing the field. Gov. Inf. Q. **29**(3), 373–382 (2012)
7. Kersting, N.: Online participation: from 'invited' to 'invented' spaces. Int. J. Electron. Gov. **6**(4), 270–280 (2013)
8. Lindner, R., Aichholzer, G., Hennen, L.: Electronic Democracy in Europe. Prospects and Challenges of e-Publics, e-Participation and e-Voting. Springer, Cham (2016). https://doi.org/10.1007/978-3-319-27419-5
9. Norris, P. (ed.): Critical Citizens: Global Support for Democratic Government. Oxford University Press, Oxford (1999)
10. Amnå, E.: Playing with fire? Swedish mobilization for participatory democracy. J. Eur. Publ. Policy **13**(4), 587–606 (2006)

11. Karlsson, M.: Digital democracy and the European Union. In: Bakardjieva Engelbrekt, A., Leijon, K., Michalski, A., Oxelheim, L. (eds.), The European Union and the Technology Shift, pp. 237–261. Springer, Cham (2021). https://doi.org/10.1007/978-3-030-63672-2_10

12. Graham, M., Dutton, W.H.: Society and the Internet: How Networks of Information and Communication are Changing Our Lives, 2nd edn. Oxford University Press, Oxford (2019)

13. Diamantaki, K.: The ambiguous construction of place and space. In: Gehman, U., Reiche, M. (eds.) Real Virtuality: About the Destruction and Multiplication of World, pp. 245–268. Transcript-Verlag, Bielefeld (2014)

14. De Souza E Silva, A., Sheller, M. (eds.) Mobility and Locative Media. Mobile Communication in Hybrid Spaces. Routledge, New York (2014)

15. Šimůnková, K.: Being hybrid: a conceptual update of consumer self and consumption due to online/offline hybridity. J. Mark. Manag. **35**(1–2), 40–74 (2019)

16. Chadwick, A.: The Hybrid Media System: Politics and Power, 2nd edn. Oxford University Press, Oxford (2017)

17. Karpf, D.: The MoveOn Effect: the Unexpected Transformation of American Political Advocacy. Oxford University Press, Oxford (2012)

18. Boulianne, S., Lalancette, M., Ilkiw, D.: "School strike 4 climate": social media and the international youth protest on climate change. Media Commun. **8**(2), 208–218 (2020)

19. Fung, A., Warren, M.E.: The participedia project: an introduction. Int. Publ. Manag. J. **14**(3), 341–362 (2011)

20. Misnikov, Y., Filatova, O., Trutnev, D.: Empirical modeling of e-participation services as media ecosystems. In: Meiselwitz, G. (ed.) HCII 2021. LNCS, vol. 12774, pp. 87–104. Springer, Cham (2021). https://doi.org/10.1007/978-3-030-77626-8_6

21. Åström, J., Grönlund, Å.: Online consultations in local government: what works, when, and why. connecting democracy: online consultation and the flow of political communication. In: Coleman, S., Shane, P. (eds.) Connecting Democracy, pp. 75–96. MIT Press, Cambridge (2012)

22. Thoneick, R.: Integrating online and onsite participation in urban planning: assessment of a digital participation system. Int. J. E-Plann.Res. **10**(1), 1–20 (2021)

23. Charalabidis, Y., Loukis, E.: Participative public policy making through multiple social media platforms utilization. Int. J. Electron. Gov. Res. **8**(3), 78–97 (2012)

24. Farrell, H.: The consequences of the internet for politics. Annu. Rev. Polit. Sci. **2012**(15), 35–52 (2012)

25. Chi, P.-S., Conix, S.: Measuring the isolation of research topics in philosophy. Scientometrics **127**(4), 1669–1696 (2022). https://doi.org/10.1007/s11192-022-04276-y

26. Van Eck, N., Waltman, L.: Software survey: VOSviewer, a computer program for bibliometric mapping. Scientometrics **84**(2), 523–538 (2010)

27. Waltman, L., van Eck, N.J.: A smart local moving algorithm for large-scale modularity-based community detection. Eur. Phys. J. B **86**(11), 1–14 (2013). https://doi.org/10.1140/epjb/e2013-40829-0

28. Sæbø, Ø., Rose, J., Flak, L.S.: The shape of eParticipation: characterizing an emerging research area. Gov. Inf. Q. **25**(3), 400–428 (2008)

29. Verba, S., Schlozman, K.L., Brady, H.E.: Voice and Equality: Civic Voluntarism in American Politics. Harvard University Press, Cambridge (1995)

30. Smith, G.: Democratic Innovations: Designing Institutions for Citizen Participation. Cambridge University Press, Cambridge (2009)

31. Adenskog, M.: Democratic Innovations in Political Systems: Towards a Systemic Approach. Örebro university, Örebro (2018)

32. Steenbergen, M.R., Bächtiger, A., Spörndli, M., Steiner, J.: Measuring political deliberation: a discourse quality index. Comp. Eur. Polit. **1**, 21–48 (2003)

33. Mansbridge, J., et al.: A systemic approach to deliberative democracy. In: Parkinson, J., Mansbridge, J. (eds.) Deliberative Systems. Cambridge University Press, New York (2012)
34. Parkinson, J., Mansbridge, J. (eds.) Deliberative Systems: Deliberative Democracy at the Large Scale. Cambridge University Press, Cambridge (2012)
35. Easton, D.: An approach to the analysis of political systems. World Polit. **9**(3), 383–400 (1957)
36. Åström, J., Jonsson, M.E., Karlsson, M.: Democratic innovations: reinforcing or changing perceptions of trust? Int. J. Publ. Adm. **40**(7), 575–587 (2017)
37. Grönlund, K., Setälä, M., Herne, K.: Deliberation and civic virtue: lessons from a citizens deliberation experiment. Eur. Polit. Sci. Rev. **2**(1), 95–117 (2010)
38. Adenskog, M.: After the equilibrium: democratic innovations and long-term institutional development in the city of Reykjavik. Anal. Kritik **40**(1), 31–54 (2018)
39. Drazkiewicz, A., Challies, E., Newig, J.: Public participation and local environmental planning: Testing factors influencing decision quality and implementation in four case studies from Germany. Land Use Policy **46**, 211–222 (2015)
40. Pratchett, L., Durose, C., Lowndes, V., Smith, G., Stoker, G., Wales, C.: Empowering communities to influence local decision making: systematic review of the evidence (2009)
41. Kubicek, H., Aichholzer, G.: Closing the evaluation gap in e-participation research and practice. IN: Evaluating e-Participation: Frameworks, Practice, Evidence, pp. 11–45 (2016)
42. Åström, J., Hinsberg, H., Jonsson, M.E., Karlsson, M.: Crisis, innovation and e-participation: towards a framework for comparative research. In: Wimmer, M.A., Tambouris, E., Macintosh, A. (eds.) ePart 2013. LNCS, vol. 8075, pp. 26–36. Springer, Heidelberg (2013). https://doi.org/10.1007/978-3-642-40346-0_3
43. Macintosh, A.: Characterizing e-participation in policy-making. In: Proceedings of the 37th Annual Hawaii International Conference on System Sciences, pp. 117–126 (2004)
44. Wirtz, B.W., Daiser, P., Binkowska, B.: E-participation: a strategic framework. Int. J. Publ. Adm. **41**(1), 1–12 (2018)