Bus Inf Syst Eng 66(2):127–134 (2024)
https://doi.org/10.1007/s12599-024-00862-x

EDITORIAL

Digital Democracy: A Wake-Up Call

How IS Research Can Contribute to Strengthening the Resilience of Modern Democracies

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Published online: 26 April 2024

1 Democracies in Times of Crises and Polarization

The aftermath of the pandemic, the climate crisis, rising inflation, the Russian war of aggression against Ukraine, the attack on Israel by Hamas, and the growing right-wing extremism, including visible antisemitism, all this is keeping politics and society in a state of emergency. Crises require finding feasible answers to new and highly complex questions. The current developments affecting our societies were certainly amplified by the tremendous progress in digitalization, the progress made in hardware technologies as well as in Information Systems during the last decades and even more so in the last years. Governments and supranational bodies are responding to this in different ways; e.g., the EU has introduced the AI Act, the Digital Services Act and the GDPR with major implications for global IT companies and platform providers in particular.

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The rapid advancement of information technology has significantly democratized access to communication channels, making them accessible and affordable to the vast majority. Network effects and widespread adoption of devices and platforms ensure that almost anyone can take advantage of a multitude of services available online. Combined with the power of data and AI, individuals can now experience a remarkable level of personalization or even hyper-personalization, in their digital interactions (Valdez Mendia and Flores-Cuautle 2022). Both a blessing and a curse, we are all continuously targets of marketing campaigns—not only by those who are well-intentioned to reach us or seek our consumption and money but also by those who want to manipulate us individually and, by doing so, change our society and political system's stability. Thus, information technologies play a major role in attacking democratic systems from the outside and from within.

Therefore, we must ask ourselves whether we, as Information Systems researchers, can continue to avoid taking a stand on the potentially problematic role of information technologies in democracies. Can we afford, in our academic work, to concentrate mostly on the positive aspects of information technologies and hardly concern ourselves with the dark sides of these systems, especially as these become more and more obvious?

For example, Information Systems Research (ISR), one of our leading international journals, is explicitly "[…] focusing [on] information systems in *organizations, institutions, the economy, and society*. It is dedicated to furthering knowledge in the application of information technologies to human organizations and their management and, more broadly, *to improving economic and social welfare*" (Information Systems Research 2024). Given the inherently interdisciplinary nature of our field, we, as IS

researchers, are uniquely positioned to actively engage with the critical questions surrounding the strengthening of our democracies—of course not on our own, but in close cooperation with colleagues from sociology, political science, communication science, law, psychology, computer science, and data science.

In this sense, we aim to highlight the pivotal role that Information Systems research plays and propose an exploration of core themes to construct a research agenda for the BISE community strengthening our modern digital democracies.

2 The Public Sphere Reimagined: Democracy's Adaptation to the Digital Age

The ideal model for public discourse and the public sphere has long been a topic of discussion and analysis in political philosophy and intellectual history. The foundational concepts of liberal democracies and the political sphere can be traced back to ancient Greece, where philosophers like Aristotle and Plato first distinguished between the 'oikos' (the private household sphere) and the 'polis' (the public realm). The polis marked an early instance of public participation in administering shared space, however, only for a small portion of the population (Massing and Breit 2003; Rosenzweig 2010). This early notion of the public sphere is a consistent thread throughout European history, reaching, according to Habermas (1990), its fulfillment in the modern state and its institutions. The distinction between private and public spheres was reestablished in the bourgeois public spaces of the eighteenth and nineteenth centuries, which served as counterpoints to state authority and initiated the rise of mass media and coffeehouses as sites of class-specific, argument-driven dialogue among citizens (Massing and Breit 2003).

Central to this public sphere is the concept of deliberative democracy, characterized by "argumentative, deliberative, agreement-oriented consultation" (Habermas 1992, p. 229). Furthermore, Habermas argues that the political public sphere can only execute its role in identifying and addressing societal issues if it emerges from the communicative interactions of *all* potential stakeholders. The Internet and Online Social Networks (OSNs) have often been hailed as democratizing forces, potentially embodying the ideal of a public sphere where discourse among equals can shape political opinions (Staab and Thiel 2022; Bruns and Highfield 2015).

Nancy Fraser critically added to Habermas the concept of subaltern counterpublics (Fraser 1990). Counterpublics stand in opposition to the bourgeois public sphere, and allow marginalized discourses to flourish before potentially influencing the dominant public sphere. By emphasizing the importance of these counterpublics, Fraser suggests that the ideal of free and equal individuals engaging in public deliberation has not yet been fully realized, as groups such as women, ethnic or religious minorities, and workers have historically been underrepresented in the public sphere (Fraser 1990). The early Internet was seen as a new sphere where information was freely exchanged and where voices marginalized in the traditional public sphere found new platforms and forums. Global digital interconnectivity enabled through new hardware and software solutions, is making it harder for authoritarian regimes to control information and suppress dissent, helping to facilitate political change (Diamond and Plattner 2012). OSNs, in particular, might be seen as modern counterpublics, a space where critical and diverse discourses can grow and challenge dominant narratives (Jackson and Kreiss 2023).

The notion of a public sphere where equals exchange viewpoints to shape political opinions remains a theoretical cornerstone of robust democracy and underpins theories of citizen participation in political decision-making. Liberal democracies have seen an increased call for political participation ranging from an expansion of 'conventional political participation' such as voting and petitions to 'large-scale unconventional participation' including protests, strikes, or sit-ins (Schmidt 2019). The late 1960s marked a pivotal moment in Europe with social and civil rights movements, particularly in Germany and France, that initially centered around universities. These movements catalyzed local actions that expanded into broader societal demands, ultimately sparking the peace, environmental, and feminist movements of the 1970s. These movements' sustained activism prompted policy reforms and the establishment of political reforms (Klimke and Scharloth 2008). In parallel, the United States saw its civil rights and new left movements concentrating not just on peace and environmental issues, but fundamentally on securing the voting rights and representation of women and ethnic minorities, addressing a historical legacy of exclusion from the democratic process (Tarrow 2022). These global movements, as well as the fight for democracy in Eastern Europe in the 1980s, functioned without the Internet but would not have been possible without free and independent mass media—as a corrective to state-run authoritarian media agencies (Gross 2002).

In the early 2000s, an increasing number of services on the Internet fostered the idea of unlimited social interaction and commercial prosperity. However, as observed today, besides the many positive aspects of interconnectivity, the digital realm has led to unwanted phenomena. The escalating prevalence of surveillance, hate speech, and the broad dissemination of disinformation are increasingly evident, putting our democracies under unprecedented pressure. Therefore, the digital sphere has not lived up to

the ideal of an egalitarian space for reasoned discourse, as also recently acknowledged by Habermas (2022).

The reasons for this shortfall are manifold: The proliferation of mis-, dis- and malinformation and echo chambers (Wardle and Derakhshan 2017; Lazer et al. 2018) along with the algorithmic filtering of content (Tufekci 2014; Kölbel et al. 2023) all contribute to a lack of tranparency the digital public sphere. The very structure of many OSNs, which prioritize content that generates strong emotional responses, often undermines reasoned, deliberative dialogue.

While IT, in principle, has the potential to facilitate the involvement of a large part of the population, we still observe a significant digital divide in terms of access to technology and the literacy needed to participate effectively in online discourses (van Dijk 2020). The commercial interests that drive many OSNs can be at odds with the democratic ideal of a public sphere. Furthermore, the commodification of attention in the platform economy undermines the potential of OSNs to serve as spaces of free and equal discourse (Lazer et al. 2018; Zuboff 2019). Instead of a marketplace of *ideas*, parts of the Internet have diminished into marketplaces for *attention*, where the loudest and most sensational voices drown out reasoned discussion. Beyond that, troll farms or troll factories seek to interfere in political opinions and decision-making. Freedom House's report showed in 2017 already that 30 governments worldwide (out of 65 covered by the study) paid keyboard armies to spread propaganda and attack critics (Titcomb 2017). Thereby, many digital platforms have reinforced existing power structures and social divisions (Nahon 2015; Aytac 2022) instead of inclusion. The promise of a digital deliberative democracy that serves the common good has been severely compromised by these realities.

When it comes to concrete threats of our democracies, Levitsky and Ziblatt define the term "democratic backsliding" (Levitsky and Ziblatt 2018). They identify four crucial indicators of this decline: constitutional disdain, deeming opponents as existential threats, affiliations with violent groups, and endorsing laws that curtail civil liberties (Levitsky and Ziblatt 2018). Populist leaders often ascend to power through elections, only to subvert democratic norms from within, packing institutions with loyalists to diminish their independence. Their strategies frequently include digital databased campaigns or even Internet trolling to control narratives, thereby standing in stark divergence from the deliberative ideals of Habermas. For populist movements, especially those of the extreme right, digital channels and tools, especially OSNs, have become powerful instruments of propaganda as well as of self-organization, as witnessed by the 2020 attack on the German Bundestag, the storming of the U.S. Capitol in 2021, and the attack on the Brazilian seat of government in 2023 (Doerr and Gardner 2022; Molas 2023; Jakubik et al. 2023). Such incidents contrast with control through military power – as practiced by authoritarian leaders in the twentieth century. Today, "democracies may die at the hands not of generals but of elected leaders—presidents or prime ministers who subvert the very process that brought them to power" (Levitsky and Ziblatt 2018, p. 3). This subversion of the democratic processes is carried out through the use of information technology and playing out platform mechanisms.

As we look to the future of the public sphere in the digital age, it is crucial that we address these challenges. This involves critical engagement with the design and governance of digital platforms. It involves analyzing the effects of algorithmic biases and OSN on social cohesion, investigating strategies for handling information manipulation and fostering trust in digital artifacts and proposing design principles for new digital platforms that align with democratic values and societal well-being. Additionally, it requires researching digital involvement concepts.

3 Digitalization in Democracies

One of the central topics in Information Systems is designing and engineering digital platforms of all kinds, their interfaces to all different devices at hand, and the business models which keep them running successfully (Avgerou 2000). In doing so, we contribute not only to online businesses but also in a central way to the political sphere and the technical and non-technical possibilities of taking part in it. More and more behavioral research is shaping our conferences and journals (Arnott and Gao 2022) and thereby helping to obtain a nuanced understanding of the effects of information technologies on individual users. Nevertheless, we should question if we are paying enough attention to social issues. Are we aware of the extent to which political events depend on the design of the platforms, the associated interfaces and business models?

Digital platforms thrive on network effects and therefore strive to maximize them, for better or for worse (van der Aalst et al. 2019; Hinz et al. 2020). Engineering these platforms involves first designing 'optimal' institutions, including rules and regulations, with a predictive understanding of user behavior (Weinhardt et al. 2003). The incentives coming along with the platform mechanisms are very powerful and the typical users are often not aware of how strong they might influence their opinion or decision-making (Luca and Bazerman 2020). Engineering digital platforms also entails an understanding of how network interactions work as well as well as attempting to improve

and adapt the institutions. Algorithmics, including the use of data and AI, play a crucial role in doing so (Kitchin 2017; Baldassarre et al. 2023).

It may sound trivial but all features that are offered to us by all digital platforms and apps imaginable have been consciously designed, been cast in software and tuned so that they serve the purpose, which the platform operators hope to fulfil. Their mechanisms are, therefore, generally not a coincidence or an accident. Although not all engineers are constantly aware of the impact of their design decisions, in the end, they are the ones who have a decisive influence on the way we communicate, form opinions, and make decisions. Therefore, it is extremely important to understand how these mechanisms work and how they influence human behavior.

The emergence of platform-centric business models in the digital sphere has caused a shift to facilitating multi-sided interactions as seamlessly and as ubiquitously as possible, allowing for digital involvement concepts and projects to emerge (Stein et al. 2023). Nevertheless, OSNs providers' use of network effects not only allowed rapid expansion, but also showed a problematic tendency towards market dominance or even monopolies (Galloway 2018). With increasing funding, the multi-sided interactions had to become more profitable for the platform providers, driving them to improve their services to meet their customer's—mostly advertisers—needs, thereby causing an erosion of the rules for their consumers or users (Abdelkafi et al. 2019).

X (formerly known as Twitter) is a relevant example: Since the acquisition of Twitter by Elon Musk in October 2022, the platform has undergone a significant transformation besides the changing of its name. It has demonstrated the loss of the aforementioned predictive institutions and the harmful effects on individual users. The design changes included alterations to its moderation policies, most notably reinstating previously banned users, and introducing a controversial paid verification service (Vidal Valero 2023). This service faced challenges as it enabled some users to impersonate brands and public figures, leading to public outcry. Furthermore, a rise of hate speech including antisemitism created a problematic unsocial environment (Lavelle 2022). The changes to the platform have had severe effects, particularly for those who relied on alternative publics, such as protesters in authoritarian regimes. The platform was once an open public sphere for debate and community building, which was valuable for journalism, academia, and politics. Changing algorithmic biases and moderation techniques impact the ability to organize democratic protest: the case of Twitter Blue, e.g., shows that authoritarian leaders were even prioritized when moving from a moderated authentication to a payment model (Metz et al. 2022; Wang 2022).

Another recent development is the widespread availability of Generative AI (GenAI). OpenAI released ChatGPT on 30 November 2022. The success of ChatGPT and the spectacular improvements of Large Language Models (LLMs), illustrated by GPT-4's capabilities, triggered Google to release Bard and Microsoft to release AI-powered Bing. Currently, tech companies are heavily investing in GenAI tools, which allow for the effortless generation of seemingly original articles and posts. GenAI is not limited to text, but can also generate audio, images, and videos. Generative Adversarial Networks (GANs) enable the creation of sophisticated deep fakes, which allow for the manipulation of real-world images, videos, and audio recordings. There have been instances where video content featuring politicians has been altered, demonstrating the potential to digitally fabricate statements and actions (Lehmann 2022). We expect that in a few years, large parts of the Internet will consist of artificially generated content, including deep fakes. Moreover, it will become increasingly difficult to distinguish between chatbots and real people. These technologies have already started to undermine the integrity of general elections. Obviously, this will be a major threat to democracies.

Research needs to recognize that the impact of platforms extends beyond the architecture of institutions, interfaces, and business models. It is also profoundly influenced by the content that proliferates across these platforms. Often, this content spreads with remarkable speed and has an extremely broad reach. Consequently, the nature and governance of such contents pose significant challenges, as it can shape discourse, influence public opinion, and often requires careful moderation to prevent the dissemination of harmful material (Jhaver et al. 2023). In addition, this is true for open accessible platforms as well as for those in the 'underground', in the dark net, where anonymity can increase all these negative effects (Koehler et al. 2023). Current developments pave the way to more decentralized (tokenized), fragmented (e.g., for special demarcated communities), and virtualized (augmented, virtual, or mixed reality) platforms. Future research has to shine a light on those developments and their role in or their effects on democracy.

In this kind of situation, where digital platforms have become arenas for ideological battles and the manipulation of public opinion, it is imperative to recognize the gravity of the platform economy's impact on democratic institutions. The very networks that were originally designed to bring people together and inform them are now being weaponized to disseminate hate, spread disinformation, and facilitate hybrid forms of warfare, threatening the integrity of democracies globally. As such, there is a pressing need for interdisciplinary research that spans Information Systems, Computer Science, Political Science,

Sociology, Communication Science and Law to examine and understand the diverse influences of information systems in general and platform economies in particular on today's democracies.

Following our theoretical argumentation from above, a suggestion for organizing research streams could relate to the direction of impact, such as **democracy-promoting, democracy-preserving** and **democracy-harming** effects of information systems. In all our research efforts, we should focus particularly—but not exclusively—on the following three aspects: **transparency, inclusion,** and **literacy** (indicated in Fig. 1) as they are the crucial pillars of our democratic societies. Transparency is vital because it upholds the principle of open governance and allows citizens to hold institutions accountable. Inclusion is fundamental to ensuring that technology empowers all parts of society equally. Literacy is essential for equipping citizens with the skills needed to effectively navigate, criticize, and contribute in the digital sphere. These three pillars ensure that the digital age amplifies democratic values rather than undermining them. Following these guidelines, the Information Systems community can significantly contribute to the resilience of our democracies, ensuring that they remain robust and adaptive in an increasingly digitized world.

Hence, Information System researchers should (i) always consider at least the crucial aspects of transparency, inclusion, and literacy as the cornerstones of their research and (ii) not only focus on the challenges that harm democracy, but above all, look for innovative ways to preserve and promote democracy.

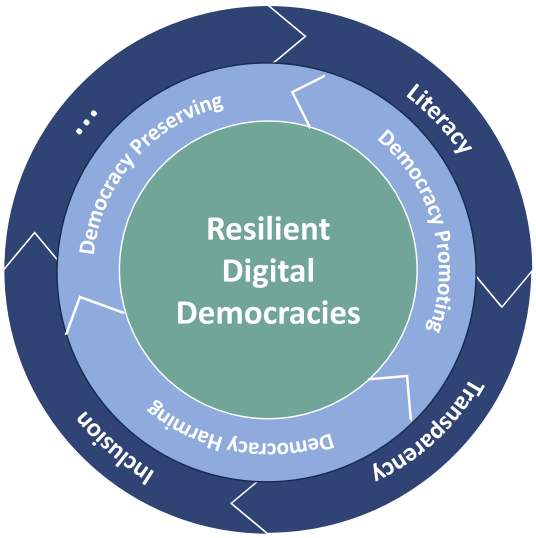

Fig. 1 Resilient digital democracies

4 Towards a Research Agenda for Digital Democracy in Information Systems

As we all experience on a daily basis, the impact of information technologies extends to (almost) all areas of our lives, where we see their transformative capabilities as crucial to overcoming countless new and old challenges. As it becomes (OR is becoming) increasingly difficult to realize the realization of the United Nations' (UN) Sustainable Development Goals (SDGs), a potential solution is envisioned in the utilization of digital solutions (ITU and UNDP 2023). The inherent interconnection between digital artifacts and political action to tackle the great societal challenges is therefore evident (vom Brocke et al. 2015). In Social Science, proposals for Digital Democracy research have recently been made (Berg and Hofmann 2021). How we, as IS researchers, can address the challenges of increasing polarization and radicalization in our societies, as well as the threats our democracies are facing, is shown in Fig. 2, which represents a research agenda for resilient digital democracies.

Within the dynamically expanding field of Information Systems, Digital Democracy research should emerge as a crucial area of study. We propose to organize this multidisciplinary field around a number of Research Areas (RAs), each dedicated to exploring a different dimension of the interaction between digital environments and democratic processes and institutions.

RA 1 Trust in Society: The first research area centers on the basis of democratic engagement – trust. The focus here is on the question of how different forms of mis-, dis-, and malinformation and hate speech affect the political landscape and, above all, trust. More abstractly, it is about better understanding how the erosion of personal data integrity affects media consumption and political engagement. It also takes into account the need to equip individuals with the skills required to identify and navigate the complex media environment, thereby improving political literacy and promoting a more informed citizenry.

RA 2 Digital Involvement of Society: Digital involvement of society assesses the mechanisms and structures that facilitate or interfere with public participation in the digital realm. It explores innovative participation formats and incentive systems that encourage meaningful interaction with digital tools and platforms, aiming to deepen civic engagement and democratize digital discourse. This section also examines how these digital interactions can be optimized to ensure that they are inclusive, equitable, and reflective of a broad spectrum of societal voices.

RA 3 Design Principles for Resilient Digital Democracies: This area focuses on integrating democratic values into the very fabric of information technology. By

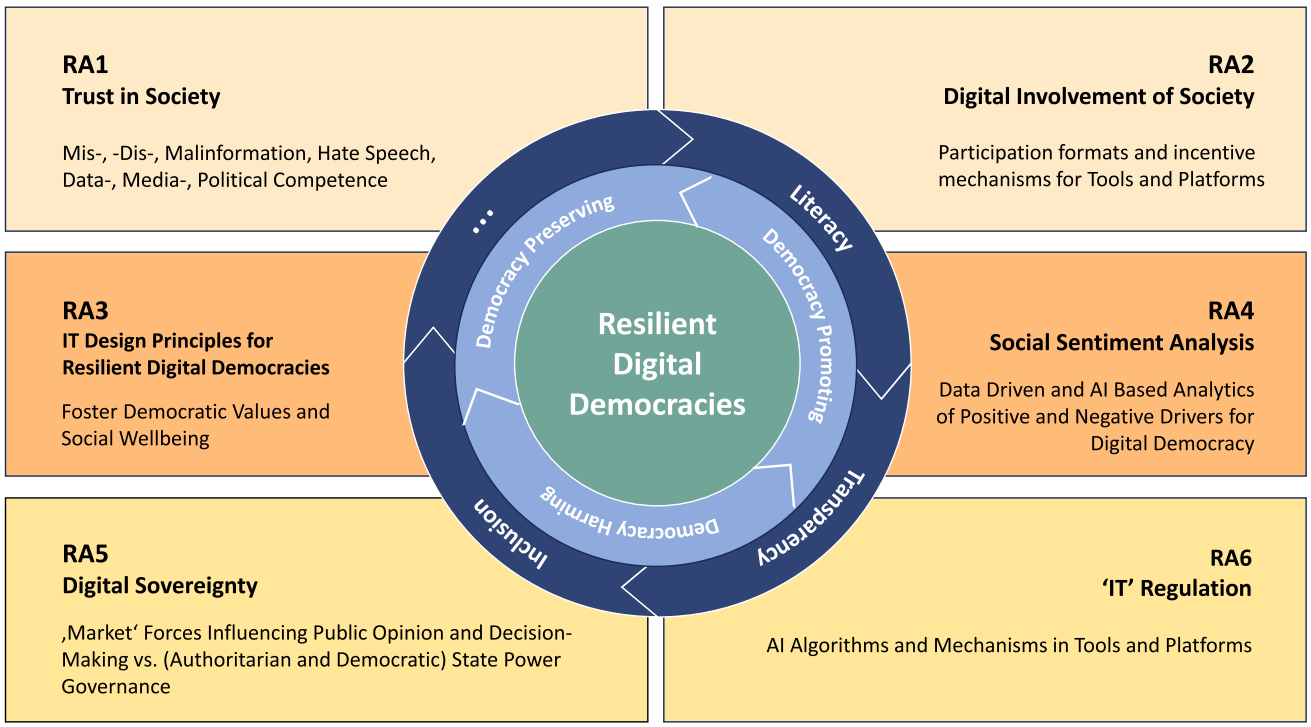

Fig. 2 Information systems research agenda for resilient digital democracies

promoting principles such as transparency, accountability, and inclusiveness, the objective is to ensure that digital platforms not only serve economic and functional purposes but also contribute positively to social and societal well-being and the democratic experience. Researchers in this field work towards creating IT infrastructures and applications that are aligned with the broader goals of supporting democratic structures and improving the quality of life for all citizens.

RA 4 Social Sentiment Analysis: This area uses sophisticated analysis tools to examine the huge amounts of data generated by online interactions and numerous (empirical) studies. It harnesses the power of AI to recognize and interpret collective sentiments and, thus, to provide insights into the factors that contribute to the resilience of digital democracies. By understanding patterns in public opinion formation, researchers can provide valuable recommendations for policymakers and provide them with tools and dashboards for evidence-based policy advice.

RA 5 Digital Sovereignty: The Digital Sovereignty research area examines power relations in the digital age and questions how market forces and state governance interact to influence public opinion and decision-making. It examines the impact of these forces on individual autonomy and collective democratic processes and explores how to design the digital space in order to support, rather than undermine, democratic governance, thereby contrasting them with the digital ecosystems of non-democratic regimes.

RA6 'IT' Regulation: The final area is centered on the regulatory aspects of IT, especially concerning AI algorithms and digital mechanisms. This research investigates the internal mechanisms of platforms and tools that facilitate the complex interactions within society. It seeks to establish norms and standards that ensure technological advancements contribute constructively to democratic institutions and processes, rather than diminishing them.

In summary, these research areas collectively provide a comprehensive, though not exhaustive framework for investigating the resilience and integrity of digital democracies. By addressing the multifaceted challenges presented by the digital transformation of society, this framework aims to guide the development of policies, systems, and tools that uphold democratic values and foster inclusion, transparency, and literacy for a better informed, engaged, and empowered citizenry.

5 From Waking up to Acting

Currently, we are witnessing a rivalry between political systems, and innovation in technological solutions is not solely emerging from democracies. On the contrary, we see the rise of insular, digital ecosystems within authoritarian states—also researched as Digital Authoritarianism. We argue that it is imperative not to turn a blind eye to these developments. Equipped with our knowledge of

information systems, in particular digital platforms and their mechanisms, we are well-equipped to evaluate their impacts and understand behavioral patterns. These skills are crucial for comprehending the digital sphere that surrounds us.

Technological advancement has often been driven by optimism and a forward-looking vision. It has offered, among others, the promise of democratizing knowledge and globalized communication, thereby breaking down digital as well as physical borders. This editorial serves as a plea to find paths that ensure that these positive and constructive attitudes of our community endure. In collaboration with other disciplines, we must strive to use our field as a driver of positive progress. Information Systems, we are convinced, can play a decisive role in safeguarding the equilibrium of democracies.

As this marks the final editorial from Christof Weinhardt as Editor-in-Chief of BISE, it is a moment to reflect upon the societal circumstances around us and how our field, Information Systems, can contribute to safeguarding democracies from faltering: It was a great honor and big pleasure to serve BISE from 2019 to 2024 as Editor-in-Chief and thereby contributing to the advancement of our discipline. I am grateful for the excellent collaboration with my Co- Editor-in-Chief, the Members of the Editorial Board, the Editorial Office, and all reviewers who personally invested in the success of our journal and discipline. I am at least equally grateful for our authors and researchers who have entrusted us with their contributions. Their dedication has contributed to the productivity and excitement of the BISE journal and the entire field and made this role an enriching journey for me.

It is obvious that the topic of this editorial is of great importance for me and my research group, as demonstrated by initiatives on themes such as 'Online Participation' that were launched many years ago. My involvement in the German Bundestag's Enquete Commission "Internet and Digital Society" from 2010 to 2014 ultimately led to the initiative "House of Participation" (https://hop.fzi.de/). Using the claim "Impact through Digital Interaction", the aim of this initiative is to communicate Digital Democracy research to a wider audience, including experts from civil society, business, administration, and politics. It also aims to establish connections with scholars in countries such as the US, Brazil, and Israel that face similar challenges and threats to their democratic institutions. This allows for the exchange of democratic innovations that can benefit us.

In conclusion, I would like to say that this does not constitute as a personal farewell, but should serve as a wake-up call and call for action for the BISE community. We must bring our expertise to bear and ensure that digital progress continues to support, rather than undermine, the democratic structures that are crucial to free and just societies—we must use our theories and methods to strengthen democracies in these times of digital transformation and geopolitical change.

Therefore, in the end, we would like to invite all interested researchers from our and neighboring disciplines to a workshop on "Digital Democracy" at the 19th International Conference on Business Informatics and Information Systems (WI 2024) to learn together from our research initiatives and projects. For more information, please visit https://wi2024.de/workshops-tutorials/digital-democracy/, where we invite you to 'Join us in shaping the future of Digital Democracy research—a participatory exploration towards better informed, more democratic and more cohesive societies.'

Funding Open Access funding enabled and organized by Projekt DEAL.

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