Technology and the Organization of Fields

Special issue of the Journal of Organizational Sociology

This special issue brings together theoretical and empirical contributions that advance our understanding of the link between technology and the organization of social fields. Papers will address the role of technology in field constitution and change and/or the role of fields in the design, production, and use of technology.

It has long been evident that technology shapes social life and is in turn shaped by society (Williams and Edge 1996). The growing ubiquity of digital technologies and the changes associated with them have renewed scholarly interest in this topic. Traditionally, researchers have examined the relationship between technological development and society as a whole (Bell 1976; Castells 2010) or investigated related phenomena at the level of technology designers and users (Akrich 1992; Pinch and Bijker 1984) or organizations (Orlikowski 1992; Woodward 1958; Zuboff 1988). Technology has also been addressed in studies on the development of industries that develop, produce, or focus on the use of specific technologies (Abernathy and Utterback 1978; Geels 2002; Nelson 1994). However, sociologists have so far shied away from examining the relationship between technology and the organization of fields more generally. Even though they are uniquely equipped to study the institutional dynamics and power relations within fields, sociologists have yielded the analysis of technology to scholars focusing on the role of sociotechnical assemblages (Latour 2005) and infrastructures (Star and Ruhleder 1996) on the one hand, and economic value creation on the other (Adner 2017; Jacobides et al. 2018).

In organizational sociology, the field concept has been used to study meso-level social orders that include heterogeneous actors such as individuals, business organizations, state organizations, social movements, communities, and crowds. These social orders have been called social fields (Bourdieu and Wacquant 1992), organizational fields (DiMaggio and Powell 1983), issue-based fields (Hoffman 1999), or strategic action fields (Fligstein and McAdam 2012). Despite their differences, all field concepts share certain characteristics (Zietsma et al. 2017). They refer to areas of social life that are marked by relatively intense social relations (e.g., competitive as well as cooperative), which give rise to and are governed by shared understandings about the field itself, including its major purposes or issues, its relevant actors and their (power) relations, and its rules of legitimate action.

The social relations examined by field theory have always been related to technology, although this has rarely been a topic of sociological research. This is obvious for fields that form around the development and production of technology (Garud et al. 2002; Gawer and Phillips 2013) or around purposes that are heavily dependent on technology (Leblebici et al. 1991). However, we argue that technology is critical to the operation and structuration of most organizational fields. The control and use of certain technologies are linked to the constitution of field positions, their meanings, and power relations. Field configuring events often revolve around issues of technology (Anand and Watson 2004; Gross and Zilber 2020). Technological infrastructures shape the interaction and mutual awareness between field actors, as they enable and partially regulate the flow of goods, people, money, and information across space and time.

Because of the central role of technology in the organization of fields, the introduction of new technologies is frequently linked to field transformation, while field structures shape the design of new technologies. In particular, these relations between organizational fields and technologies are currently reconfigured in the wake of *digitalization* (Hinings et al. 2018).

- We know that the structure of fields often co-evolves with the structure of the technologies they produce and the technologies used in their key operations (Alaimo 2022; Dolata 2009). Today, due to the increasing complexity and networked character of digital technologies, new fields of heterogeneous actors often form around technology design and innovation (Seibt et al. 2023; Windeler and Jungmann 2022). Conversely, the introduction of digital technologies and infrastructures reshapes existing field positions and relationships between fields.

- The intense interaction and mutual awareness characteristic of fields is often enabled and structured by information and communication technologies and their underlying infrastructures. The growing ubiquity of internet-based communication escalates this tendency, again leading to the formation of new fields and the transformation of existing ones. Moreover, it enables infrastructure and platform providers to monitor (Zuboff 2019) and organize (Ametowobla and Kirchner 2023) field activities, often reshuffling existing power relations.

Despite these fundamental links between technology and field, sociological field theories, with few exceptions, do not systematically elaborate the role of technology in the formation, stabilization, and transformation of meso-level social orders.

- *Bourdieu's theory* views fields as the materialized form of history. This includes the tools and machines used (Bourdieu 1981) and the kinds of products consumed by actors in specific

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field positions (Bourdieu 1984). However, most substantive analyses focus on actors' access to and dispositions towards technologies (Christin 2017; Davies et al. 2021; Ignatow and Robinson 2017, Pernicka and Johnston 2021), neglecting the structuring role of technology and differences between technologies of different kinds (but see Airoldi 2022). While Bourdieu's work also influenced a practice theory of technology use in organizations (Nicolini and Monteiro 2017), the latter has largely sidelined the field concept.

- *Institutional field theory* argues that fields may be constituted by actors producing "similar services and products" (DiMaggio and Powell 1983, p. 148). However, close analysis of the links between the material properties of technology and fields has been curtailed by the focus on legitimacy and mechanisms of isomorphism. More recently, scholars have argued that technology itself may be a source of isomorphism (Benders et al. 2006; Caplan and boyd 2018, Esposito 2024), although this argument has not been taken up in mainstream institutional theory. Others have argued that technology constitutes a key dimension of organizational fields more generally (Leblebici et al. 1991), especially when the concept is applied to industrial sectors (Dolata 2009).

- The concept of *issue-based fields* (Hoffman 1999) does not explicitly deal with technology, although it is easy to see how the development, introduction, or breakdown of technology could constitute new issues around which fields emerge or transform (Meyer 2016). Indeed, the notion of innovation field (Windeler 2021) usefully draws attention to the fact that fields often form around the development of new technologies and their constitution as innovations.

- The theory of *strategic action fields* (Fligstein and McAdam 2012) also does not directly deal with technology. However, Fligstein and McAdam mention that new technologies may constitute external shocks that trigger the transformation of SAFs or enable the construction of new social space, and thus new fields. The link between technological change and field change has been documented in studies on sustainable transitions (Hess 2013) and digital platforms (Kirchner and Schüßler 2019; Seibt 2024), while new forms of technological experimentation, such as living labs, have been linked to field emergence (Canzler et al. 2017). However, the connection between technology and fields has not been developed beyond isolated case studies.

This special issue on *Technology and the Organization of Fields* in the *Journal of Organizational Sociology* aims to advance the state of research on the link between social fields and technology. The special issue has two main goals. On the one hand, it aims to systematize and integrate

research on technology in the various strands of field theory that are a major part of organizational sociology. On the other hand, it will bring field theory to bear on major technological developments, such as platformization, datafication and the rise of AI, which are at the core of what has been termed the digital transformation. Taken together, these two aspects of analyzing the relationship between technology and fields promise to produce a deeper understanding of the digital transformation and highlight the relevance of organizational sociology therein.

We seek empirical and theoretical contributions that…

- … examine how sociological field theories can be extended to analyze the relationship between technology and field organization. We encourage studies that either focus on a single field theory or compare different theories to show how they characterize the relations between technology and field organization or reorganization. Papers should aim to extend existing theoretical frameworks by explicitly analyzing how technologies shape field structures and dynamics and/or vice versa.

- … explore how theories from the social studies of technology and innovation can be extended to account for the organization of fields and their influence on technology. Such contributions should identify the intersections and divergences between field theory and analytical frameworks dealing with, for example, sociotechnical assemblages, information infrastructures or distributed innovation processes. They should demonstrate how theories of field organization can be combined with theories of technology in empirical research and reflect on the theoretical implications of such combinations.

- … study the subtle role of technology in fields where the development, production, or use of technologies is not the primary issue or purpose. Such papers should emphasize the often-overlooked technological dimensions of supposedly non-technological fields and examine how taken-for-granted technologies influence their formation, stabilization, and transformation. These contributions should also aim to uncover how the infrastructural aspect of technologies shapes field organization.

- … investigate the influence of the digital transformation and the major technological developments associated with it on the structure, emergence, and evolution of fields. Such contributions should ideally move beyond individual case studies to offer broader theoretical insights into how processes such as datafication, platformization, the rise of artificial intelligence, and other digital transformations are reshaping the contours of organizational fields throughout contemporary societies.

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Editors

The special issue will be edited by Dzifa Ametowobla (BTU Cottbus, dzifa.ametowobla@b-tu.de) and David Seibt (JKU Linz, david.seibt@jku.at).

Format and Schedule

Submission will follow a two-step process. Interested authors are asked to submit a 500-word abstract to the editors by **December 15, 2024**. Upon acceptance of their abstracts, contributors will be asked to submit short papers of 4000 words that will be discussed at a digital author conference in **April 2025**. This will serve as an opportunity for authors to present and refine their papers and to develop potential links to the work of others. Full manuscripts (6,000-10,000 words) must be submitted by **June 1, 2025**, and will be peer-reviewed in a double-blind process. Only papers that are successful in the peer-review process will be included in the special issue. The special issue will be published in fall 2026.

Please refer to the [journal's website](#) for further information about the submission process.

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