



38th EGOS Colloquium

# Organizing: The Beauty of Imperfection



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## Sub-theme 47: “Orgachines?!” Organizational Decision-making and Machine Algorithms

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### Call for Papers

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Digital transformation is currently among the number one concerns of decision-makers in organizations (Trabizi et al., 2019). Over the past two decades, constant technological progress has enabled the digitalization of products and processes and facilitated the emergence of new business models, value propositions, forms of organization as well as organizational identities (Wessel et al., 2021; Yoo et al., 2010). Computer algorithms, machine learning and artificial intelligence (AI) increasingly support or even substitute human decision-processes (Hanelt et al., 2020, Meske et al., 2020; Vial, 2019). Organizations use such algorithms and AI associated technology, for example, in their search processes for suitable applicants and future employees, for financial transactions and forecasting

processes as well as for scheduling complex logistic tasks (e.g., Kellogg et al., 2020; von Krogh, 2018). Thus, technological development increasingly interweaves humans, organizations, and machines. Is there an emergency of orgachines if organizational decision-making relies nearly equally on human intelligence (e.g. knowledge and experience), organizational intelligence (e.g. rules and procedures) and on artificial intelligence (e.g. algorithms and big data)?

In this sub-theme, we explore how new digital technologies, computer algorithms or AI have started to increasingly impact problem solving and decision-making in organizations – key activities of organizations (Brusoni, 2005; Miron-Spektor et al., 2018; Nickerson & Zenger, 2004). While these technologies may accelerate and broaden the ability to make more accurate decisions, especially in predictable areas (Berman, 2012; Glikson & Woolley, 2020; Kellogg et al., 2020) they also delimit the space for freedom, creativity, and flexibility in human decision-making and restrict tolerance, intuition and improvisation, which are necessary for organizational development. Research on heuristics (Loock & Hinnen, 2015) or simple rules (Bingham & Eisenhardt, 2011) has investigated individual and organizational decision-making. However, these streams of literature have not yet built the bridge to algorithms that are embedded into organizations' IT-systems. Only recently, scholars have begun to explore how organizations deal with AI, but have not explicitly delved into the complex interplays between AI, decision-makers, and organizations in the context of problem solving and decision-making (Keding, 2021). Thus, research on the interplay between new digital technologies and decision-making in organizations is still in its infancy (Murray et al., 2021).

Because of the high relevance of the topic and urgent practical questions that emerge in various industries (e.g., questions surrounding autonomous vehicles or AI-based medicine), we call for research that investigates how algorithms such as AI, but also other digital technologies, influence organizational problem solving and decision making. It is the explicit aim of this subtheme to bridge research of strategic management, organization, and innovation management. Specifically, we invite contributions that address (but not exclusively) the following questions:

- How do algorithms and digital technologies affect decision-makers and their behavior in organizations, especially in the context of decision-making and problem solving?
- How will the interplay between individual heuristics, organizational rules, and IT-based algorithms affect organizational decision-making and development?
- How do managerial and organizational heuristics help to utilize the potential of AI but at the same time also hedge possible threats that follow from the emergence of powerful digital technology?
- How do algorithms, AI and machine learning affect risk-taking, trust, commitment, and culture in organizations? Which tensions arise on different levels of analysis?
- How does predictive technology impact problem formulation, search processes and tendencies for short-term vs. long-term decisions?
- How do algorithms, AI and other digital technologies impact valuations at the capital and impact organizational decisions?
- Which ethical aspects arise with decision-making in organizations in the context of digital transformation? And which institutional dynamics might emerge?

We invite and encourage submissions that address the broad subject of organizational

decision-making in the era of digitalization and deal with (but are not limited to) the following topic areas: Organizational decision-making, strategic decisions, managerial myopia, heuristics, problem formulation and solving, routines, aspiration levels and forecasting, organizational learning, tensions, dualities, contradictions, paradoxes and related concepts and fields. Contributions may be theoretical-conceptual or empirical. All kinds of quantitative or qualitative empirical settings (e.g., longitudinal studies, process studies, secondary data analyses, case studies, surveys, experiments, actor-centered measurements) are appreciated. We also encourage multi-level analyses of the topic at hand. We aim to create a platform for scholars with various backgrounds to engage in this core field of organization studies.

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More Information:

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