AI, Organizing, and Management

Aron Lindberg
Stevens Institute of Technology
aron.lindberg@stevens.edu

Jeffrey V. Nickerson
Stevens Institute of Technology
jnickers@stevens.edu

Jeffrey Saltz
Syracuse University
jsaltz@syr.edu

Stefan Seidel
University of Liechtenstein
stefan.seidel@uni.li

Artificial intelligence (AI)-based systems are now key resources that help organizations improve their operations [1]. If we portray organizations as multiagent systems that pursue system-level goals [2], it is clear that the introduction of AI-based agents has the potential to fundamentally change organizing and management. These AI-based agents differ from classical IT artifacts, for instance, in that their behavior and outcomes are often less predictable and, most importantly, they can learn [3]. Some even ascribe AI the potential to be creative [4]. For example, on 10 October 2021, Beethoven's last and unfinished symphony was premiered to mark the 250th anniversary of his birth—completed with the help of AI—a digital take on the romantic era.

This minitrack seeks new organizational and management theories, frameworks, and methodologies to explain and predict these novel AI-related phenomena as well as provide actionable guidance on how organizations can address the challenges associated with AI. The themes of explanation, prediction, and prescription are indeed reflected in the papers we accepted this year.

Six papers will be presented. Raphael Meyer von Wolff, Sebastian Hobert, and Matthias Schumann [5] develop a procedure model that can guide practitioners in chatbot projects. Qinglai He, Yili (Kevin) Hong, and T. S. Raghu [6] study the impact of machine-powered regulations on the behaviors of volunteer moderators based on the analysis 156 subreddits. Anna Sidorova and Kashif Saeed [7] develop an AI governance framework that incorporates various stakeholders, delineates types of AI-related organizational decisions, and considers different AI outcomes and byproducts. Christian Engel, Julius Schulze Buschhoff, and Philipp Ebel [8] develop a taxonomy of the business value of AI use cases. Yulia Sullivan and Samuel Fosso Wamba [9] highlight the role of AI for firm resilience in response to supply chain disruptions. Finally, Christian Dietzmann and Yanqing Duan [10] study the themes that managers face when they integrate AI into their information processing and decision making.

The articles we accepted for presentation at HICSS provide a taste of the varied implications of AI for organizing and management—addressing algorithmic capabilities, techniques of designing AI-based systems, and, more broadly, the ways that AI-based systems change the nature of work.

References

[1] M. Tarafdar, C. M. Beath, and J. W. Ross, "Using AI to Enhance Business Operations," *MIT Sloan Management Review*, vol. 60, no. 4, pp. 37-44, 2019.

[2] P. Puranam, O. Alexy, and M. Reitzig, "What's "new" about new forms of organizing?," *Academy of Management Review*, vol. 39, no. 2, pp. 162-180, 2014.

[3] N. Berente, B. Gu, J. Recker, and R. Santhanam, "Managing Artificial Intelligence," *MIS Quarterly*, vol. 45, no. 3, pp. 1433-1450, 2021.

[4] M. A. Boden, "Computer models of creativity," *AI Magazine*, vol. 30, no. 3, p. 23, 2009.

[5] R. Meyer von Wolff, S. Hobert, and M. Schumann, "Chatbot Introduction and Operation in Enterprises – A Design Science Research-based Structured Procedure Model for Chatbot Projects," in *55th Hawaii International Conference on System Sciences (HICSS), 2022*, 2022.

[6] Q. He, Y. K. Hong, and T. S. Raghu, "The Effects of Machine-powered Content Modereation: An Empirical Study on Reddit," in *55th Hawaii International Conference on System Sciences (HICSS), 2022*, 2022.

[7] A. Sidorova and K. Saeed, "Incorporating Stakeholder enfranchisement, Risks, Gains, and AI decisions in AI Governance Framework," in

URI: https://hdl.handle.net/10125/80058
978-0-9981331-5-7

55th Hawaii International Conference on System Sciences (HICSS), 2022, 2022.

[8] C. Engel, J. Schulze Buschhoff, and P. Ebel, "Structuring the Quest for Strategic Alignment of Artificial Intelligence (AI): A Taxonomy of the Organizational Business Value of AI Use Cases," in *55th Hawaii International Conference on System Sciences (HICSS)*, 2022.

[9] Y. Sullivan and S. F. Wamba, "Artificial Intelligence, Firm Resilience to Supply Chain Disruptions, and Firm Performance," in *55th Hawaii International Conference on System Sciences (HICSS)*, 2022.

[10] C. Dietzmann and Y. Duan, "Artificial Intelligence for Managerial Information Processing and Decision-Making in the Era of Information Overload," in *55th Hawaii International Conference on System Sciences (HICSS), 2022*, 2022.