

Research Problem: The Impact of AI Systems on Professional Interpersonal Interactions and Social Relationships in Organisational Contexts

The integration of Artificial Intelligence (AI) systems into organisational environments has significantly altered the professional landscape. This phenomenon has seen complex decision-making tasks increasingly delegated to AI systems. Whereas professionals previously performed these, the new interaction with AI systems gives rise to fundamental changes in professionals' work. The introduction of AI systems into professional work has resulted in profound changes, particularly in the way professionals interact with AI technologies, altering their work processes fundamentally.

However, previous research has primarily investigated the cognitive implications of AI use in professional work, overlooking the critical aspect of social embeddedness of professionals' roles. This oversight is significant because professionals are deeply entrenched in networks of interactions and relationships with colleagues, customers, and other external stakeholders. For instance, in policing, the difficulty of police officers in interpreting AI outputs led to the emergence of a new professional group—intelligence officers—who gradually became crucial collaborators in handling AI outputs (Waardenburg et al., 2022). Similar dynamics have been observed in the banking sector, where investment bankers' challenges in understanding AI outputs have affected their communication with clients (Anthony, 2021). These instances underline the importance of considering the broader network in which professionals operate, yet little research has delved into how AI systems influence professionals' interpersonal interactions and social relationships.

Social relationships in the workplace play a key role in a professionals' well-being, feeling of belongingness, organizational identification, performance, and employee commitment (Dutton & Heaphy, 2003). Interpersonal interactions occur when professionals interact with each other to accomplish tasks. Over time, recurring interpersonal interactions may result in social relationships of varying degrees. The interaction's quantity and quality determine the value of the professionals' social relationships. Whereas social relationships at the workplace are more instrumental and short-lived than relationships with friends and family, they are a valuable resource for professionals' physical well-being and an important source of emotional support.

Our study aims to bridge this gap by exploring the impact of AI systems on professionals' social relationships, particularly focusing on the changes in work-related interactions with groups like colleagues and clients. Our research is driven by the question: How does the adoption of AI systems affect professionals' interpersonal interactions and perceived social relationships within an organisational context?

This research problem is grounded in a qualitative in-depth case study in the banking industry, where we observed two AI systems being introduced with similar characteristics but divergent impacts on loan consultants' interpersonal interactions and social relationships. This study aims to contribute to the literature on AI and social relationships by offering a detailed understanding of how similar AI systems can have varied effects on professional relationships. We seek to understand why these differences occur and the role of the type of expertise as well as the relational and contextual nature of the decision-making process that is transferred to the AI system. Our research will add to the scholarly discourse on AI from a relational perspective and will also offer practical insights for organisations implementing AI systems.

Performed Activities

- **Meetings with A/Prof. Anne-Sophie Mayer:** These meetings were instrumental in shaping the direction and progress of our research project.
- **Manuscript Rewriting:** This included refining the argument, enhancing the clarity of the narrative, and ensuring the manuscript met academic standards and publication requirements.
- **Collaboration with KIN Centre Members:** These interactions provided valuable insights and different perspectives, enriching our research approach.
- **Presentation of Manuscript:** Presented our manuscript to an audience of over 30 participants, including faculty members and fellow researchers.
- **Literature Review Expansion:** Conducted an extensive literature review to ensure our research was well-grounded in existing scholarly work and to identify gaps our study could address.

Results

The results of my research stay have been very enriching, both in terms of academic progress and professional development. The manuscript, which was the focal point of my stay, advanced significantly. Through daily rigorous work sessions and collaborative efforts with A/Prof. Anne-Sophie Mayer and the exchange with other members of the KIN Center, the manuscript was not refined in its existing and saw the infusion of new ideas and alternative theoretical underpinnings. This process was further enhanced by engaging in critical reflection on the content and approach. The overall response from the audience was very positive and supportive. This validation was not only encouraging but also opened additional avenues to investigate alternative strategies (e.g., consider the hierarchical dependencies for social relationships in our case study, that may affect our results). The opportunity to utilise VU Amsterdam as a research institute enriched my experience, providing access to resources, expertise, and an academic atmosphere conducive to high-level research.

The research stay also facilitated an the expansion of my research network. Meeting new people contributed immensely to this expansion. These interactions ranged from informal discussions to more structured meetings and seminars, providing a platform to exchange ideas, receive feedback, and explore collaborative opportunities.

Literature

- Anthony, C. (2021). When knowledge work and analytical technologies collide: The practices and consequences of black boxing algorithmic technologies. *Administrative Science Quarterly*, 66(4), 1173-1212. <https://doi.org/10.1177/00018392211016755>
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