

Unseen Alignments – Sociotechnical Mechanisms of Digital Manipulation and Control: Introduction to the Dark Sides and Criminal Uses of Digital and Intelligent Technologies Minitrack

Hamed Qahri-Saremi
Colorado State University
Hamed.Qahri-Saremi@colostate.edu

Isaac Vaghefi
City University of New York
isaac.vaghefi@baruch.cuny.edu

Ofir Turel
The University of Melbourne
oturel@unimelb.edu.au

Piotr Siuda
Kazimierz Wielki University
piotr.siuda@ukw.edu.pl

Abstract

This minitrack marks the first edition of Dark Sides and Criminal Uses of Digital and Intelligent Technologies at HICSS. It represents the merger of two previously distinct traditions: the long-running “Dark Side” minitrack series (2018–2025), which explored the adverse and unintended consequences of digitalization and intelligent systems, and the younger “Cybercrime” minitrack (2022–2024), which examined malicious and criminal activities in cyberspace. This convergence reflects the increasing complexity of digital threats, where exploitation often emerges at the intersection of human, technological, and institutional dynamics. This year’s contributions reveal a shared concern with sociotechnical alignments—mechanisms through which technologies and human actors co-produce dark outcomes. Accepted papers cover a range of themes, from collusive behaviors and narrative manipulation to personality-driven AI acceptance and biometric surveillance, offering new theoretical and empirical insights into the evolving landscape of digital risks.

Keywords: dark sides of technology, cybercrime, sociotechnical systems, manipulation and control, biometric surveillance, dark personality traits

1. Introduction

For over a decade, research on the dark sides of digital technologies has formed a significant thread within the HICSS community. It started with Dark Side minitrack series (2018–2023) that focused on unintended, negative, and harmful consequences of digital transformation. Over the years, it has evolved in scope, addressing issues such as digital addiction,

algorithmic biases, surveillance, unintended organizational consequences, and the ethical and societal risks of emerging intelligent systems (e.g., Qahri-Saremi et al., 2025; Turel et al., 2018; Vaghefi et al., 2024). In parallel, the Cybercrime minitrack (2022–2024) explored the intentional and malicious use of digital infrastructures for criminal purposes, including financial crimes, organized cyberoffenses, and the strategic manipulation of digital ecosystems (Harviainen et al., 2023; Siuda et al., 2024; 2025).

The decision to merge these two lines of inquiry into a single minitrack in 2026 reflects how contemporary digital phenomena increasingly transcend traditional boundaries between unintended dark outcomes and intentional malicious actions. Emerging forms of manipulation, control, and exploitation often involve sociotechnical alignments, where human behaviors, technologies, and organizational structures interact to produce complex forms of harm. This year’s minitrack foregrounds these alignments and invites interdisciplinary dialogue across information systems, criminology, management, communication, and psychology.

2. The 2026 Minitrack

The four papers accepted for this inaugural edition reflect the breadth and depth of current research on the dark sides and criminal uses of digital and intelligent technologies. Despite their thematic diversity, they converge on a shared focus: how sociotechnical mechanisms enable manipulation, control, and exploitation in contemporary digital environments.

The first paper, *A Taxonomy of Collusion in Information Systems* (Armbruster, Kannengießner,

Beyene, Ciolacu, Sunyaev), develops a comprehensive taxonomy of collusion mechanisms in information systems, illuminating how actors exploit system affordances and governance structures to coordinate illicit or harmful activities. By mapping structural, technological, and behavioral dimensions of collusion, the paper provides a foundation for understanding how collaborative manipulation can emerge within ostensibly legitimate systems.

The second paper, *Exposure, Skepticism, and Switching* (Amure, Agarwal), advances a behavioral model of narrative diffusion in social media environments. Using an epidemiological framework, it conceptualizes how competing narratives spread and interact through mechanisms of exposure, skepticism, and switching. This work connects information systems research with political communication and cognitive psychology, showing how narratives—whether disinformation, conspiracy, or political propaganda—are amplified by digital affordances and user behaviors, producing large-scale sociotechnical cascades.

The third contribution, *Dark Personalities at Work* (Boy, Xhigoli, Schaarschmidt), examines how Dark Triad personality traits influence trust in and acceptance of generative AI tools in service settings. This study adds a crucial psychological dimension to dark side research, highlighting how individual dispositions can interact with intelligent technologies to produce divergent and sometimes problematic adoption patterns.

The final, fourth paper, *The Dark Side of Biometric Technologies* (Killoran, Park, Manseau, Kietzmann), develops a theoretical model of how biometric technologies elicit job insecurity through the novel concept of shared control of the body. It identifies causal pathways through which biometric monitoring impacts workers' psychological well-being. By conceptualizing biometric control as a unique sociotechnical arrangement, the paper contributes to surveillance studies and critical management research.

4. Conclusion

The four papers collectively reveal unseen alignments between technological affordances and human behaviors that facilitate manipulation, control, and exploitation in digital contexts. Whether through collusive organizational practices, narrative dynamics in networked environments, personality-driven interactions with AI, or biometric forms of

surveillance, these studies demonstrate that the dark and criminal uses of digital and intelligent technologies are not isolated phenomena, but rather co-produced within complex sociotechnical systems.

By merging the “Dark Side” and “Cybercrime” traditions, this minitrack aims to foster interdisciplinary, theoretically rich, and empirically grounded scholarship that can illuminate and address these challenges. We hope this inaugural edition will provide a foundation for sustained exploration of the dark sides and criminal uses of digital and intelligent technologies.

5. Funding

This research is supported by the Polish National Science Centre, Poland (Narodowe Centrum Nauki) grant: 2021/43/B/HS6/00710.

6. References

- Harviainen, J. T., Siuda, P., Hamari, J., & Gehl, R. W. (2023). Understanding and Moving Forward Research on Online Crime: Introduction to Cybercrime Minitrack. In B. X. Tung (Ed.), *Proceedings of the 56th Annual Hawaii International Conference on System Sciences, HICSS 2023* (pp. 3609–3610).
- Qahri-Saremi, H., Turel, O., Vaghefi, I. (2025). “Better Technologies for a Better World” – Introduction to the Minitrack on Dark Sides of AI and Digital Technologies. In B. X. Tung (Ed.) *Proceedings of the 58th Annual Hawaii International Conference on System Sciences, HICSS 2025* (pp. 5683–5684).
- Siuda, P., Harviainen, J. T., Hamari, J., & Gehl, R. W. (2024). After the Attack: Introduction to the Cybercrime Minitrack. In B. X. Tung (Ed.) *Proceedings of the 57th Annual Hawaii International Conference on System Sciences, HICSS 2024* (pp. 4204–4205).
- Siuda, P., Harviainen, J. T., Hamari, J., & Gehl, R. W. (2025). Dark Web and Blockchain Security in Focus: Introduction to the Cybercrime Minitrack. In B. X. Tung (Ed.) *Proceedings of the 58th Annual Hawaii International Conference on System Sciences, HICSS 2025* (pp. 3928–3929).
- Turel, O., Soror, A., Steelman, Z. (2018). The Dark Side of Information Technology. Introduction to the 2018 Minitrack. In B. X. Tung (Ed.) *Proceedings of the 51st Annual Hawaii International Conference on System Sciences, HICSS 2018* (pp. 5242–5243).
- Vaghefi, I., Qahri-Saremi, H., Turel, O. (2024). The Sociotechnical Dynamics of Digitalization: Introduction to the Dark Sides of Digitalization Minitrack. In B. X. Tung (Ed.) *Proceedings of the 57th Annual Hawaii International Conference on System Sciences, HICSS 2024* (pp. 6044–6045).