TREO
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How do we adapt to adaptive information infrastructures?

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Emerging technologies, such as artificial intelligence, extended reality, 3D printing and digital platforms, bring about new qualities in their ability to "act" inter-dependently with humans and organizations. They have become increasingly intelligent as they are able to acquire new knowledge and skills from multiple data sources; they are able to operate autonomously and intentional; and they are able to adapt themselves beyond what we commonly refer to as 'system design'. For example, Internet of Things (IoT) sensors extend our real word with virtual objects. Along with AI that tries to mimic human processing strategies, these "smart" objects become building blocks for responsive, autonomous Cyber-Physical Systems.

Overall, these new abilities prompt us to re-think our notions of adoption, use, and "virtuality" of information systems (IS)—as many instances of these technologies can be deemed ***adaptive information infrastructures*** (AIIs) rather than distinct application systems we have traditionally used to frame our inquiries in the IS discipline (Deleuze 2004; Constantinides et al. 2018).

In working with AIIs, for example in context of IoT, our assumptions about the relatedness between the real, the virtual, the digital and the material have to be challenged and re-analyzed with performative and sociomaterial perspectives in mind (Bailey et al. 2012; Cecez-Kecmanovic et al. 2014). These analyses need to consider three things: (1) the interaction of, and communication between humans and AIIs; (2) our conception of what we currently perceive as "IT artefacts;" and (3) the assumptions about causes and effects, along with unintentional effects, such as AIIs acting independently in non-deterministic ways when compared to traditional IS.

In order to position AIIs as a new phenomenon within IS, extant theories and ideas about IS and IT artefacts, as well as about organizations and organizing, have to be called into question. We embark on a project that addresses the following two questions: (1) How do AIIs reconfigure organizational boundaries, conceivably transforming organizing and coordinating in organizations and ecosystems? and (2) How do AIIs affect the spatial and temporal dimensions in which human roles are perceived and developed within new forms of organizing?

In our TREO talk, we are looking for feedback on this developing idea. We are particularly interested in whether listeners consider the transition 'from systems to infrastructures' as equally critical, and whether our conceptual focus on ***performativity of the virtual*** invites other perspectives. Researchers that provide further perspectives are invited to cooperate!

References

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