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From Representation to Mediation: A New Agenda for Conceptual Modeling Research in a Digital World

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Abstract

The role of information systems (IS) as representations of real-world systems is changing in an increasingly digitalized world, suggesting that conceptual modeling is losing its relevance to the IS field. We argue the opposite: Conceptual modeling research is more relevant to the IS field than ever, but it requires an update with current theory. We develop a new theoretical framework of conceptual modeling that delivers a fundamental shift in the assumptions that govern research in this area. This move can make traditional knowledge about conceptual modeling consistent with the emerging requirements of a digital world. Our framework draws attention to the role of conceptual modeling scripts as mediators between physical and digital realities. We identify new research questions about grammars, methods, scripts, agents, and contexts that are situated in intertwined physical and digital realities. We discuss several implications for conceptual modeling scholarship that relate to the necessity of developing new methods and grammars for conceptual modeling, broadening the methodological array of conceptual modeling scholarship, and considering new dependent variables.

Keywords: Conceptual modeling, mediation, digital technology, ontological reversal, digital objects, representation