

Shifting baselines in information systems research threaten our future relevance

In 2013, the AIS appointed its first historian. The rationale was that the IS (or MIS) discipline, now with more than 50 years of history, would benefit from a collective effort to preserve and interpret its history with a view to *strengthen and further its theoretical genealogy* (Zhang, 2015). It is ironic that, co-existing with this view, we are beginning to find forthcoming from a number of IS scholars, research that suffers from three clear and present dangers: *weak theoretical motivation* from an IS perspective; lack of *novel theoretical understanding* of an IS problem or phenomenon; and *atheoretical* analysis that does not consider or fails to build on cumulative bases in IS. In combination, these dangers pose a significant, even existential threat to the long-term health and relevance of the discipline. In this editorial, we explore the manifestation of these dangers, identify the risks that they bring, and consider how they can be tackled.

Firstly, weak IS motivation implies that research questions do not address phenomena relating to the design or implementation or use of an IS. Such research questions often involve the unthinking importation of ideas from another discipline, without relating them to the specifics of the above. For example, consider a research question that analyses the relationship between the extent of smartphone use and sleep patterns. There is no sociotechnical system present in such a research question: The smartphone, in the absence of any specific app, app settings, user, process of use, purpose, context, etc., does not qualify as such a system. Secondly, we see studies that lack novel theoretical understanding. This means that while a study may examine patterns of inference, it does not situate them in a conceptual stream of knowledge in the IS discipline. Continuing the “smartphone and sleep” example above, the understanding generated is unlikely to make any significant contribution to the IS discipline, given the absence of a sociotechnical IS, though it may make a contribution to sleep science. Thirdly, we are seeing research that suffers from atheoretical data analysis. In other words, researchers search for patterns without an adequate understanding of the phenomenon.

The incidence of these problems, while not entirely new, has now been exacerbated in part due to the analysis of huge data sets that are culled or scraped from various websites and archives. The ready availability of such data sets makes this a particularly enticing endeavour and is complemented by a plethora of tools that appear to ensure rigor; however, researchers' focus tends to be more on the supposed rigor than on the presence of an *IS phenomenon*, let alone an interesting or relevant one. Meanwhile, because papers that involve such analysis are often incomprehensible to anyone not specializing in such analysis, the broader consumability of the research (Robey & Markus, 1998) is forsaken.

There are three grave risks associated with these three problems. The first is a lack of cumulative theoretical contribution to the IS discipline. If research published in IS journals is poorly motivated from an IS point of view, or if the motivation has little to do with the design, implementation and value of an IS, then the IS components will be whittled down to single instances of IT, such as a device (e.g. smartphone or PC) or an application (e.g. Facebook), without the sociotechnical aspects that form the core around which their design, use and management plays out. The *IS contributions*, both theoretical and practical, will become ever more tenuous. If we do not develop novel theoretical understandings, our contribution to knowledge, essential for any discipline, will diminish. The second risk is that IS research will not matter to anyone because *IS may cease to exist*: it will be swallowed up by all the business functions

of the organisation and reduced to the functional and instrumental bits of technology; what we study will not be seen as an integral sociotechnical system at the core of business and societal processes. As more and more papers speak to atheoretical knowledge, their recency will afford them primacy on the reading lists of doctoral seminars such that students might eventually read *only* these kinds of papers. The third risk is thus of graduating PhD students who have little or no grounding in the cumulative traditions of the IS discipline or even more alarming, who have little understanding of what an IS theoretical contribution is. Recent conversations with some PhD students have confirmed this risk, if only for their remarkable and very unsettling ignorance of the nature of IS as a discipline and the role of theory in research. Their sensitivity to the need to develop novel theoretical understandings often appears to be wafer-thin, constituting a serious risk to the future status of IS as a discipline that makes theoretical contributions.

Shifting Baseline Theory (Ortmann, 2010; Pauly, 1995) suggests that the baseline research for any discipline shifts over time as new topics of significance and interest emerge and as successive generations of researchers bring in new ideas, new techniques and study new phenomena. However, the shifts we lay out in this editorial are threatening to redefine what IS research is, making this an existential issue that affects us all.

Does this matter? Yes, if we insist that IS should have a solid and pervasive set of core values. Yes, if we insist on our prerogative to make novel theoretical contributions that inform our many stakeholders. Yes, if we assert our status as a discipline. Failure to include IS elements in research designs to develop novel theoretical IS insights and to shun atheoretical analytics will wipe away the IS discipline's distinctive and essential focus on sociotechnical systems and how those systems create value for a variety of different stakeholders: individuals, teams, organizations, society, and natural ecosystems. The essence of shifting baseline theory (Ortmann, 2010) is that the focus of research in any discipline shifts over time. The shifting process may be unnoticed, unheralded, and by the time we do notice it, it is too late to reverse. We suggest that the current situation is already problematic and demands our immediate attention. This is our motivation for writing this editorial and our call-to-arms to take action before it is too late.

We have discussed the ideas in this editorial with a number of senior scholars in the field and as a result do not feel that the problem is intractable. We empathize with PhD students and junior colleagues who face a number of pressures. Firstly, many IS programmes are getting into the teaching of data analytics; junior scholars may feel the need to demonstrate that they have the skills both to teach courses and to conduct research in this domain. Secondly, untenured scholars are particularly sensitive to the publish-or-perish dilemma; as a result, they may feel that they have no choice but to submit articles that have the best chance of acceptance, without worrying too much about the "who cares?" question. Nevertheless, even these articles may be redeemable if their authors would consider more carefully the motivation for undertaking the research in the first place, as well as the corresponding design and theory.

What can we do about all of this? First, we need to conduct research that *strengthens the core body of IS knowledge* (Tarafdar & Davison, 2018). A cogent motivation for why the research is theoretically and practically worth undertaking should figure prominently in any research design. For an IS journal, this motivation must have a sociotechnical IS at the core, with a corresponding research design and contribution. We expect that authors will consider novel theoretical insights that demonstrate research contributions and cumulative value within IS through *intra-disciplinary research*. Second, we need to generate *IS centric insights of value to other disciplines* (Baskerville & Myers, 2003; Tarafdar & Davison, 2018). While we encourage researchers to draw from reference disciplines, we also hope that our research will give something back to those disciplines, i.e. they should be informed by IS research, just as we are informed by their research. In some cases, the central IS components may be integrated with components from other disciplines to create novel contributions that extend both IS and the reference discipline through *inter-disciplinary research*.

Finally and very importantly, we encourage researchers who wish to engage in research with data analytics to consider how they can make theoretical contributions in IS. Such research can certainly lead us to novel insights that advance knowledge that has an IS theoretical centre. In order to do this, relevance to some identifiable stakeholders, premised on a motivation that has IS as a central element, that explicates why it is necessary to do the research in the first place and why this is the best way of doing it, is essential (Agarwal & Dhar, 2014). Fishing big datasets for atheoretical and acontextual inferences and relationships without a strong IS related motivation, theory and research design, no matter how shiny and attractive, will not theoretically strengthen the IS discipline.

There is evidence that, fifty years on from the establishment of the first IS academic departments and research centres, IS research has reached a healthy level of theoretical consolidation and developed a strong core (Tarafdar & Davison, 2018; Zhang, 2015). It is equally indisputable that there are many pressing sociotechnical problems in organisations, society and the environment that heavily implicate IS and need our attention as scholars. We suggest that these provide both a strong springboard and exciting opportunities for us to contribute to the disciplinary and real-world ecologies the IS discipline is a part of. Let us not fritter away the many accomplishments of our field by engaging in research and analysis that fails to generate novel, interesting and relevant theoretical understanding of phenomena that are grounded in the technical and social aspects of information systems. Let us not lose our compass and soul as a discipline.

In this fourth issue of 2018, we present seven papers. In the first paper, Simeonova (2018) examines the role of transactive memory systems (TMS) and Web 2.0 in interactive knowledge sharing (KS). The paper also explores what underlying factors affect the use of these tools. To address this, she develops a conceptual model that draws on activity theory and critical realism by outlining the role of TMS and Web 2.0 as mediating tools in KS. The model illustrates that the use of these mediating tools depends on deeper underlying structures/factors such as informal networks and trust. The model is supported by a qualitative study, which outlines that the use of TMS and Web 2.0 facilitates KS, but also that their use and effects depend on informal networks and trust. The findings further suggest that the use of tools and KS is affected by power, outlining the need for further research in the area and the need for accounting of power considerations in KS and organisational practices.

In the second paper, Beynon-Davies (2018) notes that information modelling has been one of the most widely adopted business analysis techniques within industry for over 40 years. Over twenty-five years ago, he published an article in the ISJ (Beynon-Davies, 1992) which identified a mis-fit between the accepted theory of information modelling and the actual experience of information modelling in practice. He suggested at the time that developers typically experience a number of breakdowns between the technique as proposed and as used. This mis-fit still exists nearly three decades later and is the primary motivation for the current paper. In it he draws connections between this important activity performed by information systems practitioners and both the theory of speech acts and the theory of social ontology as proposed by John Searle. We use such theory to locate problems experienced with practical information modelling in a misconceived understanding of the relationship between the constructs of an information model and their proper context, namely the communicative pattern evident within some delimited domain of social ontology. Based on such theorisation he develops an approach to information modelling which helps resolve the theory/practice juncture and also serves to demonstrate more clearly the nature of information models as a way-station to institutional action.

In the third paper, Vithayathil (2018) raises questions about the future of the traditional IT department given the rapid adoption and growth of cloud computing. He notes that while cloud computing could do away with the IT department, in practice it is more likely that the IT department will be transformed. Specifically, he suggests that cloud computing will allow IT departments to grow if they pivot to the new demands placed on such departments under the regime of cloud computing. He identifies the major areas of change and describes governance issues that arise with the adoption of cloud computing. He further posits that firms that adapt to the transformed roles under cloud computing will achieve higher levels of performance along a variety of measures. Vithayathil offers recommendations for future research along with implications for practice.

In the fourth paper, Bala and Bhagwatwar (2018) focus on how employees' use of information systems in the workplace is associated with their positive and negative dispositions to job and organization. The authors undertook two longitudinal studies in two different systems, finding that preimplementation job and organizational dispositions significantly predicted both lean and rich measures of system use. The findings offer a comprehensive understanding of system use and its antecedents and consequences for employees in organizations.

In the fifth paper, Mettler (2018) seeks to enhance our understanding of the contextualization of IT artefacts. More specifically, he presents a design science study conducted in eight hospitals in four different countries which highlights the impacts of contextualizing IT-reliant *professional social networks* (PSN) for improving collaboration and

information sharing between professions, institutions and health systems. Building upon the premises of Action Design Research, the author proposes an alternative way for adapting and configuring PSN which is less concerned with the *reuse* of software components, but emphasizes more the individual and his or her worldview, language, culture, and the particular setting in which the IT artefact is *used*. By means of three concrete examples, Mettler also discusses the tensions and unintended uses of instantiated design features.

In the sixth paper, Mähring, Wiener, and Remus (2018) address IS project control from a new angle, focusing on communication, and in particular the performance impact of consistent control communication, or transmission, between clients and offshoring vendors. They draw on a matched-pair survey with 172 client and vendor managers from 86 projects, showing that formal controls can be transmitted consistently in spite of the distance challenges of the offshoring context. Most importantly, the authors find that high-performing projects are characterized by both greater control transmission consistency and greater use of outcome control than low-performing projects. By highlighting effective communication as a key factor for successful IS project control, their findings are important for IS project control theory, as well as immediately useful for managers.

In the seventh paper, Pike, Bateman, and Butler (2018) note that forming impressions of job candidates is a challenging process, one characterized by ambiguity brought about by the uncertainty associated with making decisions and judgments. To combat this, hiring professionals have been increasingly turning to new sources of information on the internet to find information on candidates. Popular sources being accessed for information on candidates are social networking sites (e.g., LinkedIn, Facebook). The findings of this study support the premise underlying this practice; information from social networking sites can be a valuable source to reduce ambiguity, when it exhibits good information-task quality. However, hiring professionals must be cautious, as the findings also reveal that the context from which the information was sourced matters. Specifically, the same information that can reduce ambiguity can actually increase ambiguity if obtained from sites perceived to contain multiple target audiences (termed context collapse). These factors create a paradox that must be carefully navigated by hiring professionals.

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Robert M. Davison¹

Monideepa Tarafdar²

¹City University of Hong Kong, Hong Kong

²Lancaster University (Management School), United Kingdom

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