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On Digital Theorizing, Clickbait Research, and The Cumulative Tradition: A Response to Grover & Lytinen

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*What has been is what will be, and what has been done will be done again. There is nothing new under the sun. [...]
[Yet...] There is no remembrance of former things... – King Solomon*

Abstract

The pursuit of novel and indigenous digital theories is a thought-provoking call by Grover and Lytinen. Such a piece is direly needed, and we hope it will spark a reinvigoration of the field. However, despite its many merits and our alignment with its message, we have two comments or cautionary notes for readers of their piece. These are – a) a need to re-emphasize the value of attending to the cumulative tradition in our pursuit of digital theorizing, and relatedly b) a naive reading of the paper may risk mobilizing IS scholarship towards clickbait research. We highlight three anchors that future scholarship can consider in attending to these issues a) problematization anchor, b) implications anchor, and c) boundary-spanning anchor. With these points, we add more volume to the message of G&L and offer suggestions for pursuing innovative digital theories that go beyond ephemeral theorizing.

1. Introduction

The digital age changes things, and Grover and Lyytinen (2022, henceforth "G&L") argue in their thought-provoking piece that it is time for the information systems (IS) field to embrace novel, "blue ocean" theorizing. There is a growing sense in the community that the digital age has ushered in a fundamental shift in sociotechnical organizing (Avital et al. 2021, Baiyere et al. 2019, Baskerville et al. 2020, Berente 2020). G&L see this shift as an opportunity to generate important and impactful theories – unencumbered by the tired, old, poorly-fitting theoretical perspectives from the bygone industrial age.

G&L argue that IS researchers are currently under pressure to fit this new phenomenon to reference theories that may not apply directly to novel phenomena. This requirement, they argue, hampers the generation of clever, creative, and useful insights that will enable us to make sense of these fundamental changes in new and different ways. They provide valuable guidance for generating novel insights. In particular, we appreciate their call to publish descriptive studies and novel patterns, avoiding treating reference theories as immutable, and to no longer require purity with received worldviews. This is strong, much needed guidance that is consistent with trends in the field (e.g., Baiyere et al. 2022, Miranda et al 2022).

However, looking at work in the field over the last decade, we get the sense that they are overstating the field's slavish devotion to reference theories. The IS field abounds with new approaches, novel constructs, and interesting original theories and new constructs. A brief scan of recent issues of the *Journal of Information Technology* and one sees research into digital ecology (Marton 2021), online friction (Tomalin 2022), multisensory collective activity (Chandra Kruse & Drechsler 2022), blockchain and the Internet of value (Lacity 2022). Similar efforts can be seen in other IS journals such as digital first (Baskerville et al. 2019), digital agility (Salmela et al. 2022), CARE theory (Leidner and Tona 2021), among others . These phenomena are interesting, novel and vibrant. One might wonder if G&L's characterization of the

prevailing situation is a bit of a strawman argument. Nevertheless, although the content of G&L's advice is sound, the motivation of their argument undermines the relevance and critical role of the cumulative tradition as a resilient foundation for the academic enterprise.

This cumulative tradition can take the form of reference theory or IS scholarship. G&L explicitly dismiss traditional reference theories as no longer fitting this new phenomenon: "Recent digital phenomena due to their nontraditional character call for new theorizing unbounded by conventional, received reference theory framing and related logics" (p.2). In doing so, they also implicitly dismiss the cumulative tradition of IS scholarship. At a minimum, the motivation of their article downplays the value of the more than 50 years of sociotechnical IS research.

There are two problems with this. First, a naïve reading of their paper may serve as cover for increasing work that chases new phenomena while ignoring what we already know – what we refer to as "clickbait" research. The second and more important problem is that it risks overlooking the opportunity that the strong foundation of prior IS scholarship affords for informing other fields (Beath et al. 2013, Baskerville and Myers 2002). By ignoring our competitive advantage, which is the deep attention to sociotechnical phenomena (Sarker et al. 2019), we may miss the opportunity to impact other fields at this critical juncture where they appear to be discovering the importance of digital technologies. In the end, we believe that this call for novelty ignores the reality on the ground, risks motivating clickbait research, and leads us away from understanding how we may impact the broader research discourse. In short, we risk falling to King Solomon's trap of "no remembrance of former things," which is antithetical to sound scholarship.

In this short essay, we wish to call attention to the need to attend to the cumulative tradition in unique and powerful sociotechnical IS theory as we engage in novel theorizing. Only from a position of strength can we understand how things are new and how they are not. This means that we absolutely need to attend to the cumulative tradition as a platform for understanding the novelty. This does not mean that

we need to twist ourselves into a pretzel trying to apply existing theories, but we do need to understand what is the same and what is different. In doing so, our prescriptions are much like G&L, with the caveat of maintaining attention to the cumulative tradition, as we have done from the very beginning (Keen 1980). We absolutely should look to avoid recreating existing knowledge using different terms and also export the lessons from our vibrant tradition to other fields.

Next we briefly make three points. First, we describe the risk of clickbait theorizing and the risk of not attending to the cumulative tradition. Second, we argue for three ways to incorporate the cumulative tradition of IS scholarship to take advantage of the digital opportunity. We conclude with some reflection underscoring how the appropriate sort of attention to the cumulative tradition can empower IS researchers to fulfill the G&L call for novel theory meaningfully.

2. *Clickbait research: On ignoring cumulative tradition & recreating existing theories*

As we have already established, we are in alignment with Grover and Lyytinen (2022). However, we worry that a naïve reading of their piece may lead to misconstruing their message. The potential traps that we see arising due to this include chasing phenomena and ignoring commonalities with what we already know. At best, we risk recreating existing knowledge with new terms, which denies the field from building an edifice of knowledge (Tiwana & Kim 2019). At worst, this could inspire chasing any new phenomenon as novel and being entirely phenomenally driven – in essence, clickbait research (see Berente & Recker 2022). The challenge here is that scholars may begin to point to G&L as the go-to reference for falling into these traps.

We suggest caution against such interpretation of G&L's message. Otherwise, their call might create a disservice to future scholarship. This is akin to the situation in grounded theory research, where many have misconstrued Glaser and Strauss's (1967) message and used it as a source for claiming a tabula rasa justification. As Urquhart (2002, 44) notes: "The notion of setting aside theoretical ideas is often held to

imply that the researcher does not look at existing literature, and GTM has been criticized for what is seen as a tabula rasa approach, where the researcher is a 'blank slate'." This misconstruing is contrary – in fact, opposite – to Glasser and Strauss stance since they explicitly state that "the researcher does not approach reality as a tabula rasa... [but] must have a perspective in order to see relevant data and abstract relevant categories." In grounded theory, they call for the constant comparison of findings to the existing body of work to understand what is indeed new. Similarly, we caution researchers to be well-steeped in the existing tradition to understand how any emerging theoretical perspective goes beyond existing knowledge.

A particular hallmark of clickbait theories is the tendency to ignore the prior body of knowledge. Such a tendency dilutes the essence of the cumulative tradition of scholarly research. This is particularly worrisome since the call from G&L emphasizes the novelty or newness of the phenomena that confront us in the digital age as a basis for arguing for the need for novel theorizing. If this is misconstrued, we may end up with a plethora of theories claiming to be novel because of the newness of a phenomenon without due recourse to what has come before or due diligence in first examining to what extent prior or distal theories capture the phenomena. Instead, there is a race to be the first to publish on each new phenomenon so that the resulting article can enjoy a position of informing the field of the phenomenon and garnering the associated attention and citations – often going little beyond the existing theories already applied in practice. Indeed, it is the cumulative tradition that distinguishes academic theory from the folk theories and common sense that dominate practice.

At the same time, it is important to follow many of G&L's prescriptions if we are looking to make things novel. For example, treating reference theory as immutable and requiring some sort of purity of consistency with received views does indeed stand in the way of novelty. Similarly, their call for descriptive studies and being open to patterns can contribute the building blocks upon which new theoretical insights

emerge (Miranda et al 2022). Next we point out some ways that researchers might capture the spirit of G&L yet still build upon existing knowledge.

3. *Because not despite*: On attending to the cumulative tradition – three anchors

It is hard to disagree that we need innovative theory in the age of pervasive digital (as per G&L). While the digital phenomena of interest have novel elements, the application context—the people, human nature, and the values systems that produce and are reinforced by new technology are still the foundation of any sociotechnical phenomena (Baiyere and Furstenau 2022, Sarker et al. 2019). Neither does digital technology grow on trees, nor is it received as a gift from heaven—it is a product of the human enterprise. Thus, theorizing about digital technology is meaningless without drawing on and contributing to the people and social structures that produce and consume it. Thus, looking for ‘new theorizing unbounded by conventional, received reference theory framing and related logics’ is an unrealistic and possibly a misguided position. We argue for a more pragmatic view of research contributions – one that emphasizes the enabling, not just the constraining view of existing theory. In other words, it is a case of “and” rather than “or”.

While we agree that researchers should not be shackled to the application of existing theory to describe new phenomenon, this does not mean that existing theory has no role. Existing theory serves as a language to make sense of phenomena and signal discourse with a community of conversants. Further, it serves to contrast novel findings and highlight differences from what is already known. Hence, our position is that the generation of novel digital theories should be done *because* due attention has been paid to cumulative knowledge rather than *despite* the accumulated knowledge.

We highlight three anchors for generating novel theories while at the same time attending to the cumulative tradition, and avoiding clickbait research:

a) Problematization anchor: Problematizing existing theory with new phenomena

Existing theoretical perspectives are not entirely useless and can capture important elements of organizing. But sometimes, digital technologies call to question elements of existing traditions. Drawing on an existing tradition enables one to contrast what is new with what we already know and isolate and clearly articulate the differences. By definition, problematization requires that prior research and existing knowledge be first represented and organized in order to establish a compelling context for a contribution that reflects the status, consensus, and assumptions of previous work (Locke and Golden-Biddle 1997). The salience of problematization is that it provides an avenue to question prior research, highlight limitations, challenge dominant assumptions, or invalidate fundamental axioms in a body of knowledge that is exposed when confronted by the peculiarities of emerging digital phenomena (Chatterjee and Davison 2021, Gkeredakis and Constantinides 2019).

For example, the phenomena of digital transformation and artificial intelligence are particularly relevant nowadays and many think they are about fundamentally new technologies. But existing work that connects these new phenomena to existing body of knowledge has proven to be quite valuable. For digital transformation, Wessel et al. (2019) contrast existing perspectives on IT-enabled change to understand how digital transformation is different. With artificial intelligence, Berente et al. (2021) point out that what we refer to as artificial intelligence can be conceived as the frontier of computing at any point in time, and identify the dimensions of difference for the current frontier. By engaging with the related ideas in the cumulative tradition, scholars can draw contrasts with new phenomena.

b) Implications anchor: Generating theoretical implications about new phenomenon

Given the tremendous opportunity that large, diverse datasets and computational techniques present researchers, forcing all researchers to problematize existing theory would be an unnecessary requirement if we wish to explore new patterns with computational methods. But by relaxing the need to

problematize, this does not mean the cumulative tradition should be ignored. Advocates of exploratory research still require that researchers engage with theoretical perspectives (Avital et al. 2017; Berente et al. 2019; Miranda et al. 2022). Recently, Miranda et al. (2022) argue for identifying patterns about novel phenomena using innovative methods as potentially worthy contributions in their own right, but that the implications to theory are what sets scholarship apart from industrial practice. In alignment with the ideas of Hassan et al. (2022), this could serve as fertile ground and building blocks for the generation of products of novel theorizing - that is, “interim constructions, that are useful as precursors to strong native IS theory” (Hassan et al. 2021).

G&L argue that descriptive studies and patterns are important contributions in their own right, but we hold that the burden is still on researchers – perhaps on the back end of their papers – to indicate the relevance of these patterns to the cumulative tradition. For example, Salge & Karahanna (2018) discovered that bots were significant actors in online social movements – they identified this novel pattern. They did not develop theory per se, but did point out that this empirically observed pattern calls to question some of what we thought we knew. They highlighted the theoretical implications of their discovery. Years later they used this foundation to build some key conceptual elements for novel theory around certain types of bots (Salge et al. 2021).

c) Boundary-spanning anchor: Contributing outside the IS field

Beyond the focus on indigenous digital theories, we suggest that there may be value in taking advantage of the unique position of the IS field in equally generating boundary-spanning theories. These boundary-spanning theories are theories that while originating from the IS field and centered around the essence of digital technology, attend to other phenomena of interest in other disciplines. This is especially important as other fields have discovered the relevance of digital technologies in their respective domains. This is an opportunity to draw on our cumulative tradition to strengthen the relatively weak and

superficial views other fields are concocting around digital technology. Although the IS field inherently inhibits a center of fixed core theories (Lyytinen and King 2004), IS scholars have been continuously interested in the interactions between people, information, and technology (Avital 2014).

In other words, IS scholars are not concerned solely with people (like behavioral scientists), or technology (like engineers), or information (like information scientists), but rather with the interactions and relationships between them. The ubiquity of digital technology in everyday life underscores the significance of the interactions between people, information, and technology, and thus provides an opportunity to inform other disciplines as well as to enrich IS scholarship through interdisciplinary collaboration. This is particularly so as digital theorizing is presenting itself as a bridge between the social, technology, and business interest of both IS and non-IS scholars (Baiyere and Fursternau 2022, Kempton 2022). This opportunity has been latent for the most part. However, in consonance with G&L, we argue that the digital phenomena that encompasses us provides a potent avenue to position the IS discipline as a reference discipline in shaping the conversation about digital-themed research efforts beyond IS.

In the end, any scholarly contribution is always a contribution *to* a particular discourse. To ignore existing theory risks piecemeal incremental contributions – constructing individual “bricks” rather than an edifice of knowledge (Tiwana & Kim 2019). We strongly urge researchers, in their pursuit of novel theory, to avoid throwing the baby out with the bathwater. Existing perspectives abound, and many have something to say about new phenomena. Researchers would do well to join existing scholarly conversations and attend to the cumulative traditions.

At the same time, we need to heed G&L’s advice in avoiding force-fitting references theories that do not fit. Existing theories are not immutable and should not be treated so. We should not require theoretical purity and we should be open to descriptive accounts and patterns. G&L’s advice is sound. We simply add

to their prescriptions to remind scholars not to ignore existing knowledge entirely. Use existing knowledge as a touchstone to signal conversants and to help tease out what is new and what is not.

4. *Beyond ephemeral theorizing: Concluding notes*

A recurring argument in G&L is the pervasiveness of digitalization. It is important to note the combinatorial nature of digital technology as a focal item in IS theorizing. Such a nature implies that the need for novel digital theorizing that they describe will be a continuous thing. In fact, one can almost always make this same claim every decade. This implies there is a sort of ephemerality to theories that are particularly digital technology-focused. To be clear, this does not disqualify the value of creating novel theories around digital phenomena. Our point is that ephemeral theorizing or chasing after the latest digital technology may not take us far. Beyond digital technologies, it is people's ingenuity in leveraging these technologies to imagine new ways of doing things with approaches and logics that upend traditional ways and norms that lends itself to shifts that call for new theorizing. At times one may wonder if our inability to generate novel IS theories is because we are the victim of the ever-changing nature of the phenomenon or artifacts that we study? Baskerville and Myers (2002) lament the mindset of scholars in the IS discipline and alludes to this as one of the barriers to generating reference theories. We argue that it is not the fact that the technologies are changing or the risk of ephemeral theorizing. Rather, we believe it is the innate capability of digital technology to reveal latent potential in combination with the human capacity to imagine, break barriers and overcome frontiers that unlocks the fertile ground for theorizing in the digital age. Technology will always change, humans would always imagine. Our development of innovative digital theories seats within that combination.

Indeed, digital technology has a shape-shifting property that relates to the combinatorial nature. This supports the point about boundary-spanning and points to the need to situate the phenomena we study as IS scholars beyond silos in order to give our theories a chance of standing the test of time. In fact, this

raises the volume on what we mean by an indigenous IS theory. Yet, the shape-shifting property of digital technologies does not invalidate theorizing about new and emergent technologies. On the contrary, this provides an opportunity to question received theories and problematize prior literature in order to set the stage for the creation of a new theory. The propensity for such theories to gain ground as a reference theory, however, depends on its boundary spanning potential. In this way, we have an opportunity to infuse digital inspired content into the theorizing in other disciplines (Baiyere et al. 2022). Novelty in general is about novelty to a context. Nothing is ever universally “new” but, instead, involves some combination of existing things that are recombined in a novel way for a particular context. This emphasizes both combination and context. When we seek to generate new theories, they are always with respect to a particular context.

In conclusion, the premise of this debate is whether the shifts and observations of the digital age warrant new theoretical viewpoint that can inform other disciplines or would be well served with borrowing established theories from distal disciplines? To what extent do established assumptions in extant management theories still hold true in the face of the shifts of the digital age? We have offered a few recommendations and alternative suggestions that build on the arguments made above.

The IS field has a strong tradition in deeply exploring different aspects of sociotechnical change, and other fields are ignoring this tradition. Grover and Lyytinen’s essay is well positioned to stimulate scholarly debate on the value, the necessity, and positioning of novel digital theorizing within IS scholarship with impacts beyond IS. We support their call for future IS scholarship to engage in unveiling theoretical underpinnings that capture the unfolding shifts that we are experiencing in this digital age via innovative theorizing. However, with this piece we caution against clickbait research and emphasize the need to attend to the cumulative tradition in this pursuit. In concluding, our engagement with Grover and Lyytinen’s (2022) message is a positive critique and not intended to dilute the core essence of their

message. On the contrary, it is to push it even further and hopefully help in impressing that message on the discipline.

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