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Dropping Your Tools: Exploring When and How Theories Can Serve as Blinders in IS Research

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Abstract:

The debate between protagonists of different theoretical approaches continues in the IS field, with little prospect of resolution. The debate is typically characterized by tendentious arguments as advocates of each approach offer a one-sided condemnation of other approaches. Debate on the qualities of theoretical explanations of technological change is hampered by the shadow of supremacist strategies that is cast over the debate, illustrating the manner in which IS researchers are polarized into opposing camps, each viewing the other as inferior. Ironically further polarization is occurring in the ways that various groups of IS scholars are simultaneously calling for order, discipline and clearer notions of the "core of the discipline" while other scholars call for greater research diversity. In order to overcome this polarization we advocate a strategy recommended by Weick [1996]: Drop your tools—hold your concepts lightly and update them frequently. Three reasons for dropping our theoretical tools are put forward—the focus on improving practice, the focus on building cumulative tradition in the mother discipline, and the focus on building cumulative tradition in one's own discipline—suggesting researchers must consider the "fit" between problem domain, theory and the relationship of the chosen theory to the method of inquiry.

Keywords: theory, research diversity; Actor Network Theory; Structuration Theory

I. INTRODUCTION

Calls continue for "good theory" in IS [Watson, 2001] as scholars explore facets of theory such as what types of theories there are in our field [Gregor, 2006] and how theory should be adapted to IS research [Truex et al., 2006]. Interestingly this ambition to broaden our understanding for the theoretical repertoire in the IS field is articulated at a time when other voices are being raised for more narrowly defining "the core of the field," differentiating those theories and means of knowledge creation are unique to our field and effectively bounding theoretical options rather than opting for diversification [Alter, 2003; Benbasat and Zmud, 2003; Orlikowski and Iacono, 2001; Rowe and Truex, 2007; Weber, 2003a]. We weigh in on this discourse by proposing a set of recommendations that are neither theoretical absolutes nor theoretical relatives but suggest a reflexive view toward theory adoptions, use and diversification.

While researchers have noted how theories arise and gain acceptance, or even popularity, in IS sub-disciplines [cf. Jones, 2000; Truex et al., 2006], scant attention has been paid to the ways in which theories go out of fashion and subsequently get abandoned by IS researchers. In this article we argue that such "theory abandonment" should occur more frequently and that IS scholars should cling on less tightly to their preferred theoretical tools. Our objective with this article is to explore strategies for dropping theoretical constructs to forestall premature closure of theoretical debates.

This article is structured as follows. In Section II, we examine a debate in the *Scandinavian Journal of Information Systems* (SJIS) on the topic of technological agency. The debate is used as a vehicle for illustrating, via the seven contributions to the debate, the difficulties of overcoming theoretical polarization. The debate illustrates the manner in which IS researchers are polarized into opposing camps, or to use Karl Weick's [1996] notion participants in both camps are rigid and non-reflexive "tool holders," both of which tend to view the other as inferior. In the third section we advocate the strategy recommended by Weick [1996] in order to overcome the polarization into opposing camps: Drop your tools, hold your concepts lightly and update them frequently. We will put forward three reasons for dropping our tools: (1) the focus on improving practice, (2) the focus on building cumulative tradition in the mother discipline, and (3) the focus on building cumulative tradition in the IS discipline. Finally, the article concludes with an assessment of the relevance of dropping your tools of research as a means to move forward and advance the discourse on theory and the nature of the IS field.

II. WEICK'S NOTION OF THE REQUIRED "TOOL DROP"

To set the stage, we recall a story about a journeyman scholar who learned that every theory and every technique highlights certain topics, downplays others, and totally ignores many others. Part of the challenge for any serious proponent or critic of any theoretical approach is to identify the topics and issues that it emphasizes and the topics and issues that it ignores. The example of Mark Keil and his adaptation of escalation theory "to better understand and explain software project failures and reflect on his approach" [Truex et al., 2006] exemplifies the flexibility needed in a scholar when adapting a theoretical tool by adapting those elements that are relevant to the task at hand while dropping old theoretical framing devices found not longer useful or robust enough for the task at hand.

"By drawing on the escalation of commitment literature, he was able to borrow theory from an established reference discipline and use it as a means of examining runaway software projects, providing both researchers and practitioners with a deeper understanding of this phenomenon. … Yet, [he discovered that] the theoretical tools he brought to the field did not allow him to explain this interesting phenomenon that presented itself. [But] … his initial efforts to apply escalation theory to an IS project context were based on a limited reading of the escalation literature. … When he failed to obtain the expected results, Keil probed the literature more deeply and came to realize that other researchers had reported that they could not replicate Staw's results" [Truex et al., 2006, pp. 18–21].

The adaptation of escalation theory to the IS domain has been a reflexive process wherein the balance between being faithful to original sources on the one hand, and addressing the particular concerns in the IS discipline on the other, was maintained over time [Truex et al., 2006].

Keil, among other realizations, determined that context played heavily, and through successive trial and error he refined the theory and learned more of its contextual and historical development. He had to abandon a notion of the "pure" application of the original theory in favor of a revised version. This experience gave him the ability to apply the

theory in more interesting ways in his research. Along the way these realizations required him to also drop expectations about outcomes, methodological requirements, and predilections in favor of following the problem and its theoretical and methodological developments as they evolved in use.

Karl Weick [1996] introduced the notion of "tool dropping" as a "Proxy for unlearning, adaptation, for flexibility, in short for [understanding] many of the dramas that engage organizational scholars" in an article ("Drop Your Tools: An Allegory for Organizational Studies") that reflects on the values his own discipline's flagship journal, the *Administrative Science Quarterly,* and its founding editor, James D. Thompson. The "tool-dropping" notion arose from his study of two tragic forest fires in the Western U.S. in which twenty-three firefighters died, even though they were close to safety, after failing to drop their heavy firefighting equipment and flee for their lives. Weick identified ten reasons the firefighters did not drop tools, applied those insights to James Thompson's four guidelines for inquiry, and then generalized a rationale as to why we, as academics, are reticent to do our own "tool dropping" when those tools are the theories we have embraced in previous training and research. Weick's ten reasons "academic firefighters" fail to drop tools are that:

1) We do not listen well, and we "miss the order to drop tools and run in the cacophony of current events."

2) We justify and rationalize our old ways; people need to be told why tools need to be dropped.

3) We suffer from a lack of trust. The need to drop tools needs to be seen as legitimate and the order given by a trusted other.

4) Old tools provide a false sense of control about how we can manipulate our environment.

5) We are unskilled at tool dropping because Ph.D. programs train students to privilege tool acquisition and use, and thus to hold onto the known in the face of the unknown.

6) We are not trained in new skill seeking and replacement activities.

7) Since tool possession and use connotes success, dropping tools is akin to admitting failure.

8) Since bad news travels slowly upward and we are socially aligned with our peers, we miss externally signaled tool dropping queues.

9) People need to believe tool dropping will matter.

10) Our tools become part of our identity; dropping tools implies giving up some of the "self."

Weick wrote his 1996 paper with the expressed concern for the trajectory of his own academic discipline because (a) the business sector threatened to replace the academy as seats of knowledge creation, (b) theory and practice were becoming decoupled and as a result (c) theory was becoming devalued and because "economic data-free simplifications and models" threatened to replace "real live data-nuanced models of organized human behavior." We submit that our own field is beset with at least the first two of these problems today, and posit that Weick's recommendations might be useful for IS researchers to consider.

Where is the "fire" in the IS research field then? Discussion of the role of theory in the IS discipline has raged for decades and continues fiercely today. While the diverse recommendations proposed to us by a variety of scholars stem from a genuine aim of strengthening IS scholarship, we are presented with a debate that is far from being resolved with respected scholars on either side of the debate. For instance, we are told how we need to import more theories from other disciplines, that we should let a thousand flowers bloom [Walsham, 2005] and that we should stop importing theories from other disciplines [Weber, 2003b]. We are told that we need to adapt theories to the specifics of our own field [Truex et al., 2006] and that we need to remain faithful to the thrust of the original theory [Rose et al., 2005a; Rose et al., 2005b; Truex and Baskerville, 1998]. More recently, we are told that IS research is irrelevant to practice and because our theories addressing real-life organizational behavior still remain largely descriptive and less explanatory in nature, few people find them relevant or useful [Straub, 2009; Straub and Ang, 2008]. In addition, some of the most vexing issues of contemporary IS research relate to theorizing around technology, but the way in which to theorize around technology remains a matter of debate [Lyytinen and King, 2004; Orlikowski and Iacono, 2001; Sawyer and Chen, 2002; Sawyer et al., 2001]. For these reasons we take Weick's notion of a theoretical tool drop and apply it to our own field. In the following sections, we will argue that the way in which we can move our field's theoretical discourse forward is to continuously challenge our own position and concepts and, thus, be open to dropping our theoretical tools for the sake of the discourse and growth of the

discipline. To illustrate, we examine a recent discourse that we believe helps illustrates how we interested scholars might learn to successfully "drop our tools."

III. THE PROBLEM ILLUSTRATED: CONCEPTUALIZING THE RELATIONSHIP BETWEEN TECHNOLOGY AND ORGANIZATIONS

The history of IS research has been characterized by the hegemony of the positivistic research tradition [Orlikowski and Baroudi, 1991]. There has been a clear tendency in the field to relegate "soft" research approaches to a secondary position compared to the "hard" positivist approach [e.g. Benbasat, 1987]. However, Dutton [1988] has criticized the Benbasat et al. interpretation of how qualitative case studies should be conducted because of the explicit bias toward quantitative methods. The preoccupation in the IS field with "hard" research approaches is manifest in the excessive reliance on positivist and quantitative strategies for IS research. Clearly, while theories should ideally serve as a lens to illuminate research issues, in practice they serve as blinders to help achieve closure. A pluralist strategy would allow for different theories to be applied in a research situation. It would also allow for theoretical approaches to be a part of a contingent tool-box approach where their strengths could be used as appropriate [Banville and Landry, 1989; Landry and Banville, 1992]. In contrast, a supremacist strategy would seek to establish one theoretical approach as universally applicable and "best" in all situations (for a discussion, see Benbasat and Zmud, 2003; Fitzgerald and Howcroft, 1998). In our view the character of much of the current debate seeking to identify or establish agreement about the "center" or "core" of the IS discipline [Benbasat, 2003] has the character of the later strategy.

In a debate in the *Scandinavian Journal of Information Systems* (SJIS), Rose, Jones, and Truex [2005] discuss the issue that has occupied the center stage in IS research for decades: how to conceptualize the relationship between technology and organizations? They raise a number of important concerns with existing approaches to this issue, and by highlighting these limitations; they challenge us to rethink our cherished assumptions to studying technology in context. With respect to the question of agency, Rose et al. argue that both the Structuration Theory (ST) and the Actor Network Theory (ANT) perspectives are lacking in different ways. Structuration Theorists are seen to privilege human agency over technological agency, while ANT theorists go too far in their assumptions of symmetry between humans and machines. Rose et al. [2005a] described this incompatibility between ANT and ST accounts of humans and machines as the problem of agency and suggested some guidelines for a more consistent theoretical treatment of agency and a metaphor for that theoretical development: "the double dance of agency." In doing this they are in a sense urging the IS community to drop their tools, in the form of purists adherence to traditional interpretations of either ST or ANT, and to push the debate further in the form of an attempt to integrate the two theoretical positions on human machine agency.

> In this emergent process, machine and human agency can be found inextricably intertwined: a double dance of agency. Humans base their actions on complex interpretations of past actions and present conditions, and on attributions of agency to machines. Those actions are partly planned, partly opportunistic; partly pro-active, partly reactive to conditions; partly successful, partly unsuccessful; part strategic oversight, part bricolage and tinkering. Machines (in this case computer systems) also play an important (but different) part in the double dance. Machines facilitate and enable some parts of the human exercise of agency, but constrain other parts. Seen more from the standpoint of their own agency, they accommodate some human purposes, but resist others. Humans try to marshal the agency of machines to serve their own purposes, but cannot always anticipate or control the consequences. Outcomes are emergent from the interaction of both forms of agency, not from one alone [Rose et al., 2005a, pp. 146–147].

The idea of the double dance of agency was critiqued by a number of researchers quite familiar with ANT, ST, or both. These critiques cover a range of concerns from challenging the attempt to rationalize the distinct positions in ANT and ST with regard to "agency," to attacks on one of the theories per se. Walsham [Walsham, 2005, p. 153] questions the need to integrate the theoretical positions arguing that, instead of building integrative agency theories, we should "encourage a thousand theoretical flowers to bloom." Orlikowski [2005, p. 9183] suggests a distinction between human agency and material performativity as a way forward. Hanseth [2005, p. 159] denigrates contribution of structuration theory, and instead privileges the contribution of actor network theory. Hanseth argues that ANT resolves central problems in the relationship of organizations and technology whereas structuration theory, typical of other social theories, is technology blind. Hanseth suggests that instead of focusing on symmetry, researchers should focus on the notion of hybrid collectif, an idea that McMaster and Wastell [2005] echo arguing that "only collectives can act." Hanseth sees the issue of symmetry to be a historical concern, one that is no longer in the forefront of theory development, insisting instead that researchers forget about symmetry and concentrate on hybrids and collectives. In response to the Rose et al. challenge to ANT theorists to be more specific about the way nonhumans act, McMaster and Wastell [2005, p. 175] argue that this is really a nonissue in ANT. They counter that the challenge itself is expressed in a way that separates and contrasts humans and machines—precisely the

dichotomy that Latour's project sets out to undermine. McMaster and Wastell pejoratively accuse Rose et al. of having a "symmetrophobic block" [p. 175] arguing that symmetry is not the same as equivalence.

There are many interesting elements in this debate; but a common thread we see are the contours of a supremacist strategy—a strategy aiming at establishing one theoretical approach as universally applicable. The unfortunate consequences of the supremacist strategy could be that we end up with a debate for or against a particular theory instead of a contribution to better understanding of what the preferred theory can tell us in the ongoing discourse in our discipline. Two of the debate participants suggested alternate lines of reasoning.

Holmström [2005] chose to consider the historical context of theories and the likelihood that their trajectory for those theories in the domain of IS research; or what came before and what comes next. He posits that researchers need to focus on more than a purist's notion of what came before (i.e., how Latour and Giddens formulated their ideas), but also on our own theoretical contribution—i.e., what comes next. Focusing solely on "what came first" may hamper any discussion on what comes next and the growth of the theory as a result.

Orlikowski [2005], in a terminological slight of hand, proposes to speak of "human agency" and "material performativity" in order to avoid falling into unfortunate polemical traps that hamper further understanding of technological changes. Unfortunately, however, changing our description of the nature of agency as invested in people or things does not change that nature.

Building a cumulative theory assumes common and agreed notions of the "problem" and potential alternative futures. To our thinking, the current tenor of the debate does not advance that goal. In fact, what we see is a theoretical polarization between persons advocating their favored position; it seems to us that scholars are not easily inclined to drop theoretical tools. So, in the next section, we focus on reasons for dropping theoretical tools so that we might find common ground and advance theoretical and methodological discourse.

IV. THREE REASONS FOR DROPPING THE THEORETICAL TOOLS

As the IS discipline has evolved with relatively permeable research boundaries over the years, the diversity in theoretical underpinnings has been essential to the evolution of our discipline. To this end, we find the challenges raised by Rose et al. [2005a] to both researchers and practitioners to be relevant. The authors argue that, when reference theories are taken into the domain of IS, different problems emerge. Among other things, they argue that there are correct and incorrect ways to use theories such that "what came first" or being aware of what was really said in the original theories should guide use of the theory. This notion is amplified by Rose et al. [2005a, 2005b] as they advocate the need for a continuous evolution of theories. In the following section, we build on this position by advocating for Weick's [1996] strategy, namely to: Drop your tools, hold your concepts lightly and update them frequently. We will put forward three reasons for dropping our tools: the focus on improving practice, the focus on building cumulative tradition in the mother discipline, and the focus on building cumulative tradition in the IS discipline.

Focus on Improving Practice

In recent years, the IS community has come under severe criticism for conducting research that has little relevance for practice. The gist of the criticism is that IS academia operates in isolation from practice and the findings of academic research efforts do not influence practice. A dynamic perspective of the interaction between IS academia and practice will help us understand better how IS academia can influence practice. This process should be continuous and subtle [Koch et al., 2002], but, as it stands today, this process needs to be strengthened. Moody [2000] defines relevant research as that which "addresses a practical need," and goes on to state that relevance and utility can only be evaluated by practitioners. However, since much research does not have direct or immediate relevance to practitioners, the question arises as to how those findings should be disseminated to them in a suitable form at such time as they do become relevant. While a journal like MISQ is found to be important to research, practitioner publications are often found to be more useful for teaching. This practice is slammed as being hypocritical by [Robey and Markus, 1998] who insist that academics be forced to "eat [their] own dog food."

There are voices who argue that the culture surrounding academic publishing today may actually hinder relevance in an era of rapid change [Davenport and Markus, 1999]. In fact, results that are highly relevant to pragmatic issues might be rejected as being irrelevant merely because it is presented in an inaccessible style [Robey and Markus, 1998]. Too often research is driven by researchers' own interests and the profiles of publication outlets rather than practical needs [Lyytinen, 1999; Moody, 2000]. If academics work in isolation and then try to impose ideas on industry they are bound to fail. Therefore, IS researchers should look to identify research topics that are likely to be of future interest [Benbasat and Zmud, 1999]. We believe a change toward a greater appreciation of practical issues is overdue. This is a position made by Klein and Rowe [2008] who, in examining the training of professionally

qualified doctoral students, noted that they come to Ph.D. training with practical experience and symbolic capital, giving them a boundary-spanning advantage and an ability to relate research and practice. Klein and Rowe argue for a tool dropping reassessment of doctoral training wherein the field places value on theory and practice.

To drop your tools, to update them and adjust them to face this challenge, as Weick advocates, is a part of this effort. In the SJIS debate we could see no efforts in this direction. If we allowed theories in IS to be more exposed to practice, we could also expect to see more creativity among IS scholars in adapting theories in relation to actual needs in practice. We would then indeed be "eating our own dog food."

Theoretical "tool dropping" is relevant to the issue of IS in practice and IS research as practice. In research the focus of attention varies over time and theories come in and go out of fashion [Jones, 2000]. Given that a poor fit of theory-to-question or problem stands to result in misleading or uninteresting findings, we need to be particularly careful in a rush to find new or different theoretical lenses to apply to a domain of inquiry. This theme is more fully developed elsewhere [cf. Truex et al., 2006] and raised only a cautionary note in considering the call for theoretical diversity.

The second concern, when considering the impact on practice, is the effective match of theory and research method. Put simply, different theories are more or less amenable to different types of data, different means of acquiring data and/or inquiring about that data. Theory and methodology are fundamentally related issues such that we cannot consider the selection of theories without also considering what implications this may have on research methodology. This topic is also treated in a much fuller way elsewhere [Truex et al., 2006]. So again we raise this as cautionary note because a researcher needs to be aware of the costs and implications of the choice of theory in considering the impact on her own practice of research or the practice of IS design, development, and management.

The ways in which academics cling to pet theories and, too often, resist further adaptation of it, contribute to an unfortunate state of affairs. In our mind, a reconsideration of the value proposition our research offers and further consideration of the real needs or practitioners would help reduce our isolation and infuse the field with fresh insights.

Focus on Building on Cumulative Tradition in the Mother Discipline

Holmström [2005] finds the challenges raised by Rose et al. to both researchers and practitioners valuable. In particular, Holmström

> … find[s] the argument that there are correct and incorrect ways to use theories to be an interesting and important challenge to our field. When it comes to theories one cannot only take the good bits and leave the bad bits behind. If a researcher does not understand enough of the theoretical tradition from its original setting, s/he is likely to open the work up to any of the same criticisms of that theory that have already been voiced in the original discipline.

Examining efforts at theorizing in the IS research literature it seems that giving back to the theoretical discourse in the discipline where the theory at hand originated is either difficult or downplayed as not of importance. An exception can be found in Truex, Holmström and Keil [2006] wherein the authors suggest that the researchers borrowing theories from other disciplines have the responsibility to do so knowledgably, with fidelity and with current knowledge of the discourse surrounding those theories in the home discipline, but also that they have responsibility to actually attempt to further the discourse by use of the theory in a second discipline. They say:

> When using a specific theory as a resource in the theorizing process, the researcher should be able to answer: What is the added value to the theorizing process when using theory x that is not added when using theory y? The answer to this question should be given considering the tradition of the field—what we know and what we don't know. To contribute to cumulative tradition, a piece of research has to step beyond that which we already know (p. 30).

For them "… there is a pressing need to pay attention to cumulative tradition when adapting theories to IS research." They illustrate via Keil's use of Escalation theory how work in IS research settings may contribute to the cumulative tradition and feedback into the discourse in the home field. This is a way in which escalation theory can be dropped in order to pursue a better explanation of technological change. Such a willingness to adapt theoretical tools is rare but looks like a promising route to pursue.

Perhaps arguing that IS researchers need to make contributions back to the mother discipline is a tad ambitious. But we are of the opinion that our field has indeed made theoretical contributions that should be noted elsewhere. We see the development extensions and refinements to escalation theory made by Mark Keil and colleagues [Keil,

1995; Keil and Flatto, 1999; Keil et al., 2000; Keil and Robey, 1999; Keil et al., 1995; Montealegre and Keil, 2000] or to the refinement and extensions of Habermas's theory of communicative action by Klein, Lyytinen, Hirschheim, Myers, Mingers and Walsham, Truex et al., and others as examples [Davies and Wood-Harper, 1989; Hirscheim and Klein, 1992; Hirschheim, 1989; Lyytinen and Hirschheim, 1988; Lyytinen and Klein, 1985; Mingers and Walsham, 2010; Myers and Klein, 2011; Truex et al., 2011].

Focus on Building on Cumulative Tradition in the IS Discipline

Holmström [2005] finds the challenges raised by Rose et al. to both researchers and practitioners valuable. The key challenge for an IS researcher approaching a theory from another discipline for use within IS is to invest the time and effort to understand the theory in its native environment, to learn the vocabulary and underlying assumptions of the theory, to understand its weaknesses as well as its strengths, and to acknowledge its previous use. But while we need to be more reflexive about the ways in which we adapt theories to our field and to deepen our understanding about how and why any theory is adapted, the faithfulness toward original theories is only a part of such reflexivity. For this reason we want to elaborate on the importance of considering not only a theory's historical context, but also the theorizing process' contribution to cumulative theory.

Weick [1995] points out that "theory is a continuum" and as theories move from visions to detailed constructs and propositions they lose some of their accuracy and become more of an approximation, but they also become increasingly useful to the discipline. This is in concert with Weick's idea of embedding your theoretical contribution in the context of what came before and what comes next [Weick, 1995]. This includes not only the lifecycle of one's own research process but, more importantly, the ongoing discourse in the particular discipline one is immersed in. Such development depends on the generalization that Yin labels as an "analytical generalization," where the researcher "is striving to generalize a particular set of results to some broader theory" [Yin, 1994].

With this in mind, Rose et al. [2005a; 2005b] might be criticized for concentrating on what came before rather than what comes next. They ask us to remain faithful to the original ideas from Giddens and Latour. But, following Weick's idea of theorizing, we argue that there is an even higher standard. Namely, we must seek not only to remain faithful to the key elements in the original theory, but also to develop the theory further. This begs the question of how one can be faithful to an original theory and develop it further. We suggest that: To be ready to drop your tools is to be ready to develop them further in line with a theory-development ideal.

To illustrate we use Orlikowski's efforts to adapt Giddens's notions to the realm of research on information technologies use. Orlikowski, recalling "interpretive flexibility" emphasizes that "there is flexibility in how people design, interpret, and use technology, but that this flexibility is a function of the material components comprising the artifact, the institutional context in which a technology is developed and used, and the power, knowledge, and interests of human actors...," as well as time [Orlikowski, 1992, p. 421]. To her credit, her adaptation is a development of Giddens's original ideas to the practicalities of IS. But a problematic issue in Orlikowski's model is that she puts technology between human agency and structure, and thus reestablishes a dualism that Giddens's structuration theory achieves to overcome [Rose and Truex, 2000]. In a later work, Orlikowski [2000] appears to recognize this and proposes a "practice lens" as a means of overcoming these inconsistencies, thus bringing her characterization closer in line to Giddens's intent.

However, an important point should not be missed. Namely, that those, like Orlikowski and others, who seek to adopt structuration theory for use in their research are adapting those ideas and, willingly or not, developing Giddens's original ideas as they fit those ideas to the practicalities of IS. They are conducting a kind of action research project on the theory itself. Such work illustrates the challenges of adapting general theories of society to the particulars of organizational life and IT research.

This point is elaborated in the SJIS debate in which there are two basic positions. There are, on the one hand, arguments advocating the need to remain faithful to the main thrust of Giddens's original ideas. On the other hand, there are arguments advocating the necessity to adapt Giddens's original ideas to the particulars of IS research. A good researcher will be able to combine these two positions, but in order to do so s/he will need to be open toward the idea to drop her/his theoretical tools in order to contribute to cumulative tradition in IS.

V. CONCLUSION

This article is influenced by the work of those scholars who have become sensitive to the need of further developing our explanations of technological change by adopting and trying on theories that have not been applied previously in the IS research arena. In so doing they are effectively helping us all "drop our tools" and renew our ideas and the character of our discipline.

With this in mind, we ask: Why is it then that an approach such as ANT has failed to make a similar impact as positivistic accounts of technological change have? One reason can be found in the character of the intellectual debate surrounding Actor Network Theory (ANT); the debate is concerned with arguments for or against ANT rather than what ANT can tell us. There are a number of such debates in our field. They are often characterized by tendentious arguments as advocates, protagonists of different theoretical approaches, offer a somewhat one-sided condemnation of other approaches. These debates have little prospect of resolution when participants do not loosen their grip on their tools. The debate on technological agency illustrates the manner in which IS researchers can be polarized into opposing camps, both of which tend to view the other as inferior.

This polarization casts a shadow of supremacist strategies over a discourse; and the field loses out as a result. If we accept that theories shape what we notice or ignore, what we believe to be important or not, and if we accept that better theory is likely to contribute to stronger results [Lyytinen and King, 2004], then we are obliged to loosen our grip while exploring theoretical notions. Accordingly, it is our hope that as the IS community casts a wider theoretical net over the organizational dynamics of technology-based innovation and seeks to improving practice, that we will also focus on building cumulative tradition in the discipline of origin, as well as building cumulative tradition in the IS discipline itself.

In order for a community to have the capacity for ongoing renewal it has to identify the elements holding it back. Today it seems as if the ways in which researchers hold on to theories and defend their usage is such an element. In order to make change happen, we believe that on occasion we all need to make informed decisions about dropping the theoretical tools that hold us back.

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