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Research Commentary

The Theoretical Core and Academic Legitimacy: A Response to Professor Weber[1]

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Abstract

We respond to Ron Weber's commentaries regarding the necessity of a theoretical core in achieving academic legitimacy for the IS field. We examine the practical problems in identifying a theoretical core, clarify the ontological connection between identity and legitimacy, acknowledge mistakes in our earlier formulation criticizing the necessity of theory in legitimation, and attempt a synthesis between our views and those of Weber. The paper concludes with suggestions for improving the workability of efforts to improve the legitimacy of the IS field.

Introduction

This is a response to Professor Weber's commentaries in the ongoing discussion of what has become known as the "logic of the core" debate. The discussion, for those not familiar with it, is summarized in our book (King and Lyytinen, 2006) *Information Systems: The State of the Field*, particularly chapters 10, 11, 13, and 19. Specifically, we respond to Professor Weber's commentary in Chapter 13 of the book (Weber, 2006a), and in this issue of JAIS (Weber, 2006b). The broad discussion deals with efforts to establish identity and legitimacy for the IS field, while this response focuses on the role of theory – particularly the establishment of a theoretical core – in achieving legitimacy. We assume the reader has been following this discussion, and do not recapitulate it here. Citations, including page numbers, are to original publications, though most of them can be found in the book.

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[1] We are indebted to Ron Weber for his persistence and precision in helping us to clarify our position. We are also indebted to logician J. Michael Dunn for his assistance.

We will address Professor Weber's commentaries in four sections: the meaning of the theoretical core, reiteration of our views of identity and legitimacy, an attempt at synthesis, and some thoughts about the workability of the whole program of legitimacy seeking.

The Meaning of the Theoretical Core

We observed in our previous writings that the ongoing discussion of the theoretical core has been short on clear explanations of exactly what is meant by a theoretical core (Lyytinen and King, 2004 pp. 223). This starts with the difficulty of describing exactly what "theory" means in this context. As of August 1, 2006, Wikipedia states that the word "theory" "…has a number of distinct meanings in different fields of knowledge, depending on the context and their methodologies." The IS field seeks academic legitimacy, so perhaps the Wikipedia characterization of theory for scientific use will help: "…a proposed description, explanation, or model of the manner of interaction of a set of natural phenomena, capable of predicting future occurrences or observations of the same kind, and capable of being tested through experiment or otherwise falsified through empirical observation." Yet, the IS field deals with more than "natural phenomena." Is some or all of IS research excluded from scientific theory? Problems of this sort are common in discussions of the role of theory in science and scholarship.

Professor Weber suggests that any theory serving a legitimating role must be generic, powerful, novel to the field seeking legitimation, and recognized as such by other fields (Weber, 2006a, p. 297). There is very little overlap between these characteristics and those provided by the Wikipedia description. Again, it is common for different descriptions of the attributes of theory to differ considerably from one another. Is one characterization right and the others wrong? Should we simply make a union of them to create a complete description? Are some characteristics appropriate for some conditions, while others are appropriate for other conditions? Researchers in the IS field routinely publish papers claiming to be using "structuration theory," "grounded theory," "garbage-can theory," and so on. Do any of these actually *count* as theory for the purposes of legitimation? If so, how? Perhaps, as with Justice Stewart's definition of pornography, theory is difficult to define, but people know it when they see it. This is useful for describing something *after* it appears, but it is less useful when attempting to understand, *a priori,* how to make that thing.

Similar difficulties arise in determining whether a theory is truly novel to a field. IS researchers have used theories related to adaptive structuration in the evolution of particular systems, or the competitive advantage gained through use of IT for particular purposes. These add intellectual value, and they seem unique to the IS field. Should they count as part of the theoretical core of the IS field? If so, then we seem to have at least some legitimating theory; if not, why do these theories not count for this purpose? We trust the answer is not merely a retreat to the circular observation that the field lacks legitimacy, and therefore whatever theory it has must be inadequate.

Moving on to the idea of a theoretical *core*, how do we handle fields that embrace many theories that are in fundamental conflict with one another? Sociology is an identifiable and legitimate academic field with a substantial body of theory demonstrating different characteristics (*e.g.,* simplicity, elegance, generalizability, accuracy) across multiple

levels of analysis (*e.g.,* macro, meso, micro). Different subfields of sociology fiercely defend or strenuously reject many of these theories. The harshest attack on a theory is the accusation that it does not qualify as a theory at all. Sociological training is largely a matter of learning how to navigate this complex theoretical maze. Are all of these controversial theories, including those that opponents claim to lack the required characteristics of theory itself, part of Sociology's theoretical core? How does one decide? In many fields, it is not the theories themselves, but the conflicts over the theories that most clearly represent the field. These conflicts might be evidence of revolutions between paradigms (Kuhn, 1996), or wars between incompatible research programs (Lakatos, 1974). Even when we know what a theory might be, how can we tell whether a given theory is or should be part of the theoretical core of the IS field?

We also wonder what is meant by a field's ownership of a theory? Many theories, especially in the social sciences, are claimed by a number of fields. For example, Simon's theory of bounded rationality has been adopted by economics, psychology, organizational behavior, and other fields. Do they all get to own this theory as part of their core, or is only one field permitted to do so? If only one, how is ownership allocated? Simon received the Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel for his work on rationality, though he was never trained in economics, and many economists resent the fact that a "non-economist" was given "their" prize. Theories become contested when they become interesting, and ownership becomes cloudy (Murray, 1971). Many academic fields borrow heavily from other fields: operations research from mathematics; organizational behavior from economics, sociology and psychology; civil engineering from physics. For some fields, it is hard to identify any theories owned by the field. Yet those fields are identifiable, and the people in them seem to feel the fields are legitimate.

We remain unclear on what, exactly, constitutes the theoretical core. This does not mean we deny the reality or importance of theory, or the role it can play in legitimating an academic field. It might be possible as time goes on to develop a more precise construct of the theoretical core for the IS field that takes care of these concerns. In the mean time, the uncertainty that surrounds the nature and characteristics of the theoretical core of the IS field suggests that legitimacy for the field arising from a theoretical core is more likely to happen by accident than to be done on purpose.

Identity and Legitimacy, Redux

Our earlier paper distinguished between academic identity and academic legitimacy (King and Lyytinen, 2004). Identity is ontologically necessary for legitimacy: only identifiable things can be legitimate or not legitimate. Once a field is identifiable, it might be judged legitimate by being salient to the society at large that patronizes academic work, by producing strong results that stand the test of time and prove useful to society, and by maintaining sufficient plasticity to sustain salience throughout the time-consuming process of developing strong results. We shall turn to the role of identity in securing legitimacy below. Our focus in this section is to untangle the process whereby identity is established.

We have argued that academic identity is established primarily by sustained focus on a particular subject (King and Lyytinen, 2004). Identity might also be influenced by the kinds of methods used and by the nature of theories arising from the work, but we do not

believe these necessary to the establishment of identity because many identifiable academic fields lack a theoretical core. Professor Weber responds that "…some might contest the claim made by Lyytinen and King that disciplines like classics, German literature, accounting, and history are 'legitimate' academic disciplines" (Weber, 2006a: 297). Whatever Professor Weber thinks about the legitimacy of these fields, he acknowledges that they are identifiable simply by mentioning them in this manner. He is not alone. To prove the point, we turn to the arbiter of the age, Google.

The table below shows the hits from Google searches in which the search string (using quotes) was "field of X" and "discipline of X," where X was one of four nouns: classics, literature, accounting, and history.[2] These phrases are in routine use among academic institutions. We assume that the people who use these phrases do so in the belief that these exist as identifiable fields or disciplines, and that they are identifiable enough to be referenced in such fashion. (For those interested, a search on the field/discipline of information systems also fares pretty well, yielding 63,000 hits.)

Table 1.	
Search String	**Hits**
Field/discipline of classics	>130,000
Field/discipline of literature	>110,000
Field/discipline of accounting	>145,000
Field/discipline of history	>245,000

This analysis proves nothing beyond the fact that people routinely use phrases such as "the field of history," and they seem to think they know what they are talking about. One could construct a definition of what it means to be an identifiable academic field that would render such colloquial uses wrong, but that would not change the fact that people use these terms meaningfully.

Our disagreement with Professor Weber on identity hinges on whether a field can gain identity even if it lacks a theoretical core. We argue that it can, and that there is evidence to support our claim. We are willing to meet Professor Weber at least part-way in two respects: we are not claiming that a sustained focus on a particular subject is necessary for establishing academic identity, although we cannot think of an identifiable field without such a focus; and we are not arguing against a role for a theoretical core in the establishment of academic identity. Our disagreement is whether possession of a theoretical core is necessary for academic identity. We think it is not.

Seeking Synthesis

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[2] That is, the hits in the row labeled Field/discipline of classics is the sum of hits for two searches, "discipline of classics" and "field of classics." We shortened "German literature" to just literature, but combined hits for "discipline of German literature" and "field of German literature" were less than 1,000. We wanted to know whether these hits were related to academic use of such search strings, so we scanned the first 100 hits in each search and found that nearly all of the hits were to web sites hosted at academic institutions. We also ran each search again with the string ".edu" included, finding that searches with and without .edu yielded almost identical numbers of hits.

Our primary dispute in this ongoing discussion is with those who argue that a theoretic core is necessary to establish academic legitimacy. The intent of this section is to find a way to reconcile these views, or at least specify the conditions under which they cannot be reconciled. However, before we begin we must first clear up some confusion we introduced in our earlier work, and that Professor Weber rightly notes.

In Lyytinen and King (2004) we developed a formal argument to clarify what we saw as the key logical positions of those who claim that a theoretical core is necessary for academic legitimacy. We read the articles that had been published on this subject, and tried to tease out what each position would mean for formulating strategy that the IS field might follow. It was our view that many of these logical arguments were not articulated well, and in some situations the arguments appeared to commit a fallacy of reasoning. Professor Weber (2006b) takes us to task for weakness in details of the formal argument we developed, and points out a number of errors in our formulation. We stand corrected on his technical points. We retract that formulation, and we apologize to our readers (and particularly Professor Weber) for preoccupying them with what we confess is a sloppy piece of work.[3]

That said, we reiterate the point that most concerned us: that "A implies B" does not entail "not-A implies not-B." Even if it is true that having a theoretical core implies legitimacy (a point we do not concede), it is not thereby true that failure to have a theoretical core implies non-legitimacy. From our reading of Professor Weber's critique, we believe that he would agree with us on this point, at least on straight logical grounds.

The disagreement between Professor Weber's position and our own appears to come down to the necessity and sufficiency of a theoretic core in pursuit of academic legitimacy. We identify two positions of necessity and sufficiency we cannot accept:[4]

- *A theoretical core is necessary and sufficient for academic legitimacy.* We do not believe Professor Weber takes this position, and we have not seen this position taken by anyone else in the discussion, although Professor Weber says that some have (Weber, 2006b).

- *A theoretical core is necessary but not sufficient for academic legitimacy.* This appears to be Professor Weber's position (2006b).

One might protest that Professor Weber does not hold to the second position. He says, "Some (including myself) contend that having a theoretical core is neither a necessary nor sufficient condition for academic legitimacy. Rather, it is a necessary condition for having a *clear disciplinary identity*" (Weber, 2006b) (Italics in original). As discussed above, identity is ontologically necessary for legitimacy, and must precede it. By transitivity, anything necessary for identity is necessary for legitimacy, so a theoretical core is necessary for legitimacy.

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[3] We often tell our doctoral students, poor writing is most often the result of poor thinking. We feel obligated to offer this as an instructive illustration of that point.

[4] There is a third: *That a theoretical core and academic legitimacy are mutually exclusive (negative sufficiency).* We do not believe anyone involved in the discussion to date has taken such a position. We include it simply for completeness.

We disagree with any position contending that a theoretical core is a necessary condition for achieving academic legitimacy. If formulated via transitivity (*i.e.,* that a theoretical core is necessary for identity, and therefore for legitimacy) we reply that there are identifiable academic fields that do not have a theoretical core. If formulated directly (*i.e.,* a theoretical core is a necessary condition of legitimacy, irrespective of identity), we see no logical grounds for the claim, and little empirical evidence to back it up.

There is a possibility for reconciliation and synthesis between Professor Weber's position and ours. We concede that a strong theoretical core and academic legitimacy are correlated. We further concede that there is probably a causal relationship in which the creation of such a theoretical core increases legitimacy (this is subsumed under our strong results condition). We can imagine circumstances in which strong results – perhaps singling out strong theoretical results – might be overwhelmingly dominant in the production of academic legitimacy. Our position is not that far from that of Professor Weber. Were he to concede that a theoretical core is not necessary for academic identity, our positions would shift from a difference in kind, to a difference in degree. Our debate would turn on the question: To what extent does having a theoretical core influence the academic legitimacy of a field? The possession of a theoretical core might be of overwhelming or even exclusive importance in achieving legitimacy in some cases, and this need not be necessary for it to be true.

Workability

Assuming the positions can be reconciled as noted above, it is worthwhile to consider the conditions under which achieving academic legitimacy is most important. This might include additions to or reframing of the conditions under discussion thus far (e.g., a strong theoretical core, salience, strong results, plasticity). Our shared objective with Professor Weber is to strengthen the academic legitimacy of the IS field. There might be multiple paths to this objective, but as long as the paths are equifinal, our arguments about which path is best should be limited to workability.

Any path taken must be evaluated in terms of reachability and cost-effectiveness. Some paths to an objective are good in principle, but under particular circumstances cannot be traversed successfully. Among reachable pathways, we favor the low-energy-cost path if one can be found. We have never suggested that academic legitimacy for the IS field cannot be reached via the theory path: we just believe it is less cost-effective than leveraging the IS field's inherent salience, coupled with sufficient plasticity to maintain that salience. Improving the strength of the field's results, including through new theory, can solidify the legitimacy that comes from those efforts, but we favor efforts to produce strong empirical results over pursuit of theory. Breakthroughs in theory can have enormous consequences for legitimacy, but the history of science suggests that big theoretical wins do not come from nascent calls to build theory. Most arise in sustained, often intensive, pursuit of common concerns facing the research community (*e.g.* Richter and Ting's experiments that made sense out a Gell-Mann idea that led to a coherent theory of quarks), and many others occur through discoveries by individuals working in intellectual niches that most people do not recognize as particularly important (*e.g.,* McClintock and transposable genetic elements). The pursuit of strong theory is a high-risk, high-return strategy in the short term, and it is a subtle art to achieve the right balance.

Conclusions

Our discussion revolves around a shared concern for improving the legitimacy of the IS field. Some think there is only one path to this goal. We think there are many pathways to the goal, including theirs.   Professor Weber's commentary in this issue of JAIS suggests that strong theory is worth reaching for, invoking our use of the reach/grasp metaphor from Robert Browning's poem. It is an apt use of the metaphor: scholars typically do have to reach beyond what they can grasp in the creation of important new theory. Our use of the metaphor was not focused on this, however. We challenged the field to refute dysfunctional ethnocentrism and look beyond to the opportunities that are within reach, even if that reach is risky. We think the field should be bolder and more confident in its pursuits, whether they be theoretical or otherwise. It is possible that we have introduced new error or confusion to the discussion with this response, although we have tried to avoid that. In any case, we do not believe the highest and best use of the field's time lies in haggling endlessly over issues of theoretical necessity when a large fraction of the community will either disregard the arguments or do whatever they please anyway.

Besides, there may be happier reasons to refocus the field's attention on opportunities. As we suggest earlier (King and Lyytinen, 2004), a great deal of the current anxiety about the IS field is rooted in declining enrollments for IS programs in management schools. It should come as welcome news that a recent study involving interviews with 45 management school deans showed rebounding recognition of the centrality of information technology in management education, and new ideas about how to incorporate IT in MBA curricula (Dhar and Sundararajan, 2006). This is the venue where we prefer to invest our efforts going forward.

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