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Phylogeny and Power in the IS Domain:*

A Response to Benbasat and Zmud's Call for Returning to the IT Artifact

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Abstract

We question a call by Benbasat and Zmud (2003) to narrow the focus of information systems research to a set of core properties. We first discuss three limitations of their argument and then offer two alternative viewpoints for analyzing the state of our profession. One viewpoint casts the arguments of Benbasat and Zmud in terms of power in the domain of scholarship. The second viewpoint, based on colonial systems, sees fresh perspectives, discipline newcomers, boundary spanners, and topical outliers as the likely source of the field's creativity, vitality, and long-term survival. We conclude that the discipline is best served by focusing on supporting diverse and novel research. We proffer neither an alternative research agenda nor a research-appropriate evaluation mechanism since we demonstrate that such restrictive policies hinder both our relevance

* Detmar Straub was the accepting senior editor for this paper.

and potential survival. We suggest some administrative changes for the IS discipline intended to encourage and nurture creativity without sacrificing academic rigor.

Introduction

Benbasat and Zmud (B&Z) (2003) argue that “*the IS research community is making the discipline’s central identity even more ambiguous by, all too frequently, under-investigating phenomena intimately associated with IT-based systems and over-investigating phenomena distantly associated with IT-based systems.*” They claim that these behaviors are at the heart of an “*identity crisis*” oppressing the field. B&Z’s solution is to prescribe boundaries for the field’s identity. They propose that IS researchers limit their research agenda to the study of the IS artifact or more accurately, “*...the application of IT to enable or support some task(s) embedded within a structure(s) that itself is embedded within a context(s).*” (B&Z, 2003, pg.186). They conclude that the acceptable areas of study for an IS researcher aspiring to publish in a major IS journal are (ibid: 186):

The managerial, methodological, and technological capabilities as well as the managerial, methodological, and operational practices involved in planning, designing, constructing, and implementing IT artifacts.

The human behaviors reflected within, and induced through both the (1) planning, designing, constructing, and implementing, and (2) direct and indirect usage of these artifacts.

The managerial, methodological, and operational practices for directing and facilitating IT artifact usage and evolution.

As a consequence of use, the impacts (direct and indirect, intended and unintended) of these artifacts on the humans who directly (and indirectly) interact with them, structures and contexts within which they are embedded, and associated collectives (groups, work units, organizations). (ibid: 186)

Having instituted a rather time-honored view of the IS field,¹ it is not surprising to find that not all research currently being published in the top IS journals meets B&Z’s standard. They suggest that the top IS journals, in particular the *MIS Quarterly (MISQ)* and *Information Systems Research (ISR)*, have erred in publishing non-IS research. Among the offending authors are colleagues publishing in areas such as “*online consumer behavior, trust-building, research methodology, online services delivery, collaboration, decision making, knowledge management, resource allocation, online communities, and supply chain management*” (B&Z, 2003). They argue that such topics are better studied in fields such as marketing and management and are difficult areas for an IS researcher to add value.

¹ At least by one of our authors; see Ives, Hamilton, and Davis [1980] now several decades old but similar model of the core elements of information systems research.

Limitations of B&Z Perspective

We offer an alternative vision of the future. In this section of the paper we discuss three limitations of B&Z's work.² Among these are their contentions, stated or implied, 1) that the field faces a crisis, a crisis that is best addressed by defining the field's identity; 2) that the field's journal editors have erred; and 3) that a solution can be formulated by viewing the discipline as an analogy to a formal organization. We then offer two alternative views, one drawn from the literature of power and the second from colonial systems. Finally, we use these two perspectives to draw rather different conclusions and to offer suggestions for improving the research component of our discipline.

The Identity Crisis

We suspect that many IS researchers are unaware of, or unwilling to accept the identity crisis B&Z describe. Indeed, B&Z's definition of the field seems to be a view of the IS field that does not exist in the minds of many IS researchers worldwide. We contend that this vision of the IS field has only existed amongst a subset of information systems academics—mainly in U.S. business schools. This group has somewhat narrowly defined IS research around a limited set of research methods, reference disciplines, and acceptable research topics. While it may seem to some that the IS field has a definite, narrowly definable identity, IS programs outside U.S. business schools have operated on a variety of principles and with diverse identities. The identity crisis B&Z describe may instead be a reflection of the rich diversity that has long characterized the IS field worldwide.

It is our contention that the importance of the IS field in academia has rested on the market demand for skilled IS professionals – not on the significance of IS research or on the definition of the identity of the IS field.³ We see no evidence, historical or otherwise, that limiting the IS research agenda will improve the status of the IS field. It is possible that alleged limitations in IS research provide convenient cover for downsizing IS programs as student demand goes down; but it is likely that the decrease in student

² An assumption that we do not explore in more detail is that our field is mature enough to provide the foundation for a long-lasting discipline. Writing a decade ago, King [1993] made a compelling argument that the information systems discipline might very well be driven by "*our shared interest in a phenomenal event -- the rise and consequences of radical improvement in information technology.*" And the consequent likely impossibility of building "*a long-standing academic field on a phenomenon, especially a revolutionary phenomenon.*" (King, 1993, p. 293) At that time King warned that any attempts to channel information systems research would be "*an uphill battle,*" and "*one we should avoid* [p. 294]."

³ Modest evidence for this, in the U.S. at least, is seen in the location of so many of the leading information systems programs in large state supported universities (e.g., the University of Arizona, Indiana University, the University of Minnesota, Georgia State University, the University of Georgia, the University of Houston, Florida State University, the University of Texas), where industry demand for large numbers of skilled information systems professionals drove the demand for faculty. Prestigious, and particularly smaller and private, graduate business programs (e.g., Dartmouth, Duke, Tulane, Virginia, Rochester, Chicago, Stanford, Northwestern) tend on the other hand to have generally contributed only modestly to the information systems literature – unsurprising given both their lack of faculty specializing in information systems and the high demand for their highly branded graduates.

demand, and consequent fall off in industry attention, rather than any limitations of the research, actually drives those decisions.⁴

Inadequate Reflection of History of the IS Field

A second limitation in B&Z's perspective is that it inadequately reflects the history of governance and leadership within our field's essential institutions – in particular our journals. Among the most influential actors in determining a field's research agenda are the editors (at all levels) of its most prestigious journals. Through their decisions about journal governance and the precedents they establish, editors play an essential role in shaping the research agenda.

It is, therefore, instructive to revisit some of the key decisions regarding the governance of our top journals. Many of the governance structures, we contend, were designed to avoid placing too much power in the hands of one individual or intellectual camp. From his own participation in the selection processes of journal editors, one of the authors [Ives] contends that, at least at *MISQ*, "big tent" choices tend to be favored over candidates with a narrow view of information systems research or methodology. The institution of the senior editorial board similarly can be seen as safeguarding the journal from a narrow disciplinary focus by providing broad editorial expertise and by placing final manuscript decision authority in the hands of senior editors.

Izak Benbasat borrowed this structure for *ISR* in 2000 (Benbasat, 1999). He justified the decision in part because it better allowed the journal to "serve the wide spectrum of the information systems community." And a year prior to his appointment as editor-in-chief, Benbasat expressed his intention that *ISR* would continue to cater to "the wide spectrum of the information systems community as it is broadly defined," (Benbasat, 1999).

Benbasat's tenure at *ISR* and Zmud's at *MISQ* followed those of other editors with intentions of broadening the boundaries of the field. For instance, in 1990, Editor-in-Chief Jim Emery increased the number of international members on the *MISQ* editorial board from zero to five (Emery, 1990). This move had the effect, intended or otherwise, of increasing diversity in the philosophies of scientific inquiry, research methodologies, and topic areas covered in the journal. Emery and his successor also increased the number of qualitative researchers on the *MISQ* editorial board, culminating in 1999 with the appointment of Allen Lee as editor-in-chief. Recent *MISQ* editors have continued to enlarge the tent. Ron Weber, the current *MISQ* editor, and the first head of either *ISR* or *MISQ* to be drawn from outside of the U.S., continues that trend. Writing in his first editor's statement, Weber (2002), announced his intention that the journal "eventually publish papers on the full gamut of topics that command the attention of researchers in the information systems field" (p. v).

John King, editor of *ISR* from 1993-1999, argued forcefully for expanding the footprint of the information systems field at *ISR*: "Our current base is large and diverse ... [it] should, in my view, be seen as even broader. We need to think seriously of colleagues from other established fields as part of our community." (King 1993, p. 295) In that essay, King announced the appointment of eleven new members to the editorial board

⁴ The recent revision of the AACSB accreditation guidelines for undergraduate and graduate programs in business, which now contain considerably greater emphasis on information systems, is one promising sign on the demand side [AACSB International, 2003].

and five to the advisory board – several of these were clearly disciplinary boundary spanners.⁵

While there have been some attempts to narrow the focus on our journals,⁶ in general, the trend reflected by journal editorial statements is to become more, rather than less, diverse. Accepting a wider range of methodologies, widely delegating paper acceptance authority, broadening the geographical diversity of the editorial board, or even being open to a wider set of topics does not necessarily broaden or violate the core properties of a discipline. But no one should be surprised to find that it has. B&Z's estimate that 33% of articles fall outside their definition of disciplinary boundaries confirms the inevitable. Moreover, this increase in breadth was by no means accidental; rather, it was the consequence of carefully considered decisions taken by past and current journal editors.

Limitations of the Formal Organization Analogy

A third limitation of the B&Z position is their contention that an intellectual discipline can be defined and managed as if it is a formal, purposeful organization. B&Z rely on Albert and Whetten's (1985) and Aldrich's (1999) writings on formal organizations, including their models on identity and evolution according to population ecology models. Based on this literature, B&Z propose that:

(1) The IS field evolves like a population of purposive organizations and communities of practice.

In building their argument, B&Z suggest that the IS field consists of "nascent entrepreneurs" who create "a population of organizations." These new organizations, they say, create "communities of practice," which in some unspecified way relate to "organizational science and information science research communities, business and information science academic institutions, and the various organizations, industries, and professional groups that comprise the information technology (IT) industry" (pp. 184-185). Specifically:

Adopting a theoretical lens from institutional and ecological theory (Aldrich 1999) it is insightful to view IS scholars as a community of nascent entrepreneurs attempting to create a new population [of organizations], i.e., the IS discipline, within an organizational field populated by other scholarly disciplines or populations. Aldrich argues, "Together, founders and members of new organizations create communities of practice..." (p. 185).

Based on (1) above, B&Z go on to propose that:

(2) The IS field can have organizational identity and that identity has survival value.

⁵ Recognizing that others had a different view, King [1996] did provide *ISR* pages for other perspectives on the disciplinary focus argument [Benbasat & Weber, 1996; Robey, 1996].

⁶ Desanctis, for instance, writes of *MISQ* editor's decision to abolish "research on research" from the pages of *MISQ* [Desanctis, 1993]. *ISR* similarly reports that they will no longer "accept for submission consideration any manuscript whose sole purpose is to communicate the development of and assessment of new measurement instruments" [*ISR*, 2003].

Specifically:

“We then describe what such an [organizational] identity may look like by proposing a core set of properties, i.e., concepts and phenomena, that define the IS field (p. 184). . . . We argue that the primary way in which a scholarly discipline signals its... intellectual core—is through the topics that populate discipline-specific research activities” (p.185).

In the following two sub-sections we discuss the theoretical limitations of their argument.

The organization analogy

According to B&Z, *“While Aldrich’s ideas are primarily couched in the context of for-profit collectives, his ideas are intended to apply to non-profit collectives as well” (p.185).* Our reading of Aldrich (1999) suggests his focus was narrower. Specifically, Aldrich (1999) defines an organization as a *“goal-directed, boundary maintaining, socially constructed system” (Aldrich, 1999, p. 2).*

Goal setting in an organization is performed by owners or leaders who *“entice or coerce”* other participants into contributing to the organization’s activities (Aldrich, 1999, p. 3). Thus, a clear hierarchy characterizes a purposive organization in the Aldrich sense. Another distinguishing characteristic of a purposive organization is a *“deliberate design”* for *“concerted collective action toward an apparent common purpose”* (Aldrich, 1999, p.2). According to Aldrich (1999), these two characteristics of organizations *“mark them off from other collectives”* (p. 2). Moreover, Aldrich specifically qualifies that: *“[o]rganizational analysis of other types of social units is certainly possible, but I focus on goal-oriented organizations”* (p. 2). Thus, Aldrich does not assure or even suggest that his ideas (or ideas relating to purposive organizations in general⁷) are applicable to academic disciplines, which may primarily subscribe to different organizational forms, purposes, and behaviors.

It is apparent that academic disciplines differ from purposive organizations in several respects.⁸ Most organizations have formal authorities, statutes and hierarchies and, if well managed, are driven by a clear purpose. By contrast, the IS field has grown up

⁷ It is important to note that Aldrich’s *“Organizations Evolving”* is mainly not a discussion of his views but a general review of organization theory ideas.

⁸ For example, DeSanctis (2004) argues that the IS community consists of scientific communities of practice. A review of Wenger’s concept of *communities of practice* results in a different viewpoint of the IS field’s nature from that of B&Z’s. Most importantly, according to Wenger (1999), communities of practice are not organizations: *“Most organizations are beyond the scope of engagement of their members”* (Wenger, 1999, p. 246). Engagement means shared ways of knowing what others know, what they can do and how they can contribute to the enterprise (Wenger, 1999). Thus communities of practice have a *“local lore, shared stories, inside jokes and a knowing laughter”* (Wenger, 1999, p. 125). *“Communities of practice are about knowing, but also about being together, living meaningfully, developing a satisfying identity, and altogether being human”* (Wenger, 1999, p. 134). They develop their identities through interaction of their members.

without any of those, though they do exist to greater or lesser degrees within the various institutions that help to bind the discipline together.

Indeed, the very nature of the pursuit of scholarship, with its notions of autonomy, individual contribution, and academic freedom, seems to be built on a far more fluid foundation than most enterprises (cf., Webster and Starbuck, 1988). Moreover, most research universities, through the institutionalization of knowledge communities, have far less formalized and shared purposes than other types of organizations. Rather, they provide an inefficient bureaucratic irrigation system by which a thousand diverse intellectual and creative seeds may or may not bloom depending on their merit, the good works of each seed's intellectual gardeners, and a bit of good fortune. Thus academic disciplines are founded more on nurturing diversity than purposive behavior toward common goals.

A third difference between purposive organizations and academic disciplines is the nature of participation. According to Aldrich, organizations produce nascent entrepreneurs who start communities of practice, which in turn become new organizations. These entrepreneurs, armed with a business or product idea, seek to marshal the necessary resources to create a firm. We believe that an IS scholar may not be best described in this way. Aldrich's type of entrepreneurship may not resonate in the context of academic fields, whose primary purpose is advancing knowledge by initiating research streams, new theories and practices.

The need for an identity

A further potential limitation of the organizational metaphor is that it does not necessarily support identity as a central survival factor. Which populations become extinct, and for what reasons, is a much more complex issue than that of identity alone. Pinpointing which factors led to a field's extinction requires *a posteriori* identification of the decisions, actions, and environmental forces involved in the eradication process over time (Diamond, 1999). This is possible only after the discipline has ceased to exist. Since the IS field still exists, there is no reliable way of knowing (1) whether the IS field will survive; and (2) what decisions, actions, and environmental forces will be involved in its potential eradication. Against this backdrop, shaping the IS field's identity to correspond with B&Z's views may not have the intended consequences.

Another central characteristic of an organizational identity is that it forms over time as outsiders learn the distinguishing characteristics of a population, eventually recognizing it by an external identity code (e.g., chip makers, the IS field) (Meyer and Rowan, 1977; McKendrick and Carroll, 2001; Polos et.al., 2002). The identity B&Z prescribe for the field varies from this construct in that: (1) it inherits only a select part of the IS field's past identity (<70%), which does not necessarily correspond to the identity by which the field is currently recognized by outsiders; (2) it is primarily not a result of recognition from outsiders but is an internally-initiated boundary-defining effort, which may or may not eventually be recognized by outsiders; and (3) it is primarily defined by research topics, while organizational identity is primarily defined by organizational form (McKendrick and Carrol, 2001).

Alternative Perspectives

In the previous section, we have raised some potential issues with the purposive organization analogy as a theoretical foundation for redefining the identity of the IS field. B&Z's conclusions that the field's identity is defined by the consistency of our journals' research profile and that such a redefinition of the field's direction has survival value, we believe may not be justifiable. We now present two contrasting perspectives on the field that provide further evidence of the risks associated with the course proposed by B&Z.

Power and the "Search for Core Principles"

In this section we draw on a different theoretical framework, Actor Network Theory (ANT), which we believe better fits the intellectual community population and, in a softer light, illuminates a different perspective on the call for a well-defined identity.

ANT is appropriate as it concentrates on the processes of opening and closing controversies in the social construction of science (Callon 1986; Latour 1987). ANT pays attention to how, in a scientific field, established ideas, methods, and techniques are open to controversy and how, after various bargaining and power moves, a negotiated solution becomes institutionalized (Latour 1987; Law 1986). As new ideas emerge and then become institutionalized, they turn into a source of disciplinary power and control. They do so by providing the criteria for determining what is being researched, what is being published and, as a consequence, who are to be members of the scientific community in question.

By focusing on how knowledge is constructed and institutionalized, ANT contemplates that specific actors⁹ -- which we will call As—will claim the existence of a problem the solution to which will require the enrollment and mobilization of other actors—the Bs of the power relation (Callon 1986). It is important to notice that the As will hold that the solution to the problem can only be found by following the path that they have established. This necessary path leading from problem to solution is called the Obligatory Passage Point (OPP). If the Bs accept the existence of the problem and are subsequently enrolled in and mobilized to the OPP proposed by the As, then the A's will have achieved their objective and, more importantly, solidified their power. We argue that B&Z, though unintentionally, are proposing the establishment of such an OPP for IS researchers.

B&Z take the first step toward establishing their research program by attempting to convince us that there is an identity crisis in the IS discipline. They state that, "...*topical diversity can, and has, become problematic in the absence of a set of core properties, or central character, that connotes, in a distinctive manner, the essence of the IS discipline*" (B&Z, 2003, p. 185). While they present little evidence in the paper to support this claim, the impact of their argument is magnified by their stature in the field and by the publication of their arguments by a leading journal. Furthermore, they state that implementing a prescribed set of core properties can provide the solution to the alleged crisis. Thus, the same actors who formulate the problem provide its solution.

⁹ We adopt Dahl's (1957) nomenclature for designing the members of a power relation: As for those exercising power and Bs for those whom power is exercised upon.

B&Z's arguments allow us to identify who are the As and Bs of the power relation, as well as the proposed OPP. To capture the attention of the IS community B&Z draw on two discourses. One is the consequences of not adopting the set of core properties: the threat of identity loss and then, presumably, other more material consequences. If the IS community does not adopt their model, we presumably risk being diffused into the reference disciplines or worse.

The other discourse is composed of a model, the application of which will, according to B&Z, ensure that we keep our identity. B&Z explicitly suggest a path the other members of the IS community should follow: "A few simple rules of thumb (or questions) that IS researchers and IS editors might pose to heighten the distinctiveness of our work and our journals" (B&Z p. 193). Their central recommendation is the establishment of an index of paradigmatic conformity. Thus editors, associate editors, and reviewers now must utilize a quantitative measure that calculates the percentage of conforming research constructs per paper and sets a minimum threshold for publication. There is a risk that adopting a practice such as this may limit the progress of the IT field (Kuhn 1979).

B&Z share their prediction of what will happen if we do not follow their model, and they indicate what the IS community must do to foreclose such an unfortunate eventuality. The enrollment of the IS community into the research program suggested by B&Z will institutionalize the proposed model and criteria to judge what is proper IS research while providing further acknowledgment of the power of the key players. Thus, Actor Network Theory has helped us to describe the power connotations that will accompany implementation of the proposed core properties. We want to emphasize, however, that we do not believe that B&Z's intention was to marginalize other IS researchers, change the variety of discourse that has permeated the governance structure of our top journals, or increase their own power within the field. Those are, however, likely byproducts of accepting their position.

Colonial Systems

Another lens for examining the evolution of academic fields is the colonial model of evolution. This model is based on Eldredge and Gould's (1972) model of punctuated equilibrium. We believe the trans-generational evolutionary mechanism of colonies (Porra, 1999) may help illuminate why the diversity of the IS field may be a necessary stage in the evolution of the field. Porra's model may also be able to address some of the concerns surrounding B&Z's viewpoint, resulting in a more inclusive scenario of the future of the field.

Porra describes how colonies breed colonies in a process called punctuated prototyping. This often-overlooked mechanism relies upon the existence of isolated sub-populations (species, groups, or colonies) that develop attributes that are different from their parent. These mutations possess some essential characteristics that allow them to survive periods of radical change, while the parent community becomes extinct or highly diminished. Porra's application of biological colonies can explain why change of the IS field is aperiodic and radical to the point that it may seem like an identity crisis to those involved. But more importantly, her model emphasizes the importance of the very IS research declared as non-core by B&Z.

Specifically, Porra notes that in all populations there are sub-populations that operate at the periphery of the larger colony. These sub-populations are particularly important for the survival of the species because their geographic isolation can lead to the development of unique characteristics that differ from the parent population. While environmental change may threaten the survival of the parent colony, peripheral offspring may thrive under the new circumstances. From the colonial viewpoint, the very reason why the IS field may survive for generations to come lies in the research, researchers, and even audience for research deemed as outsiders by the current doctrine.¹⁰

Colonial Speciation

We propose the colonial model as an alternative viewpoint of the phylogeny (evolutionary history and mechanism) of the field for two reasons. First, the colonial model is based on characteristics of colonies of individuals who choose to persist in learning from one another in a mutually nurturing relationship. This viewpoint may better describe research communities (i.e., around topics such as philosophical foundations of information systems or e-commerce). Research communities like these have thus far initiated their own mini tracks in major conferences (i.e., AMCIS) and their own journals (i.e., *Foundations of Information Systems* and *Journal of e-Business Management* respectively¹¹). Thus they could be considered as IS field colonies.

Another central reason for suggesting the colonial interpretation is that the colonial model seems to be able to explain how the IS field has survived. In light of the model, we propose that the IS field has survived because a small group of unique individuals (a sub-community) divorced itself from their parent field (a parent colony) in a radical shift.

The Phylogeny of Information Systems

Often the surviving sub-community flourishes in comparison to the parent community left behind. In the 1960s when computer-related research began to emerge from U.S. business schools, there were few outlets for publication. *Management Science* and *Operations Research* were generally considered the top outlets in the field, and the ORSA/TIMS organization (the Operations Research Society of America—formed in 1952 and The Institute for Management Science—formed in 1953) provided the primary academic meeting each year. However, the prevailing editorial policies and the resulting journal output revolved almost exclusively around the area of mathematical optimization. While optimization was central to the journals' content, some allowances were made for specific practical applications. This led to the emergence of peripheral areas within the journals such as queuing theory, simulation and gaming, and even the infrequent appearance of information systems articles. As the breadth of the topic areas increased

¹⁰ There is an interesting parallel here with the work of Christensen [1997], who found a quite similar, and related, phenomena of disrespect from established players within the realm of so called turbulent technologies – that is technologies with the potential to radically transform business.

¹¹ One of the authors (Porra) was one of the initiators of the annual AMCIS mini-track entitled “Philosophical Foundations of Information Systems” and one of the founders of the e-journal, *Foundations of Information Systems*. The purpose of these outlets is to support research on philosophical foundations of information systems – an area, which has previously had few publishing outlets or working forums. She is currently serving on the editorial board of the *e-Business Management Journal* – a journal for the community of e-commerce researchers.

and the journals' page limits remained constant, many faculty areas were caught in a promotion and tenure squeeze. Researchers not writing theorem-proof optimization articles were considered to lie at the periphery of the field with corresponding limitations on their publication possibilities and hence their long-term academic success.¹²

During the late 1960s the rising discontent over publication "appropriateness" led to the formation of the American Institute of Decision Sciences (AIDS) (later to be renamed the Decision Science Institute). The initial membership at the inaugural meeting in 1969 was composed primarily of faculty with interests in practical applications such as operations management, quantitative decision making and information systems. At that time the optimization focus of the journals strongly favored a mathematical orientation, but many business school faculty perceived the need for outlets with a more practical and real-world focus. The new organization and its journal, *Decision Sciences*, became a rousing success at the membership expense of ORSA/TIMS. It grew rapidly and made significant inroads within business schools with respect to both curriculum and professional recognition.

Within the AIDS community, the satisfaction of those members whose interest focused on information systems was short-lived. As information systems became a more important topic in the business schools, the IS membership felt limited by the decision sciences stranglehold on journal pages. Thus, less than ten years after AIDS was founded, an isolated sub-population took root once again. The observable consequences included the founding of the *Management Information Systems Quarterly* in 1977 and the first ICIS meeting in 1980. Much of the IS community left the decision scientists' organization to form what most felt were more appropriate outlets for their research and professional activities. Once again the child, ICIS, was wildly successful at the expense of its parent organization.

But again satisfaction was short-lived. ICIS, which focused on publishing a small number of high quality papers, was increasingly seen as elitist. Thus starting in 1997 a large subgroup of ICIS was attracted to AIS (the Association for Information Systems) - a new organization again more appropriate to their interests.¹³ Whether the recent merging of the two organizations (a sub-colony returning to its parent colony) will be a fortunate or unfortunate circumstance for the long-term survival of the field remains to be seen.

At every step of the evolution of the IS field, the parent organization made an attempt to retain or regain its lost membership.¹⁴ Often the effort turned out to be too little and too late. For example, ORSA/TIMS eventually added journals like *The Mathematics of*

¹² While we focus here is on management sciences as the parent field, many members of our colony came from other backgrounds including accounting, computer science, library science, and management. The environments they faced there were, however, not unlike that described within management science. King [1993], for instance notes that "after being abandoned by computer science departments, applications as a focus was left to researchers in business schools who formed the IS community" [p. 294].

¹³ Similarly, in 1993 the European Conference on Information Systems emerged in Europe. In about that same timeframe, the Pacific Asia Conference on Information Systems began to meet the needs of disenfranchised information systems scholars in Asia.

¹⁴ King [1993] describes an attempt by the National Research Council Computer Science and Telecommunications Board, the legitimizing body for computer science, to retake several application areas, including "commercial computing" that had splintered off from computer science many years previously.

Operations Research for those with a theorem-proof focus and *Interfaces* for practitioners. More than 15 years after the launching of the *MISQ*, TIMS finally launched *ISR* a journal that focused on topics of interest to our community.

Throughout the history of the IS field, each case of the sub-colony splitting from the parent caused a debate about “rigor versus relevance.” In every case, the parent organization held the high ground of rigorous research standards while the departing peripheral population carried the banner of relevance and practicality. Subscribing to the colonial model, the parental populations have survived, though often in a greatly reduced role. The relevant successors have eventually succumbed to the same fate as they themselves assumed the mantle of the “more rigorous” parent.

This short genealogy of the IS field illustrates the importance of evolutionary models as lenses through which we view the history of our own field. In a dynamic ecology such as information technology, there are certain assumptions about the identity of the field we make at the risk of extinction – or at least diminution.

When the ecological landscape changes, restrictive operating assumptions lead one to believe the eternal correctness of one’s rigorous stance. History shows this can be a tragic mistake. Peripheral sub-colonies apparently understand something about the way the world is currently operating that the parent fails to recognize. In the contest against the environment that includes other fields, the periphery’s relevance wins. Sticking to original premises won’t save a brittle parent. Declaring peripheries irrelevant to the future of the field may tell more about the future of the parent field than the periphery. In the long run, it is the mechanism provided by the environmentally induced mutations occurring in the isolated sub-population of the field that hold the key for the survival of any academic discipline.

Discussion – The Conflict Between Phylogeny and Power

The positions presented in the previous sections demonstrate the continual conflict between the strict editorial control required for rigorous research guidance and the necessity for the kind of openness and flexibility that allows the IS field to persist. On one hand, B&Z’s viewpoint suggests that paradigmatic conformity is the mechanism by which we overcome a perceived IS crisis. For this explanation to hold we must: (1) accept the existence of an identity crisis, and (2) believe that the core properties and conformity model formulated by B&Z are the best way to address that crisis. On the other hand, Porra’s phylogenetic interpretation suggests that our discipline’s survival is predicated on a mechanism that relies upon the existence and support for peripheral sub-populations (i.e., research that B&Z would characterize as having low paradigmatic conformity).

Our characterization of these two viewpoints is of a power versus phylogeny conflict. We contend that the power scenario outlined above is a bleak description of events that, if allowed to grow, will inevitably lead to the conclusions fomented in the colonial section of this paper. Members of the parent colony will move to one or more peripheral sub-colonies and the field may ultimately wither. As Porra’s work suggests, errors of exclusion and inclusion limit the relevance and survival of the IS field in the phylogenetic sense, since the very seeds of our survival lie in those currently unidentifiable research areas that will prosper and become central to the IS domain in the future.

We further suspect that editors and reviewers generally assume that they have the ability to forecast the changing IT domain and adjust editorial policies accordingly. Our historical discussion of how operations research, decision sciences, and the IS field have evolved leads us to question that assumption. In each case, the editors of domains "in vogue" generally failed to identify the changing ecology and failed to expand their domain of discourse. While the editorial boards should retain their policing of rigor, the specification of the field's domain that has survival value will likely come from the isolated periphery – i.e., the authors themselves. It is incumbent on the originators of innovation (arguably, unlikely to be editors) to continually redefine the domain and the discourse by providing sufficient critical argumentation for the relevance of their research to the IT domain. Authorship control over the domain and discourse should be a preeminent component of our editorial policy.

We must avoid an index of paradigmatic conformity. We suggest that the constantly expanding IT domain and attendant research paradigms that will be required in the future are the critical issues for our profession – not its codification and limitation. Thus we reject the aforementioned outcomes implicit in B&Z's arguments in favor of the more long-term concern for professional survival. As an academic profession we must choose to have a phylogeny (a succession of generations) rather than just an ontogeny (a single life cycle or fixed lifetime). It is the very unpredictable and extraordinary applications of IS and IS scholarship that will carry us forward.

One purpose of this paper has been to show that different theoretical lenses lead to very different conclusions concerning the status and the future direction of the IS field. The power lens and the colonial lens are two examples of many alternative viewpoints. While we may continue to argue about the applicability of the organization, power, and colonial interpretations of our discipline, we should explore how the lenses can contribute to directing the future. In this respect, the colonial lens offers several potentially useful pointers. These suggestions are based mainly on three central properties of colonial systems: phylogeny (evolutionary history and method), short-term change, and power (Porra, 1999). Thus, we suggest structuring the governance of the field as if it consisted of colonies that must be nourished.

First, the IS field should recognize the validity of both the existing research domains and those topics that lie at the periphery. This can be accomplished by (a) identifying associate editors by their specific research sub-domain (see for example INFORMS and DSI structures discussed above), and (b) assigning several special associate editors to manage the review process for submissions that do not lie within the traditional IS domain of (a). In the latter case, boundary-spanning associate editors charged with assessing potential contributions would review authors with novel or non-traditional applications of IS. Rather than a monolithic structure (as B&Z seem to suggest), this editorial approach might provide the traditional authors with editors and reviewers more directly familiar with their category of work, and the avant-garde authors with a review process based on potential contribution as opposed to conformance to tradition.

Second, we should clearly distinguish between short- and long-term governance of our journals. While editors, associate editors, and reviewers clearly hold the power over community membership on a paper-to-paper basis, we should not confuse this power with the long-term governance of the field. There are several components to executing this principle. To ensure that the short-term process is impartial and fair: (1) every sub-

domain within the IS field should have its associate editor and list of candidate reviewers published in the top journals; (2) the review process should be double blind; (3) there should be a formal process for the authors to challenge reviews of their manuscripts; (4) there should be a formal and public process by which authors can anonymously rate associate editors and reviewers, and the averages of those ratings should be available for review by those rated, and be otherwise solely employed for selecting reviewers and editors.

Third, for long-term governance, there should be a periodically elected body of scholars in charge of journal governance (i.e., the specifications of (2) above), and they should provide additional direction for both arbitrating and determining the viability of the peripheral research directions. No person should serve at both levels of governance at the same time. The long-term governance board should have the authority to review and terminate journal editors and approve editor-defined policies for the evaluation and termination of reviewers and associate editors.

Even outside the colonial metaphor, these suggestions may seem relatively obvious if one accepts the premise that our field operates in an ever-changing ecology of dynamic technological advances. In order to support the phylogeny of the field, we must assure ourselves that the necessary mechanisms and power for change are in place.

Conclusions

The information systems discipline has, thus far, evolved with relatively egalitarian leadership and permeable research boundaries. From our vantage point, the result has been welcome, and increasing, diversity in research methodology, theoretical underpinnings, and range of phenomena investigated. We believe, following the arguments of colonial systems, that this diversity is not only healthy but also essential to disciplinary evolution.

We do not dispute the right of a single journal or its current editor-in-chief to try, through their words as well as their editorial actions, to influence the direction of our field. We grow nervous, however, when the grasp of our field's leaders is spread across too many journals and other disciplinary institutions for too many years. We grow anxious when the agents of those institutions begin to invoke policies that narrow the field, prescribe methodology or philosophy of science, close off the debate, and are difficult for others to subsequently undo. Fortunately, our concerns with our esteemed colleagues, B&Z, revolve only around the first of these four – the threat to narrow the field – and we appreciate their approaching this as a public debate rather than as a *fate d' accompli* through editorial dictums.

If our field currently faces a crisis, we believe it not to be one of scholarly identity but rather one of practical import. This crisis may soon pass with the inevitable improvement in the economy or, if other environmental factors such as cross-border process outsourcing come more aggressively into play, it may persist and even worsen. If it continues, we believe our best hope will lie with information systems academic departments, professional organizations, and journals populated with boundary-spanning and intellectually gifted entrepreneurs and free thinkers, rather than by proponents of disciplinary parochialism.

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