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IS RESEARCH PERSPECTIVES ARTICLE

Change as Crisis or Growth?
Toward a Trans-disciplinary View of Information Systems as a Field of Study:*

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

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Abstract

Benbasat and Zmud (2003) express concern that the research community in Information Systems is responsible for the ambiguity of the discipline's central identity by "under-investigating phenomena intimately associated with IT-based systems and over-estimating phenomena distantly associated with IT-based systems" (p. 183). Their related argument is that IS needs to focus on the core of the discipline to survive.

I seriously contend this point of view. Questioning that we are at a crossroads in the Information Systems (IS) field, I argue that the field should become less disciplinary, and more trans-disciplinary in nature.

I build my case by focusing on –and then questioning – underpinnings in their argument. These include: (1) their definitions of IS as a field; (2) the locus of our field in organizations; (3) the assumption that IS is a discipline; and (4) the lack of consideration given to the inter- and trans-national nature of IS as a field of study.

Thus, the paper attempts to reposition Information Systems (IS) as quintessentially trans-disciplinary in nature. This case develops by considering how fields of study evolve over time. This evolution can be seen as either natural or as producing crisis. Next, I offer an alternative "core" to Benbasat's and Zmud's "IT artifact." Following this, I present an appropriate locus of study for IS, one that offers a less constricting boundary than that of the organization, including societal and cross-cultural considerations. Finally, I question the very notion of "discipline" as applied to IS, and identify implications for the IS academy.

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

Tempora mutantur, et nos mutamur in illis[1]

Introduction

This paper is in response to Benbasat's and Zmud's recent *MIS Quarterly* article in which they express "…concern that the [Information Systems] research community is making the discipline's central identity ambiguous by, all too frequently, under-investigating phenomena intimately associated with IT-based systems and over-estimating phenomena distantly associated with IT-based systems" (Benbasat & Zmud, 2003; 183; cited hereafter as Benbasat and Zmud).

The case made by Benbasat and Zmud is that we need to become more disciplinary to survive. I seriously contend this point of view, and deny that we are at a crossroads in the field. Information Systems (IS) has been an interdisciplinary field in the past, and my sense is that the field should become less disciplinary, and more trans-disciplinary as we continue our development into the future.

I build my argument by focusing on – and then questioning – several basic underpinnings in their argument:

1. The implied definition of information systems as being solely *IT-based* ("IS scholars research and teach … topics associated with information technologies, IT infrastructures and IT-enabled business solutions (i.e., information systems) …" (*ibid*; 184).
2. The implied locus of Information Systems [IS] study as being *organization-based* ("If influential stakeholders are unable to comprehend the … role being served by the IS discipline, these stakeholders are unlikely to acknowledge its legitimacy within the organizational field" (*ibid*; 185).
3. The unquestioned assumption that IS as a field of study is indeed – or is most helpfully treated as – a *discipline* ("The Identity Crisis Within the IS Discipline" (*ibid*; 183).
4. The lack of consideration given to the *inter- and trans-national* nature of IS as a field of study ("… the discipline's major journals, *MIS Quarterly* and *Information Systems Research*[2]" (*ibid*; 185).

I first consider the manner in which fields of study develop over time. Such developments can be seen as entirely natural and consistent with an evolving understanding of our field of study and the changing nature of the phenomena we investigate, or they can be seen as a cause of crisis. I then discuss the meaning of IS as a term, and alternative "cores" to Benbasat's and Zmud's "IT artifact." Following this, I consider an appropriate locus of study for IS as having a less constricting boundary than that of the organization, including societal and cross-cultural considerations, before moving on to questioning the very notion of discipline as applied to IS.

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[1] "Times change, and we change with them." [Quoted in Harrison (1577), *Description of Britain*, Pt. III, Ch. iii.]

[2] The selection of these two journals is based on the fact that they "are included in the list of administrative sciences journals used by the *Financial Post* and *Business Week* to rank [*North American*] *business* schools" (Benbasat & Zmud, 2003; 185, emphasis added).

Background: Change as Crisis or Growth?

One can view change in a field of study as a crisis, as Benbasat and Zmud do, or as an opportunity for growth. The latter point of view is more in keeping with the rapid changes that we see in information and the technology that delivers it. Viewing change as a crisis, I feel, could result in the field being left behind.

Benbasat and Zmud advocate that IS should be a discipline with a "core," one that is well defined and constant. But given significant shifts in the underlying technologies studied by academics in the field, a fixation on an old-fashioned core could lead to stasis. , Trans-disciplinary approaches, on the other hand, are more likely to allow the core to change and knowledge of the field to grow naturally.

Consider how fields of study develop. I draw your attention to a seminal quotation that appeared in the first issue of the journal *Organization* back in 1994:

> 'The events which took place in 1989, two centuries after the French Revolution, did more than merely terminate the bipolar balance of terror which had kept the peace for nearly half a century; they also brought to an end the older ideological equilibrium and the habit-encrusted formulation of issues which went with it. The concepts we use to describe the world now urgently need to be reformulated … We are facing a new situation in which the old polarities of thought can no longer apply, or at the very least require scrutiny' (Gellner, 1993; 3) … The Editors of *Organization* concur, yet would go further. Gellner's characterization of the contemporary intellectual and institutional context of social theory applies equally to the socio-historical situation confronting organization theory and analysis. Today older ideological equilibriums and ingrained intellectual habits are being destroyed by fundamental social, economic, political and cultural change. The old polarities of thought between "agency" and "structure," "informal" and "formal," "power" and "authority," and so on, no longer seem to apply or, at the very least, are in need of critical scrutiny. (Burrell, *et al.*, 1994; 5)

The point is made eloquently in relation to both social theory and organization theory. As the phenomena we study change, so must the very foundations of our theoretical constructs. We can either embrace this change as a natural development in (our treatment of) our subject matter,[3] or we can view it as representing some kind of *crisis* that, presumably, must be resisted if our field – our "discipline" – is to remain intact and unsullied.

There is a hidden "early" Kuhnian aspect to Benbasat's and Zmud's argument, which I believe, needs to be surfaced. Central to Kuhn's early consideration of scientific communities – in *The Structure of Scientific Revolution* (Kuhn, 1961) for example – was the concept of paradigm. For Kuhn, scientific communities could be identified by what many (e.g., Banville & Landry, 1989) viewed as a monistic vision of science, requiring revolution for there to be any movement away from the "core." Those who believe in such a core:

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[3] See Somogyi & Galliers (1987) and Hirschheim (1985) for historical accounts of developments in business IT, and IS epistemology respectively.

> … seem to use the term paradigm as meaning that members of a scientific discipline … always know precisely the relevant research topics … the appropriate research methods and the proper interpretation of results. Therefore, a paradigm should dually indicate problems and methods *not* belonging to a discipline (*ibid*; 49, emphasis added).

Thus we see Benbasat and Zmud identifying *errors* (their term) of exclusion and *errors* of inclusion. Their model of the IT artifact and its nomological net (Benbasat & Zmud, 2003; 187) defines *for them* "the set of core properties of the IS discipline" (*ibid*.; 186). Thus, they are able to argue that "the problems of exclusion and inclusion hamper efforts toward developing and reinforcing a central identity for the IS discipline" (*ibid*.; 192).

The underlying arguments of this critique are: (1) the apparent logical inconsistency in identifying IS as an *inter*-disciplinary field of study and a discipline in the same breath, and (2) the point that any field of study is bound to have to embrace change – even in its fundamental concepts and subject matter – if it is to survive and prosper. Indeed, we see Kuhn coming round to this way of thinking (i.e., from revolution to evolution) in his later work (e.g., Kuhn, 1977). To be grounded in unchanging "core properties" is to unnecessarily bound the subject to a particular age and context – a form of *Zeitgeist* if you will.

Surely, few would argue that the field of IS has undergone considerable change over the past four decades or so. Even were we to agree with Benbasat's and Zmud's focus on information *technology*, the very nature of these artifacts has changed so considerably over such a relatively short space of time as to make them unrecognizable to the early developers of business information systems (e.g**.,** Caminer, *et al*., 1998). The consequence of this has been that the nature and focus of our subject matter has also changed – with consequent changes to the manner in which we view, and approach, our field. Is there much point to identifying a core if we continually need to change it? And what if our field embraces a wide diversity of interests, with the core becoming a battlefield rather than a field of dreams?

On Information, Systems and Information Systems[4]

It may be useful to consider definitions of the terms 'information' and 'information systems' so that we can understand the nature of information systems and the associated field of study. Even as far back as 1973, Ronald Stamper argued that:

> The explosive growth of information technology has not been accompanied by a commensurate improvement in the understanding of information. It is undoubtedly easier to manufacture and distribute electronic hardware than to refine our concepts of information … The application of information technology to organizations demands a wider knowledge than many of its specialists now display. It calls for an understanding of both machine and human information systems (Stamper, 1973; 1).

Building on this line of argument, Land and Kennedy-McGregor (1981) unpack the notion of information systems to include:

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[4] The heading of this section is taken from Checkland & Holwell (1998).

1. The informal human system comprising the system of discourse and interaction between individuals and groups … characterised by cultural and political attitudes …
2. The formal, human system comprising the system of rules and regulations, of departmental boundaries and defined roles …
3. The formal computer system comprising those activities which are removed from [what was] originally [a] human system because they lend themselves to formalization and programming …
4. The informal computer system epitomised by personal computing and the possibility of using the formal system and computer networks as means of holding unstructured information and passing informal messages …
5. The external system, formal and informal. No organization exists in isolation and links between it and the external world must exist (*ibid*., in Galliers, 1987; 86).

Most importantly, they make the point that we as human beings rely on informal as well as formal sources of information. "The effective use of information technology as a source of internal information has been handicapped by a number of problems. Two of the most important [are] …The lack of flexibility of computer based systems [in] … adapting to changing requirements [and] … The related problem of having to build systems which leave little scope for interaction with the host of less formal systems which are pervasive in … organizations" (*ibid*.; 82-83). In other words "information systems are essentially social systems of which information technology is but one aspect" (Land, 1992; 6).

This line of reasoning is picked up by Checkland and associates (Checkland & Scholes, 1990; Checkland & Holwell, 1998) and Galliers (1987; 1993). The last defines information as:

> … that collection of data, which, when presented in a particular manner and at an appropriate time, improves the knowledge of the person receiving it in such a way that he/she is better able to undertake a [required] activity or make a [required] decision. (Galliers, 1987; 4)

Thus, information is "both enabling and contextual, while data are context-free and simply the raw material from which information (meaning) may be attributed" (Galliers, 1993; 203; see also Galliers & Newell, 2003).

> From these considerations … two consequences flow. Firstly, the boundary of an [information system] … will always have to include the attribution of meaning … [and] will consist of both data manipulation, which machines do, and the transformation of data into information, [which humans do] … Secondly, designing an [information system] will require explicit attention to the purposeful action which [it] serves … (Checkland & Scholes, 1990; 55)

Insisting on the IT artifact as IS's core seems also to neglect what many in the field would see as an alternative set of cores:

> The roots of Information [Systems] are to be found in a number of different fields. One is Information Theory (see e.g. Shannon and Weaver, 1949; and Langefors,

1966). Another root is Systems Theory (see e.g. Langefors, 1966; Churchman, 1968; and Checkland, 1981). A third root comes from parts of Change Theory … (see e.g. Lewin, 1947; Langefors, 1966; Lundeberg et al, 1981; and Schein, 1985) (Lundeberg, *et al*., 1995; 196).

Thus, were the preceding arguments to be accepted, there is a clear danger in focusing attention solely on IT-based systems at the expense of a consideration of the essentially human activity of data interpretation and communication, and knowledge sharing and creation. This is not to say that researchers in IS should be silent on the idiosyncrasies of various information technologies (cf., Orlikowski & Iacono, 2001). Indeed, were we to do so, we might fall into the trap of black-boxing IT. But this is not to say that we should assume that IS are anything other than social systems, albeit with an increasingly technological component. We leave consideration of how distant is "distant" to Benbasat and Zmud, but will consider the important issue of boundary selection in the section that follows.

An Appropriate Locus of Study for Information Systems

Neither the boundaries nor the locus of study of a field should be confined to a pre-established set. I argue that boundaries, distance from an emergent core, and the locus of this emergent core come forward in a natural and non-predetermined way as a field evolves. Much of this line of reasoning emerges from a consideration of Benbasat's and Zmud's focus on core.

Implied in Benbasat's and Zmud's (2003; 186) set of core properties of the IS discipline is a focus on IT's *impacts* on "humans … and contexts within which they are embedded, and associated collectives (groups, work units, organizations)." We could first find a point of contention with the notion of IT and its *impact*s, given that IT artifacts are themselves – or at least can be construed as – social constructions (Bijker, *et al*., 1987).[5] Leaving this aside, however, I believe there are dangers in drawing our boundary too closely to organizational entities and making this the locus of all of our study. It goes without saying that, with the advent of EDI systems and the emergence of the Internet, inter-organizational systems have been an important aspect of the IS research agenda for many years (e.g., Cash, 1985). But there are clearly wider and deeply ethical issues that demand our attention. For example, in relation to societal issues associated with IT, there is a considerable research agenda confronting us with respect to the so-called "digital divide" (NTIA, 1999; DTI, 2000). Indeed, more broadly speaking, there is an emerging agenda associated with IT and globalization (e.g., Castells, 2001; Walsham, 2001) and IT in the developing world (e.g., Avgerou, 2002) and the associated issues of culture and diversity (Beardon & Whitehouse, 1993).

Thus, I believe it is reasonable to argue that an appropriate locus of IS study is more broadly based than organizations or individuals. Societal, policy and ethical issues might reasonably be included within the ambit of the IS field. Indeed, returning to notions of system, the whole question of boundary drawing is a complex one and itself a social construction. The definition given by Checkland (1981, 1999; 312) demonstrates the latter point: "… a boundary is a distinction <u>made by an observer</u> which marks the difference between an entity he takes to be a *system* and its *environment*" (underline

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[5] See also, Bloomfield, *et al*., 1997 and Scarbrough & Corbett, 1992.

added). To know where to draw one's boundary in any problem context is an art form in and of itself. During the thirty years of developing and applying soft systems methodology in action projects, Checkland (1999) notes that the environment of any chosen system of activity can usefully be seen as the "elements outside the system which it takes as given" (Checkland & Scholes, 1990; 35).

In other words, these are constraints on the system that has been chosen, and defined, for further analysis. Experience has shown that in dealing with complex real-world organizational problems, the choice of boundary is often key, and that a conservative choice may well not lead to insightful conclusions.[6] Indeed, in order to understand what actually are constraints on the system under consideration, those aspects over which there is little or no control, or those aspects that we choose to hold constant, an iterative process of boundary re-positioning is often useful. If we do not push the boundaries, then we may well be overly constraining ourselves and we will certainly not know whether a relevant choice has been made. Indeed there may be a number of different boundaries to consider:

> The problem situation … is itself located in a number of environments, some of which are concrete, and some others of which are abstract; all are important in the analysis as a source of influences, possibilities, and constraints. The first point to note is that an environment is somehow "outside" the problem situation; that is to say, it is outside both the problem-content and problem-solving systems … If we can define a system's boundaries (and there may be a number of different kinds), then we have said something important about the system's environments. (Checkland, 1985; 159)

To relate this line of reasoning to the definition of one's field of study we, as an academy, can chose to draw and redraw our boundaries as we see fit. Indeed, given the breadth of subject matter and interest, our academy may choose to embrace a number of different boundaries simultaneously. "Variety's the very spice of life."[7] While Benbasat and Zmud (2003; 184) are not concerned "whether such diversity of topics is beneficial," they nonetheless wish to draw us back to "… investigating phenomena intimately associated with IT-based systems." Thus, "errors of inclusion" (*ibid*.; 190-192) might presumably have been committed by the editors of the *Journal of Strategic Information Systems* in commissioning special issues of the journal on 'Knowledge Management' and 'Trust in the Digital Economy,'[8] but this editor, for one, would wish to disagree.

Should IS be Disciplined?

In this section, I wish to question the notion that IS is, or should be treated as, a *discipline*[9] – a question posed by Claude Banville and Maurice Landry some 14 years

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[6] A conservative choice may be to define the system such that its boundary is entirely consistent with the organization's existing (legal) boundary. A more insightful choice may be to draw the boundary to include external stakeholders or, conversely, focus attention on a particular aspect of the organization that requires attention. See, for example, Checkland & Scholes (1990; 31-36).

[7] The quote is from William Cowper's (1731-1800) *The Task*, Book II; 606.

[8] *Journal of Strategic Information Systems* volume 9 (2-3), September 2000 and volume 11 (3-4), December 2002 respectively.

[9] dis·ci·pline (http://www.yourdictionary.com)

ago (Banville & Landry, 1989). Benbasat and Zmud clearly think so, and they clearly think that the fields of marketing, operations management and organization behavior are disciplines also – and are "more entrenched scholarly disciplines" (Benbasat & Zmud, 2003; 189) to boot.

I want first to determine whether colleagues in these fields of study see this to be the case, and then will return to the question of boundary, and more specifically, boundary spanning.

If one reads the introduction of any textbook on the subject of marketing, operations management or organizational behavior, one might easily challenge the notion of the scholarly discipline label being easily applied to these fields of study. For example: "… marketing is the philosophy of management that recognises that the success of the enterprise is only sustainable if it can organise to meet the current and prospective needs of customers more effectively than the competition." (Doyle, 1994; xiii) "Operations management is about the way organizations produce goods and services … [it] is, above all else, a practical subject … (Slack, *et al.*, 1995; 4-5). Alternatively, "operations management may be defined as the management of the direct resources that are required to produce and deliver an organization's goods and services." (Davis, *et al.*, 2003; 4). It can be defined narrowly, or broadly, to exclude the activities of any of the other functional areas of management, or to "include all activities which [have] any connection with the production of goods and services – in practice every activity with the exception of core marketing/selling and accounting/finance activities." (Slack, *et al.*, 1995; 9) And when it comes to the field of organization behavior, "… the related theory and scientific study are extremely broad-based. It is an eclectic theory … comprised of … parts of sociology, psychology, anthropology, economics, political science, philosophy, and mathematics" (Kast & Rosenzweig, 1974; 9).

One could go further and point to new directions and critical reflections in such fields as accounting (e.g., Hopwood & Miller, 1994; Johnson & Kaplan, 1987), and economics and finance (e.g., Kahneman, 1994), where we see the influence of historical analyses, social psychology, and critical theory each playing an important role. If it is true that anything making "ambiguous the boundaries of IS scholarship, thus rais[es] questions regarding its distinctiveness – and hence its legitimacy – with respect to related scholarly disciplines" (Benbasat & Zmud, 2003; 189), then it is clear that IS in not alone in this regard.

Indeed, one could argue to the contrary: any field that is able critically to reflect on itself and range widely over related subject matter actually *enhances* its legitimacy. Such boundary spanning (Tushman & Scanlan, 1981) activity can lead to new thinking and innovation. If members of the IS academy not only publish in other disciplines' (sic.)

 (dĭs´ə-plĭn) *n.*   1. Training expected to produce a specific character or pattern of behavior, especially training that produces moral or mental improvement. 2. Controlled behavior resulting from disciplinary training; self-control. 3. Control obtained by enforcing compliance or order. 4. A systematic method to obtain obedience: *a military discipline.* 5. A state of order based on submission to rules and authority: *a teacher who demanded discipline in the classroom.* 6. Punishment intended to correct or train. 7. A set of rules or methods, as those regulating the practice of a church or monastic order. 8. A branch of knowledge or teaching.

leading journals such as *Organization* (e.g., Galliers, *et al.*, 1997), *British Journal of Management* (e.g., Newell, *et al.*, 2001) and *Decision Sciences* (e.g., Tukana & Weber, 1996), but are also members of their editorial boards,[10] it would seem reasonable to argue that IS academics are (rightly) held in high regard by their colleagues from other fields. And does it really matter where we – or they – publish the results of our research efforts?

The Trans-Disciplinary Nature of Information Systems

Having demonstrated that IS is not alone with its "ambiguous boundaries" and claiming the benefits of boundary spanning, I'd like to consider the benefits of a trans-disciplinary approach to the study of IS. First, I want to take note of the warnings about the more mechanist approaches to multi-disciplinary research in management fields, where there is little in the way of knowledge sharing and communication (Knights & Wilmott, 1997). There is a cogent argument (Gibbons, *et al.*, 1995) for investigating the spaces *between* traditional disciplines since this is where emerging issues and new learning are likely to occur. This is also more likely to lead to innovative solutions (Von Krogh, *et al.*, 2000).

As IS researchers, we have often accepted unquestioningly the assertion that IS has its "reference disciplines," often quoting Keen (1980) to make the point. Others (e.g., Davis & Olson, 1984; Culnan & Swanson, 1986) propose that the field of IS emerges from, or is at the intersection of, *inter alia*, computer science, behavioral science, decision science, organization theory, management, operations research, and accounting.

But are these reference *disciplines* actually disciplines themselves?[11] As I pointed out in the previous section, this assumption can very well be called into question.[12] Like IS, they may just as easily be viewed as applied fields of study. And, after all, a crucial point made by Keen is that an important goal of IS research is "to improve practice through research" (Keen, 1987; 3). Thus, he emphasizes the need to improve the effectiveness of IS applications. Further, and while calling for a cumulative tradition in IS research, Keen makes the point that the field, by its very nature, is evolving. He also sets out not to define a single view of IS research: "Our backgrounds, training and interests are very different. We must make that as a strength not a cause of argument." (*ibid*.)

I agree with Keen. There is strength in diversity; new lessons and approaches and innovative solutions are more likely to emerge from taking a variety of perspectives on the phenomena we study. Being aware of these alternative perspectives, and applying a "logic of opposition" (Robey & Boudreau, 1999), in an holistic, inclusive manner are more likely to lead to effectiveness than narrowly focused approaches. Information systems

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[10] For example, Wanda Orlikowski (*Organization Science*), Izak Benbasat (*The Accounting Review*), Bob Zmud (*Academy of Management Review*) and Claudio Ciborra (*Human Relations*) to name just four.

[11] Indeed, there are those in the Organizational Behavior (OB) field who are now calling for OB to be viewed as a "neo-discipline" (Burrell, *et al.*, 2003).

[12] Nambisan (2003) and Baskerville and Myers (2002) argue, in fact, that IS has become a reference discipline for other fields, so if one believes in the concept of a reference discipline, an argument can be made that boundary spanning is now taking place and even originating from other so-called "disciplines." In short, most disciplines lean toward a trans-disciplinary view of the world, and their topics of study and citation profile convincingly demonstrates this.

are complex phenomena that pervade a great deal of human existence in many (unseen) ways. Taking a lesson from Ashby's Law of Requisite Variety (Ashby, 1956), we must surely treat such complexity with all the requisite tools necessary, otherwise we will form only partial views. Narrowly focused, reductionist (cf., Descartes, 1968) thinking that assumes that the whole is *no* greater than the sum of the parts, that individual components of a complex entity will interact one with another in exactly the same way when certain of those components are taken out of the equation, that systems do not exhibit emergent properties – such thinking is unlikely to lead to the kind of insights that would emerge from a more systemic approach. This is the key to my argument. By attempting to define the core of IS, Benbasat & Zmud may be giving certain properties the value of zero – the one value that it is likely they do not have. By attempting to define this core, they confine our field of study to but one view of its current state, thereby denying its future development, and alternative perspectives. By attempting to pre-determine the core, they run the risk of denying the emergent agendas that *will* arise as the field develops and the phenomena under investigation – and our understanding of them – develop. By focusing on the IT artifact, they deny the existence and relevance of other forms of information system. By seeking to define the boundaries of a pure IS discipline an unintended "contradictory consequence" (cf. Robey & Boudreau, 1999) may be to relegate the field to a perceived state of irrelevance and isolation from the very disciplines from which it draws strength.

The trans-disciplinary nature of the phenomena we study dictates the need for trans-disciplinary scholars and approaches – boundary spanners (Tushman & Scanlan, 1981) – who are not wedded to a single perspective or line of reasoning. There is strength in diversity and pluralism, not weakness. The field of Information Systems will only be in crisis if we do not allow ourselves to develop and explore shared phenomena of interest with our colleagues from other (sometimes cognate) applied fields of study.

Some implications for the IS academy

It is for the IS academy itself to weigh the arguments posed by our colleagues Benbasat and Zmud against those introduced in this paper. Let me, however, close by offering a brief outline of the main arguments for a trans-disciplinary, rather than a disciplinary, approach to our field, and suggest some implications, for us as an academy, of this line of argument. My argument is, of course, a social construction (cf., Berger & Luckman, 1966: Benson, 1977; Bijker, *et al*., 1987). Table 1 attempts to summarize the polar opposites about our subject highlighted by the Benbasat and Zmud contribution and the current paper. By characterizing these two schools of thought in this way, I bring the different perspectives into stark relief. It is for the academy to choose in which direction it wishes to move.

Table 1. Characterizing disciplinary and trans-disciplinary perspectives on the field of IS		
	Disciplinarity	**Trans-disciplinarity**
Boundary	Organization	Society
Central artifact	IT	People/Information
Focus	Inward	Outward
Scope	Narrow	Broad
Reference disciplines	OB, Computer Science, etc.	IS
Properties	Defined	Emergent
Inter-disciplinarity	A threat	An opportunity

I conclude with a call for acceptance and pluralism. My argument is similar to that of Benson (1977) in his treatment of organizations. If we were to replace "organization" with "the field of IS" we could paraphrase his argument as follows: "Established perspectives fail to deal with the production of [IS knowledge] or to analyze the entanglement of theories in [that field]. … [The field of IS] is seen as a concrete, multileveled phenomenon beset by contradictions, which continuously undermine its existing features" (*ibid*; 1). If we are to accept this as a starting point for our journey, it follows that we should both welcome and cherish new approaches to the study of our field, its emergent characteristics, and the disparate perspectives on its very locus of concern. IS as a field is, indeed, multi-leveled and multi-faceted. Overly constraining the IS academy to a narrow field of interest is self-defeating. Closed systems exhibit entropy; open systems do not.

Acknowledgements

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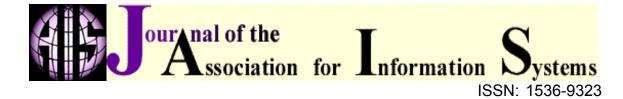
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