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## THE IS CORE – VIII DEFINING THE CORE PROPERTIES OF THE IS DISCIPLINE: NOT YET, NOT NOW

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### ABSTRACT

I believe that a lively and vigorous debate about the nature of the IS discipline is important. We need an open and constructive debate about the identity of the IS field and its subject matter. For this reason I welcome Benbasat and Zmud's June 2003 article in *MIS Quarterly* in which they suggested that the core of IS research should be the IT artifact. I also welcome Alter's response in this issue of *Communications of the AIS*, in which he argues that the core of IS research should be "systems in organizations". However, both articles take one point for granted: that the IS discipline is ready and able to define a core. In this article I take issue with this fundamental assumption. I believe the attempt to narrow the field to a core is misguided, at least at this point in time. The argument of this paper is that the field of information systems is nowhere near ready to define a core in information systems.

**KEYWORDS:** IS discipline, IT artifact, identity crisis, information systems

### I. INTRODUCTION

It is rather paradoxical that a call for IS researchers to narrow their focus to the "IT artifact" should follow an article published just one month earlier in *Harvard Business Review* in which it was said that "IT doesn't matter." The first article was written by two leading researchers in IS and published in the field's top research journal [Benbasat and Zmud, 2003]; the second was written by an editor of one of the world's leading management journals for business practitioners [Carr, 2003]. If the latter article is some indication of the views of senior business people, then the call for IS researchers to narrow their focus to the IT artifact is potentially disastrous. If we focused our research solely on IT, then the IS field as whole could well be seen as irrelevant by senior business leaders in just a few short years. The proposed cure for the supposed identify crisis could result in the opposite effect of what was intended.

In this article, therefore, I take issue with Benbasat and Zmud's identification of the IT artifact as the core phenomenon of the IS field [see also Benbasat and Weber, 1996, Robey, 1996]. I

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believe the attempt to encourage everyone to focus on the IT artifact holds significant hidden dangers for the IS field as a whole.

However, I also take issue with Alter's suggestion that the core of the IS discipline should be "systems in organizations" [Alter, 2003]. While systems in organizations is broader than the IT artifact concept, Alter still takes one fundamental point for granted: that the IS discipline is ready and able to define a core.

I disagree with this fundamental assumption. From my point of view it does not really matter if the core is seen as the IT artifact or systems in organizations. The underlying goal remains the same. The argument of this paper is that the field of information systems is nowhere near ready to define a core in information systems.

This paper is organized as follows. Section II discusses the IT artifact concept proposed by Benbasat and Zmud. Section III discusses the systems in organizations concept proposed by Alter. Section IV argues that we are nowhere near ready to define a core in information systems. The final section is the conclusion.

## II. THE IT ARTIFACT

In this section I critique the IT artifact concept that is proposed by Benbasat and Zmud [2003] as a core for IS research. Benbasat and Zmud [2003] define the IT artifact as follows:

*"We conceptualize the IT artifact . . . as the application of IT to enable or support some task(s) embedded within a structure(s) that itself is embedded within a context(s). Here, the hardware/ software design of the IT artifact encapsulates the structures, routines, norms, and values implicit in the rich contexts within which the artefact is embedded"* [Benbasat and Zmud, 2003, p. 186].

Alter [2003] makes many good points in his critique of the IT artifact concept. He argues that the term itself is poorly defined and somewhat questionable. By and large I agree with many of his arguments and will not repeat them here. I will add two additional points, however.

First, I agree with Weber [2003] who argues that IS researchers should not seek the core of the information systems discipline "in theories that account for information technology-related phenomena". He suggests instead that the core should attempt to account for information systems-related phenomena. He says "The two sets of phenomena are not the same. They are fundamentally different" [Weber, 2003, p. vi]. I agree entirely with Weber's distinction between IT-related phenomena and IS-related phenomena.

For this reason I find great difficulty with Orlikowski and Iacono's phrase "IT research" [Orlikowski and Iacono, 2001]. For example, they say "We believe all IT research will benefit from more careful engagement with the technological artifacts that are at the core of our field" [Orlikowski and Iacono, 2001, p. 131]. What Orlikowski and Iacono seem to forget is that IS researchers do not do IT research; IS researchers do "IS research." The two are fundamentally different. Therefore to claim that the core of IS should be the IT artifact is similarly misplaced.

I agree with Orlikowski and Iacono that we should not completely ignore the IT artifact. The IT artifact is one important part of an information system. But it is just that: it is but **one** part of a system. The focus of IS research should be on information **systems**, not IT.

Second, I believe that defining the core of the IS field as the IT artifact is potentially life-threatening for the field as a whole. The fact is that most business people do not believe the IT artifact is important. If an editor of the *Harvard Business Review* says that IT is now a commodity and IT doesn't matter [Carr, 2003], then why should IS researchers focus on something that doesn't matter? It is completely irrelevant to argue that Carr's argument is wrong. Whether it is right or wrong misses the point. What is indisputable is that this is what many senior business

leaders and deans think. Therefore for IS researchers to focus solely on the IT artifact would be a serious mistake and potentially damaging for the field as a whole.

### III. SYSTEMS IN ORGANIZATIONS

In this section I critique the systems in organizations concept that is proposed by Alter [2003] as a core for IS.

Let me begin this section by saying that I basically agree with Alter's critique of the IT artifact concept. He highlights many of the weaknesses of this concept. I also agree that his socio-technical approach has merit and support his vision of a broadly inclusive field. However, while I agree that systems in organizations should be one important focus of IS research, I disagree with the idea that systems in organizations should be defined as the core of the field, for two reasons.

First, although Alter claims that the term "systems in organizations" succeeds in including most of what it currently done under the IS research umbrella, it does exclude a few important research areas. It excludes some of the more technical IS research that is done in areas such as information economics [Bakos and Kemerer, 1992] or networking. It also excludes IS research on institutions [e.g. King et al., 1994, Robey and Boudreau, 1999], industries [e.g. Crowston et al., 2001] or countries [Ein-Dor et al., 1997, Watson and Myers, 2001]. Most research work in these areas is not focused on individual organizations..

Second, while I agree that the systems in organizations focus "reflects a reality that we do not incorporate fully into our view of ourselves and our work," it reflects today's reality, not tomorrow's. In other words, if the core becomes systems in organizations, we may still end up restricting the future progress of the field, even though the systems in organizations vision is much broader than that of the IT artifact. I do not believe the IS field is ready for such closure. Historically, one of the strengths of the IS field is its openness to new ideas and new areas of inquiry. This leads me into the next section.

### IV. A CORE OF IS? NOT YET, NOT NOW

One idea is indisputable in the debate so far: at this point in time, information systems does not have a core. On this point, everyone agrees. In fact this very reason is why Bensbasat and Zmud and some other IS researchers are concerned: they worry that by not having a core, IS suffers from a lack of legitimacy within the organizational field [Benbasat and Zmud, 2003]. If the core of knowledge or expertise in IS were distinctive, so their argument goes, then the legitimacy of the field as a whole would be improved. There are a few problems with this argument.

First, it assumes that the field of IS suffers from a lack of legitimacy. The evidence for this assumption is not very strong. The very same arguments were made approximately ten years ago, but the "doom and gloom" scenarios that were painted at the time did not come to pass. If anything, the total number of faculty members on the ISWorld list increased substantially over that period, and the membership of AIS continues to increase, passing the 3400 mark in 2003. The increase in numbers of IS faculty world-wide provides no evidence for a lack of legitimacy. On the contrary, the increase appears to reflect the fact that the field of information systems is now well established. Evidence supports a much more positive assessment of the legitimacy of the field [Baskerville and Myers, 2002].

Second, it assumes that we are ready as a field to agree on a core. Agreeing on a core implies some consensus on the fundamental concepts; it implies that all the basic ground work in the field is done, and all that remains is to narrow the field to these fundamental concepts. I believe this assumption is untenable. At this point in time no consensus exists on what these fundamental concepts are. Over the years many IS researchers suggested a core for IS. Some of the cores suggested are:

- In the mid-1980s Weber proposed that conceptual modeling and databases was at the core of IS [Weber, 2003]
- in the late 1980s Weber says that he changed his mind and became convinced that “representation” was at the core [Weber, 2003].
- In the early 1990s Nunamaker suggested that the core of information systems was systems development [Nunamaker et al., 1991];
- In the mid-1990s some suggested that business processes were at the core of IS
- In the late 1990s Checkland and Howell suggested that the core concern of IS was “the orderly provision of data and information within an organization using IT” [Checkland and Holwell, 1998];
- In 2003 Benbasat and Zmud say that the core of IS is the IT artifact [Benbasat and Zmud, 2003];
- This same year Alter says that the core of IS is systems in organizations [Alter, 2003]

What is clear from the above list is that the proposed cores of IS come and go on a regular basis. What was seen as core at one particular point in time was not seen as core later. An important question at this juncture, therefore, is: Are we at the point where no new cores will be suggested? Is the field settled down to such an extent that we do not expect any major new discoveries or insights that will cause a major shift of focus in the field?

I believe it would be a mistake to suggest that no new discoveries will be made in the coming decade. The Internet was hardly mentioned in our research ten years ago, and no one ever heard of e-business beyond EDI back then. Are we sure that field of information systems is ready for closure? The recent interest in mobility computing suggests that we are not.

Third, it assumes that we all agree on the meaning of fundamental concepts in information systems. At its most basic, it assumes that we can all agree on the meaning of “information”, “information systems” and “information technology”. Once again, I am not sure that this assumption is valid.

For example, the definitions of information in our textbooks and research articles are many and contradictory. Information is sometimes defined as a resource, at other times it is defined as a discrete product, and at other times as something that is unique, personal, and context-bound [Checkland and Holwell, 1998]. Likewise, “information systems” are sometimes defined in functionalist terms as serving to achieve the goals of an organization, and at other times are defined in interpretive terms as helping to make sense of the world and helping to manage relationships [Checkland and Holwell, 1998]. Similarly, information technology is sometimes defined as including communications technology and at other times as excluding communications technologies. The prevalence of the latter is the rationale for the emergence of a new all-encompassing term “information and communications technology” (ICT).

Fourth, it assumes that the discipline of information systems is like a natural science. According to Kuhn, the natural sciences tend to have just one paradigm at any one time [Kuhn, 1996].

I am not convinced that this assumption is valid. If the discipline of information systems is more like a social science than a natural science, then it may be impossible to have just one paradigm or one core for the entire field. None of the social sciences have a core. For example, in psychology the language and concepts of behavioral psychology differ substantially from those of cognitive psychology. The core concept of the former is “behavior” whereas the core concept of

the latter is "cognition". Researchers in psychology do not use a core set of concepts that are common to all.

A better approach might be to define a common body of knowledge for the field as a whole [Hirschheim and Klein, 2003]. This approach recognizes the current diversity in IS. Hirschheim and Klein [2003] propose a common body of knowledge as a high-level classification scheme "that does not endanger the currently very fertile pluralism that exists in the field" (p. 244). This proposal appears to me to be a much more promising way to achieving some consensus in the field, but it is just a proposal at this stage.

## V. CONCLUSION

The main argument of this paper is that the field of information systems is nowhere near ready to achieve consensus on a core set of concepts. A core may be possible at some time in the future, but we are not ready to narrow the field just yet. In fact trying to narrow the field of IS by focusing on a defined core is potentially dangerous because what is seen as core now, may be seen as largely irrelevant later. Furthermore, a clearly defined core will exclude the work of many IS researchers, work which may contribute to an understanding of the field as a whole. I believe that diversity is a positive attribute and ensures the continued viability of the field in a rapidly changing environment.

*Editor's Note:* This article is the eighth in the series titled *The IS Core*. At the time of publication, the papers in this CAIS series included Articles 31 through 41 and the editorial in Article 42. These articles were motivated by Benbasat and Zmud [2003] in the MIS Quarterly and by Article 30 [Alter 2003] in this journal. The article was received on October 24,, 2003 and was published on November 24, 2003.

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