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The Evolution from ICIS 1980 to AIS 1995: Have the Issues Been Addressed

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In 1980, the first ever conference on information systems research and education, the International Conference on Information Systems (ICIS) was held, with more than 200 persons in attendance. A decade and a half later, the first international organization devoted fully to information research and education (i.e., the Association for Information Systems) was created and convened its first conference. During the 15 year period since the first ICIS meeting, the field has expanded in size and scope. However, it is meaningful to pause and take stock of the extent to which the field has progressed on the issues that existed in 1980. This paper reviews and assesses progress on those issues.

Information Systems as a Coherent Research Field

In 1980, there was a great deal of concern about the future of the field. Many observers openly doubted that there would even be an academically based community of MIS scholars or that apparent research interests were useful, needed, or influential in practice.

Dimensions of Research Coherency

At the first International Conference on Information Systems (ICIS) in 1980, Peter Keen, through a set of questions, challenged the research community to examine itself on six key dimensions (Keen, 1980).

Dimensions	1980 Assessment
<ul style="list-style-type: none"> • What are the <i>reference disciplines</i> for MIS? 	<p>“There is no clear theoretical base and no match between theory and method.” It was suggested that the main methodologies at the time were naive and atheoretical.</p>
<ul style="list-style-type: none"> • What is the <i>dependent variable</i>? 	<p>The dependent variable is always defined through surrogates and, lacking a theoretical base, is “full of ‘frameworks’, untestable assertions and surveys.”</p>
<ul style="list-style-type: none"> • How do we build a <i>cumulative tradition</i>? 	<p>“There is virtually no cumulative tradition.” It was suggested that the field is so interesting that researchers are too easily diverted to new ideas and areas. The departure of senior researchers to practice was also lamented.</p>
<ul style="list-style-type: none"> • What is the <i>relationship of MIS research to computer technology</i>? 	<p>The relationship to technology (i.e., mamtam meaning as technology changes versus the pursuit of facts) was seen to be improving.</p>
<ul style="list-style-type: none"> • What is the <i>relationship to practice</i>? 	<p>The relationship to practice (i.e., offer something different than do consultants) was seen to be improving. Yet, the dilemma of responding to the demands from the practitioner community remained very real.</p>
<ul style="list-style-type: none"> • Where should we try to <i>publish</i>? 	<p>Publication outlets were judged to be a “major, discouraging problem.” Journals were assessed as lacking in prestige, unsympathetic, or reinforcing the fragmentation of the field.</p>

Assessment

A current assessment of the state of affairs along each dimension is based on the published literature of the field over the past 15 years.

Reference Disciplines

Keen defined a reference discipline as "... an established field to which one looks to get an idea of what good MIS research would look like, if one could ever do it." He indicated that since MIS is a "fusion of behavioral, technical and managerial issues," there cannot be any single reference discipline.

What has changed since 1980? Many more academic institutions undertaking MIS research. In a study of publications and universities, Lending and Wetherbe (1992) found that in the period 1984-1990, 744 published MIS articles were contributed by 192 domestic institutions. This contrasted to 389 articles from 102 domestic institutions in the period 1977-1983 (Vogel and Wetherbe, 1984). This would suggest that there are more active MIS researchers today than in 1980 and that they are more dispersed (although the studies' taxonomies do not provide much insight into any changes in reference disciplines).

There is a great deal of other widespread evidence (e.g., Swanson and Ramiller, 1993) that the field is still comprised of an eclectic set of reference disciplines, perhaps more so than in 1980 when Keen raised the issue of reference disciplines appropriate to MIS. Furthermore, since some of our reference disciplines consist of multiple paradigmatic communities, the eclecticism is further exacerbated.

Dependent Variable

In 1980, the principle concern was development of a theoretical basis for information systems, with substantial concern about formulation of a theory of information. The nature of inquiry regarding the dependent variable has progressed in two different directions, away from the highly visible emphasis on human information processing that existed then.

Today the principle dependent variables are organizationally focused. A 1980 emphasis on information has evolved into a concern for information flow and the deployment of information technology to facilitate that flow with respect to organizational performance, including the manner in which individual managers and staff members use IT in meeting organizational expectations.

In an extensive review of the research literature dealing with information systems success DeLone and McLean (1992) synthesized the research using a taxonomy consisting of six dimensions of success. The authors' synthesis of the research led to the conclusion that the six categories are not independent, but rather six *interdependent* dimensions to IS

success. Based on the summary of DeLone and McLean, it is evident that the research community has not satisfied the dependent variable issue as it was raised by Keen.

Over the last 15 years, the IS community, both practitioners and scholars, have focused on two other highly visible types of dependent variables which have been tackled directly rather than through the use of surrogates: (1) The impact of MIS on corporate strategy and (2) The impact of MIS on "bottom-line" performance. A great deal of investigation has been conducted with the result that there is now widespread recognition of the impact IT can have on facilitating and supporting corporate strategy and showing payoffs in terms of corporate performance.

Cumulative Tradition

In a cumulative tradition, researchers build on each other's and their own previous work; definitions, topics and concepts are shared; and senior researchers view their main role as shaping the field. Moreover, each journal in the field has a clear focus and there is some definition of orthodoxy, while unorthodoxy is not discouraged (Keen, 1980).

The evidence suggests that a suitable cumulative tradition has not yet been established. The "fragmented adhocracy" (Banville and Landry, 1989) that results from the variety of interesting issues available for research, coupled with the different reference disciplines that can be drawn upon for that research, leads to a body of cumulative research across the field remaining elusive.

In addition many of the environmental problems perceived in 1980 still exist, particularly with the tenure process. MIS researchers still have difficulty in describing to members of other disciplines just who they are and what they do. In many ways, the formation of AIS is another effort for us to achieve 'respectability' in the academic community.

Relationship to Computer Technology

Concern over the distinction between computer science and management information systems has largely disappeared in the period from the emergence of ICIS to AIS. On the one hand, each area has further defined itself with respect to dominant research issues and methods. On the other hand, there is widespread agreement that certain content areas (e.g., software and application development, object oriented paradigms, and multimedia technologies) are much too important to be claimed as the domain of a single discipline. Moreover, for those who seek it, there is open and ongoing communication between scholars in both fields.

Relationship to Practice

It appears that by and large, the research conducted by the IS academic community is not leading practice. More often the community investigates the underlying causes of a phenomenon, as evidenced in the above discussion of dependent variables.

There is good evidence of the issues that IS practitioners consider important in the form of large sample survey results. Both University of Minnesota's MISRC (in conjunction with the Society for Information Management) and the consulting firm of CSC Index regularly conduct surveys that identify the critical issues facing information systems executives. Repeatedly, it is found that if a list of the most important issues identified by practitioners are placed alongside the list of topics that are the most frequent subject of research, the overlap is both limited and troubling. This has been reaffirmed in ICIS panel sessions involving practitioners. It is as evident today as it was 15 years ago that the relationship of IS research to practice is wanting. Only in selective areas of the MIS research community does adequate synergy on critical issues occur.

Publications

A great deal of progress has been made in the establishment and use of publication outlets for MIS research. There are many outlets available now, both in the form of journals as well as MIS related conferences.

Unfortunately, many practitioners openly acknowledge that they do not subscribe to, or read, the academic journals of the MIS community. Many practitioners hold that academic journals are not readable; others indicate that the contents are better suited to the academic community (with due deference to the dictates of a university's promotion and tenure process) than to aiding IS professionals. Some researchers are concerned that this state of affairs represents a problem; others are not.

Moreover, researchers in other fields within business and organizational science seldom read, monitor, or cite MIS research. Some MIS researchers find this quite troubling; others do not.

Suffice it to say that as a community of MIS scholars, we have gotten the word out on research findings, but only to ourselves.

Summary

The areas of progress are significant and substantial. Yet the surprising lack of progress over the past 15 years is disturbing. MIS has an increasingly polyglot set of reference disciplines. The cumulative tradition in the field is still elusive, however, it is emerging in some research areas. More MIS research is carried out and published, but only read by MIS researchers themselves, bringing in to question relevance to practitioners. When added to the fact that important new issues have arisen, the future of the MIS research community appears to remain problematic.

It may be that we should consider MIS to be a 'meta-field' containing numerous related yet distinct fields. Such a view might result in fewer reference disciplines for any given field, more unified research communities within a field, and an increased opportunity to build a cumulative research tradition for each field. It might also make it easier for us to explain what we do to members of other disciplines.

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