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Leaders Assess the Current State of the Academic IS Discipline

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**LEADERS ASSESS THE CURRENT STATE OF THE IS
ACADEMIC DISCIPLINE**

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IS PROFESSION

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ABSTRACT

Telephone interviews were conducted with 17 leaders in the IS academic field. The leaders shared their views on the current status of the IS field in terms of the strengths, weaknesses, opportunities, and threats facing the discipline. The insights of the leaders are organized into 10 categories, including the core identity of IS, the legitimacy of the IS field, competitors to what we teach and research, research rigor versus relevance, the pervasiveness of information technology, the impacts of changing technology, the quantity and quality of journals, the demand for IS services, and ICIS and AIS. In many areas the leaders agree on the issues. Most of the differences of opinion are research related, such as the core identity of the field for research purposes, how to best achieve relevance in our research, and the number of journals in our field.

KEYWORDS: information systems academic field, information systems research, information systems leaders, identity of IS, legitimacy of IS, research rigor versus relevance, demand for IS

I. INTRODUCTION

Information systems (IS) is the “new-kid on the block” in comparison to other business school disciplines. With roots in general systems theory, computer science, accounting, management science, and electronic data processing (from the world of practice), IS degree programs first surfaced in the mid-to-late 1960s. Faculty willing to take on the professional risks and challenges associated with birthing a new academic discipline staffed these programs.

The emergence of IS as a discipline faced many challenges, obstacles, and problems over the last 30 years. For example, several excellent universities continue to be slow to recognize IS and to provide the resources needed to offer courses beyond basic PC literacy. The rigor of IS research was sometimes questioned by other business school faculty who judged our research to be methodologically weak. As the importance of IS in the business world grew, older, more established academic disciplines such as management science and accounting often tried to claim IS as part of their domain.

The rewards of being an IS academic are substantial, however. It’s an open field where new faculty can quickly assume substantial roles in the profession. We teach exciting “stuff” that is in high demand by students and businesses alike. The opportunities for interesting, important research are unlimited; every technological advance creates new research opportunities.

The condition of the field is mixed. It has many strengths and weaknesses, and there are opportunities and threats. And much like in business today, the rate of change in the profession is increasing. Every year new issues emerge for the discipline.

II. THE STUDY

Against this backdrop, we decided to investigate the current state of the IS academic discipline (not the IS profession as a whole). In our literature review (see Bibliography), we found that much has been written about IS research, with the focus often on the rigor versus the relevance of IS research (see, for example, the March 1999 issue of *MIS Quarterly*). *ISWorld* recently contained

discussions about technical versus behavioral research, the kinds of research that are published in the field's leading journals, and the long publication cycle times associated with traditional journals. Most of the other discussions of issues (e.g., teaching, promotion and tenure) take place informally over lunches and at conferences. This situation is likely to change, however, now that the Association for Information Systems exists with a charter to address IS discipline issues and the potential for the *Communications of AIS* to serve as a forum for discussing issues.

To study the current state of the IS academic discipline, we interviewed leaders in the IS field. It was believed that such people would have the experience and perspective to provide an insightful assessment. A leader was defined as someone who either:

- Publishes frequently in leading IS journals;
- Served as a conference chair for ICIS or the AIS Americas Conference (AMCIS); or
- Served as an officer in a leading professional organization.

Using these criteria, a list of possible study participants was created. Each person on the list was e-mailed to ask about his or her willingness to participate in the study. Table 1 identifies the 17 leaders who participated, except for two who preferred anonymity. All of the leaders included in the study are at North American universities and the findings should be interpreted with this in mind. The interviews were conducted from October - November 1998.

Data was collected through taped telephone interviews that were 15-30 minutes in length. The interviewers followed a script that asked each leader about his or her perceptions of the strengths, weaknesses, opportunities, and threats facing the field (i.e., SWOT analysis). Little probing was done except for clarification and to ensure that the strengths, weaknesses, opportunities, and threats were covered. At the end of the interviews, the participants were asked

Table 1. Study Participants and Survey Results

Issues	The Core Identity of IS	The Pervasiveness of IT	Research Rigor versus Relevance	The Legitimacy of IS Field	The Impacts of Changing Technology	The Quantity and Quality of Journals	The Demand for IS Services	Competitors to What We Teach and Research	AIS and ISIS	Other Issues
Izak Benbasat			X	X		X	X	X	X	X
Alan Dennis	X	X	X	X	X	X	X			
Gerardine DeSanctis	X	X	X	X		X	X	X	X	X
Michael Ginzberg	X	X	X	X						
Paul Gray	X		X	X	X	X		X	X	
Varun Grover	X	X	X		X	X	X	X	X	X
Blake Ives	X	X		X	X	X		X		
Eph McLean	X	X	X	X	X	X	X	X	X	
Bill Perkins	X	X		X	X	X	X	X	X	
Carol Saunders	X	X	X	X	X		X		X	
Ralph Sprague	X	X	X		X					X
Burt Swanson	X	X	X	X	X					
Rick Watson	X	X		X	X	X	X		X	
Richard Welke	X	X	X	X	X		X			X
Bob Zmud	X	X	X			X		X		
Unattributed	X	X	X	X			X	X		
Unattributed	X		X					X	X	X
Number of Responses	17	14	13	12	11	10	10	10	9	6
Percentage of Total	100%	82%	76%	71%	64%	59%	59%	59%	53%	36%

whether they would like to receive a draft copy of the manuscript and all indicated that they would. They were also asked whether we could attribute comments to them, and most were willing to do so, subject to their review of the manuscript.

The taped interviews were transcribed and reviewed by the authors. Some issues surfaced repeatedly in the interviews, which suggests their importance. Several issues were mentioned by only a single or a few leaders, but were very interesting. Nine major categories of issues were developed to

organize what was learned from the leaders, along with an "Other" category to capture the unique observations.

1. The Core Identity of IS
2. The Legitimacy of the IS Field
3. Competitors to What We Teach
4. Research Rigor versus Relevance
5. The Pervasiveness of Information Technology
6. The Impacts of Changing Technology
7. The Quality and Quantity of Journals
8. The Demand for IS Services
9. ICIS and AIS
10. Other Issues

Table 1 shows the categories and which leaders made observations about each one.

A draft of the manuscript was e-mailed to the study participants. Eight leaders responded with comments that ranged from "very interesting paper" to suggestions for improving the manuscript. The list of major issues remained the same but a few changes were made to the discussion of the issues.

III. THE FINDINGS

Each of the issues is multifaceted and they all contain sub-issues. Most of the issues have strengths, weaknesses, opportunities, and threats associated with them; seldom is an issue, for example, only a strength or weakness. In the discussion of the issues, we describe the various aspects of each issue. This was judged to be a better way of organizing the findings rather than discussing them by the SWOT categories. While there is agreement among the leaders on many issues, there are interesting differences of opinion on others. While the leaders are the source of the issues, the authors are responsible for categorizing and organizing the issues and putting the differences of opinion in perspective.

THE CORE IDENTITY OF IS

The most frequently mentioned issue facing the IS academic discipline is the question of the field's core identity. The question at the heart of this issue has three parts:

- Is there a core identity?
- If so, what is it? and
- If not, should there be one?

Each of the leaders focused on different aspects of these questions; their answers provide an interesting view on not only the question of identity, but also on the nature of the IS academic field.

Almost every academic discipline strives to have a unique identity, a difference in what it researches and teaches that differentiates it from other fields. For many disciplines, the boundary is clear. For example, the identities for mathematics, physics, and accounting have been well established over time through cumulative research, unique bodies of knowledge, over-arching paradigms or central theories, and contributions to other fields (in terms of theory or concepts). It is difficult for a young field such as IS, however, to establish a unique identity, but our leaders generally agree that on each of the above criteria, IS made progress since its founding.

An obstacle to the establishment of an identity for the IS field is the diversity of its research. This diversity has two parts:

1. the large number of reference disciplines that IS draws upon, and
2. the technology and phenomena studied.

The number of IS reference disciplines is related to the nature of the field and the diverse backgrounds of the researchers who are in the field. Researchers with backgrounds in OR/MS, economics, computer science, and organizational behavior have their own unique perspectives on what is interesting to study, the appropriate theories to use, what methods to use, and where to publish the findings. Researchers tend to employ the "lenses" that they were trained to use.

No single reference discipline has gained complete dominance in the field. Some of the leaders believe, however, that we have unique research opportunities. We can be the experts on understanding the interaction between technology (e.g., hardware, software) and the social setting (e.g., people, organizations). They feel that IS is best positioned at the intersection of computer science and engineering, which deal with the technology, and psychology and management (among several), which focus on the social setting. This research emphasis is not reference discipline free, however. Most of the research conducted follows organizational behavior paradigms. Some leaders are uncomfortable with the OB research orientation for the field and feel that it does not place enough emphasis on technology. Engineering is an alternative orientation that some leaders suggest and they say that the building of large computer-based systems is a better focus for IS. Some of the leaders feel that the diversity of reference disciplines is one of its greatest research strengths. IS spans disciplines and may potentially be a nexus for the diverse fields from which it draws.

IS technology changes rapidly. As a result, what we study changes. The end result is that there are few "constants" to our research, which contributes to the field's identity problem. The solution proposed by some leaders is not to study a particular technology, but rather to research the impact of technologies in general. In this view, any particular technology is just an instance of technology in general. The feeling is that "general truths" can be learned about all technologies and that these understandings will help define the field and be important to practice. The counter argument is that particular nuances are what are really important to understand, and these understandings are not provided by meta-understandings.

Some leaders do not believe that it is important for the field to have a core identity. They believe that the field is too diverse to coalesce around a single one and we should allow "a thousand flowers to bloom." A narrowly defined core identity would only limit the range of interesting things studied and the methods

used for studying them. They feel that IS should celebrate being different from other disciplines and promote its difference.

THE LEGITIMACY OF THE IS FIELD

As any relatively new discipline, IS faced an uphill battle to establish itself as a legitimate academic field. Part of that struggle has been in establishing an identity, but our leaders identified several other aspects associated with the legitimacy of the field that need to be mentioned. What establishing an identity is to those inside the field, establishing legitimacy is to those outside of it; many of the same questions about the unique contribution of the field or the sustainability of the field are asked but with different interest in the answers. Issues that hang on the question of legitimacy include a shortage of school resources available to IS departments, the difficulty IS faculty have in obtaining promotion and tenure, and the conspicuous absence of IS programs in some of the nation's most prominent business schools.

The question of whether IS will go the way of OR/MS was raised by several leaders. Will information technology become so pervasive that it will be absorbed by the other academic disciplines, much like OR/MS? This question is sometimes asked by business school deans who are fearful about staffing up with IS faculty and then being left with tenured faculty who are no longer needed. None of the leaders think this development is likely to happen. First, IS is more relevant to organizations than OR/MS was. Also, there was never a strong, well-defined job market for undergraduates with a degree in OR/MS. By contrast, there is a tremendous market for programmers, systems analysts, database specialists, telecommunications specialists, end user support personnel, and consultants with an undergraduate IS degree. None of our leaders thinks that IT will become so much of a commodity that these jobs will cease to exist in the foreseeable future. Students major in areas where there are plentiful, high paying jobs, which should result in the continuing demand for IS faculty who will teach students seeking an IS education.

It is certainly true that because we are a new discipline, we have not had the time to develop either the reputation or the traditions of older, more established fields such as finance or accounting. We have not yet built up a large body of knowledge that we can point to and claim as uniquely our own, nor have we developed research methodologies of our own, and we still draw heavily upon reference disciplines for theory. Our leaders point out that these are not fundamental problems, however, despite the objections sometimes raised by researchers in other fields and Promotion and Tenure committees. These problems will subside over time.

Other challenges to the legitimacy of the IS field hinge on the question of research rigor and relevance (discussed in more detail in the Research Rigor versus Relevance section below). On one hand, other academics may sometimes feel that our research is not as rigorous as it should be, while on the other hand, practice tends to lose interest if it is not readable and fails to meet their current needs. To play to one constituency too much causes problems with the other.

Although legitimacy is not yet established, the general sentiment among the leaders is that the associated current problems, such as the availability of resources and difficulties in receiving promotion and tenure, do not threaten the long-term survival of the field. IS is still a new discipline, relative to others in the university, and legitimacy will largely be just a matter of time.

COMPETITORS TO WHAT WE TEACH AND RESEARCH

The leaders expressed concern over competitors to the IS discipline. These competitors take several forms. First, there remains a concern as to whether IS can maintain and expand its position as an independent discipline. While demand is great for our product, some business school faculty members perceive IS as simply a set of tools, not a separate discipline. It was pointed out that a number of top business schools have never accepted IS as a separate discipline and that others have cut back on their commitment to IS. An example of the latter would be the Wharton Business School that has no IS coursework in

its core curriculum even though its dean is a former IS consultant and professor. The concern was expressed that IS could be absorbed into other organizational units such as accounting or schools of information technology.

One leader talked in-depth about schools of information technology, which have either been created or are being considered at a number of universities. They are being formed as a response to industry's needs for more people with IT skills. The organizing and staffing of schools of information technology can be done in multiple ways. The school can be housed in business, engineering, or be a freestanding unit. Computer science, information systems, and other faculty can be moved to the school; new faculty can be hired specifically for the school; or the school can utilize a matrix organizational design. These arrangements have anywhere from minor to major impacts upon faculty, IS programs, and business schools.

As a case in point, consider the substantial consequences of moving the IS programs and faculty from the business school to a school of information technology. Students would most likely have fewer business courses in their education and arguably might reduce their opportunities for managerial careers. Faculty would be grouped with faculty from other academic environments and cultures, with the potential for conflict over issues such as the appropriateness of different research methods, "hard versus soft" research, the quality of different publication outlets, promotion and tenure requirements, faculty responsibilities for obtaining external funding to gain release time for research, and the differences in faculty salaries in different disciplines. Business schools would also likely suffer, especially with the growing need for all business majors to obtain more IT education. Schools would have to rebuild IS expertise in some way to prepare students for the current and emerging business world.

While schools of information technology provide new opportunities, the concerned leader feels that the threats posed to IS faculty and the discipline are greater. He also feels that because there are strong drivers behind schools of IT, they should be taken seriously. He describes it this way: "When the business community wants something and the president of the university feels the

pressure, it is to be taken seriously. Schools of IT are like a big train coming down the tracks. Get on board early so that you can give it direction. Don't wait until it runs over you."

Paul Gray has a different perspective on graduate IS programs that are housed outside of business schools, such as at Claremont, Syracuse, and Michigan. His experience is that these programs serve both students and faculty well. Paul's students do not want an MBA. They prefer the concentration on IS courses with a minor in business and the faculty likes the ability to be relatively free in designing a true IS curriculum. His concerns are more with competitors outside the university.

The Internet allows any organization to extend its reach. An example is the Western Governors' University, which is an attempt to promote alternative education forms that will work in the sparsely populated areas of the western United States. Possibly of greater IS concern are electronic offerings such as "Wharton Direct," which is a combination of the Wharton Business School and Caliber Learning Systems. Together they opened a number of mini-executive education programs across the country to compete with the executive education programs in more traditional settings. Major corporations, such as Microsoft, IBM, and many of the consulting companies, are not only expert in IS, they spend many millions of dollars each year in training. Some of these corporations recognize that education is a market with large potential revenues. For over 10 years, the State University of New York system has awarded college credit for courses taken at IBM's Corporate Technical Institute. Another type of competitor is the private for-profit institutions such as Phoenix University and Devry Technical Institute.. Many of these competitors do not offer the hands-on, interactive instruction offered by traditional academic institutions, but they meet a demand that exists. Many of their students look for types of training that we may not offer or training in formats more conducive to their need to continue working. If we do not recognize the demand for our educational offerings from older, more experienced workers who want specific types of training in highly condensed forms, we may further open the door to the many competitors who are waiting.

RESEARCH RIGOR VERSUS RELEVANCE

Our leaders feel that one of the most difficult tasks facing the IS academic discipline is to strike an appropriate balance between the rigor and relevance of our research. At the heart of this issue is the question of who is the target audience for IS research and to what extent should we tailor our research to fit that audience. IS is an applied discipline and our research should be relevant to practice, but as the field matures and evolves, we want our work to be more rigorous and scientific. The problem is that to play too much to one audience potentially alienates the other. Rigorous research is the mark of a true science and the basis for our evaluation by our peers in other disciplines, but research that is too removed from the world of practice generates little interest on the part of industry. As an applied discipline, we are very interested in what is well received in the world of practice.

The leaders agree that IS research has become more rigorous. Some feel strongly that increased rigor is critical to the further development of the IS field. It marks IS as a true science, generates respect from other disciplines, and helps create success in university processes, such as the granting of tenure and promotion. They feel that our research should be of sufficient quality and value that it is cited and used by other disciplines. These leaders also believe that greater rigor has value for practice. It helps insure that research findings are valid. Theory based research helps in understanding and predicting not only today's phenomena but also those that will occur in the future.

Other leaders are not against rigorous research per se, but question the tradeoffs that often must be made. Several examples were given. To publish in leading journals, researchers frequently select topics that were studied in the past and lend themselves to rigorous methods. Other topics that are more important to industry are not studied because they are perceived to be risky in terms of their publication potential and difficult to investigate in rigorous ways. For example, group support systems in a decision room environment continue to be heavily studied even though their use in industry is limited, while more important topics to practice such as systems integration, enterprise resource

planning, and even Lotus Notes receive relatively little academic attention. Furthermore, rigorous research often involves abstractions (e.g., constructs) and statistical methods (e.g., Partial Least Squares) that are not easily understood by practitioners. Instead, simple frameworks, descriptive statistics, and insightful observations are often preferred in the world of practice.

One leader said that the conventional wisdom for many years was that good research should result in two articles – one for academicians and one for business professionals. The articles would use the same data but would be written with different audiences in mind. He finds this approach increasingly difficult to carry out because of the way topics must be researched to be publishable in the leading academic journals. He sees many similarities between what is evolving in IS and what has taken place in management where research in the *Academy of Management Journal* is increasingly removed from the every day interests of managers.

There are multiple possible reasons why our leaders take their positions on the rigor versus relevance issue. Some feel that the primary audience for academic research should be other academics and that a body of knowledge should be developed with that group in mind. Research should transcend the temporal issues of the day and provide longer-lasting value. This orientation affects what topics are studied and how they are researched. Other leaders feel that our research should be useful to practice and favor topics that are important today. This orientation also influences what topics are studied, the methods used, and the speed with which the findings are disseminated.

The field's various reference disciplines also impact the rigor versus relevance issue. For example, researchers who identify with behavioral research tend to be very conscious of rigor whereas those with an engineering orientation are often more pragmatic.

THE PERVASIVENESS OF INFORMATION TECHNOLOGY

A commonly agreed upon strength of the field is that information technology is vital to business organizations today and impacts virtually all

aspects of how organizations operate. In a similar way, information technology is now pervasive in the other business school academic disciplines. All students need the concepts and skills that IS faculty provide.

For years, economics was referred to as the “mother discipline” of business because so many fields have origins and close links to it. However, one leader thinks that it is time to rethink this reference. “Today, information technology is the most common denominator for business school disciplines. It is more important for students to understand than economics.”

Because IT is important to other fields, other disciplines threaten to take over some of the most interesting topics. To some extent, this change has already occurred, as illustrated by database marketing and data mining in marketing, the use of IT for competitive advantage in management, and the resurgent interest in accounting information systems by accounting. One leader referred to this as taking over our “intellectual property.”

Because of our IT knowledge opportunities abound on our college campuses. One is to be a leader in the use of IT for instructional purposes. A particular example is distance learning, which is restructuring how education is delivered to non-traditional students (i.e., over 22, working, non-campus resident) and even impacts the teaching of traditional students. Several leaders expressed the belief that unless traditional universities, in general, and business schools, in particular, become aggressive in distance learning that competitors will take much of a very lucrative market. One participant raised a pessimistic note, however, and mused that IS faculty probably will not seize the opportunity because promotion and tenure practices do not encourage this kind of activity.

Dick Welke provides an interesting perspective and example of whether IS faculty should be protective of their turf. For long-term political purposes, he thinks that IS should partner with other units on courses and programs that might be considered IS' domain. He uses Georgia State's E-Commerce masters program as an example. When it was being considered, he put out a call across campus to all departments and faculty to participate. He says, “Some came to the table and some choose to stay.” Some of the courses are taught outside of

the business school (e.g., law) and he made the program a business school rather than a CIS program. He feels that it is in the field's best interest to actively embrace other field's involvement in IS.

THE IMPACTS OF CHANGING TECHNOLOGY

IS, perhaps more than any other field, is impacted by changes in what (i.e., technology) it studies. The rate of technological change and the onward pace of advancement are made enough of in the media and in the academy and require no explanation here. What is of interest, though, is how the nature of what we study influences the field itself, both directly and subtly. Our leaders pointed out many instances of technology being a factor on the field of IS that go beyond the fact that new technology breeds new research. The pace of technological change and the fascination our society has with technology has created an interesting set of issues and problems that the field must face in a way that other disciplines do not, but which have certainly helped the field as much as they have hindered it.

Moore's law (i.e., the doubling of chip speed every 18-24 months) is alive and well in the world today, and seems to apply as much to technology in the broader sense as it does to processor capacity. Technology is growing and changing so rapidly that what may seem to be the next printing press goes the way of the hula-hoop in a short matter of time. The changing environment presents a problem for a field that is based on the study of technology; at best, any new line of research is a gamble that the technology under consideration will still be of interest once the study is published. In the opinion of our leaders, the lead-time between the introduction of new technologies and when our research is completed and published is intolerably long.

To some degree, the increasing demand for our classes by students and the popularity of computer technology is based on the fact that technology itself draws interest in our society. In the words of Rick Watson, "we study interesting things," and that gets peoples' attention.. The popularity of computer-based technology in the media fuels this phenomenon; we are riding a wave of "cool,"

as it were. While this certainly does not create any lasting strengths for the field, it is a temporary advantage that some leaders feel we should use. For example, a large amount of funding for IS work is available in industry and government, which is related to IT being the “hot topic.” This popularity may even create leverage for use within colleges and universities as administrators also become interested in what everyone else is talking about and doing. It would be a mistake to rely on this advantage for too long, but in the meantime perhaps we should make the most of what we have been given.

Our closeness to the use of technology also creates opportunities for us in the usage of the very technology we study. A few of our leaders pointed to the Internet, which was an academic tool long before it was picked up by industry, as an excellent example. Since we are familiar with the Internet through our teaching and research, we should use the technology and our understanding of it to our advantage, perhaps with online more journals such as *CAIS and JAIS* and living research documents as in *MISQ Discovery*. Other opportunities may lie in knowledge management and groupware, where it is conceivable that research teams could work across distances and time on a project, and then pass their knowledge on in a more useful format than a traditional journal article. The possibilities may indeed be limitless; certainly, if we leverage the knowledge and resources we have to use the tools we study, we can reap the same benefits we predict that others will.

THE QUALITY AND QUANTITY OF JOURNALS

Publication is at the heart of any academic discipline and the leaders have a variety of opinions about the quality and quantity of the field’s journals. On some issues, there is considerable agreement while on others there are differences.

The field’s generally recognized leading journal, *MIS Quarterly*, began publication in 1977. Prior to then, academicians had the choice of either publishing in practitioner journals such as the *Journal of Systems Management*, *Datamation*, and the *Harvard Business Review* or other disciplines’ academic

journals such as the *Academy of Management Journal*, *Management Science*, and *Decision Sciences*. While the latter are excellent journals, the number of IS articles published in each is limited. Over the years, the number of IS academic journals grew considerably, including several outstanding ones such as *Information Systems Research* and the *Journal of Management Information Systems*. The study participants are nearly unanimous that the quality of our academic journals is increasing and is comparable to other disciplines.

Especially during the last five years, the number of IS journals grew substantially. One group of leaders applauds the increase, citing several benefits. First, the additional journals provide more publication outlets for IS research, which is important for the large number of junior IS faculty members who must go through their university's promotion and tenure process. Second, like most academic disciplines, the IS field became more specialized. It also has many reference disciplines with their own topics, research methods, and theories. Many of the new journals such as the *Journal of Global Information Technology Management* and the *Journal of Information Technology Cases and Applications* allow specialized scholarship to flourish. Finally, the additional journals encourage innovative and different kinds of research. Researchers are unlikely to study topics unless there is an outlet for their work. If there were only a few high-quality journals, researchers would tend to research topics using methods previously published in these journals. New electronic journals such as the *Communications of AIS* also encourage research diversity. Because electronic journals shorten the cycle time from when a manuscript is submitted for publication until it is (electronically) published, researchers no longer need to avoid topics where the "shelf life" is short, fearing that the manuscript will be out of date before it is published.

For several reasons, another group of leaders is more critical of the increase in the number of journals. These leaders question the quality and contribution of some of the new journals, and feel that lesser quality journals (no specific journals were mentioned) reflect poorly on the field and diminish how

others view us. The leaders also point out that many of the new journals are published by profit-oriented companies rather than by academic organizations, which brings several issues and practices into question. Because of the profit motive, the companies that publish the journals commonly have high subscription rates for libraries, which may limit the dissemination of knowledge to those people who have access to a resource-rich library. There is also little rotation of Editors and Editorial Boards, which can stifle new ideas and approaches, even though the journals were originally introduced to provide new opportunities. And finally, the commitment to the journal and the field may be tenuous. The “plug was pulled” on several new IS journals after only a few issues were published. Another concern is that the large number of specialized journals contributes to our identity problem (see The Core Identity of IS section). It is also difficult to keep up with all of the journals. Bob Zmud raised a final point. He suggests that the pool of good reviewers is small and that the new journals are stretching this pool thin. Having thorough and fair reviews is essential to the publication process and the advancement of the field.

THE DEMAND FOR IS SERVICES

“The good news,” says Eph McLean, “is that there is a tremendous demand for our services; but the bad news is that there is tremendous demand for our services.” There is perhaps no statement that expresses the paradoxical nature of this issue better; while demand is one of the most important strengths of the field, it also is one of its most dangerous threats. The reason for this duality is that demand has two components: demand itself and supply. While there is universal excitement across the field about the tremendous popularity and demand for IS knowledge, the short supply of resources to meet this demand introduces many potential problems. Each of the aspects of demand, therefore, introduces both positive and negative impacts, as the participants in our study were quick to point out.

Perhaps the most striking and ubiquitous aspect of demand is the strong demand by students for IS courses and degree programs. Student enrollment in

the field exploded, with most of the growth in the last five years. Growth certainly had positive effects on the field; increasing student demand is enabling to any academic program because, if sustainable, it can lead to more resources, better standing, and better industry connections for the discipline. Student demand certainly has its downside, however. Faculty sizes lagged behind the growing demand, existing resources were spread out over the short run, and potentially the quality of instruction and research in IS programs can go down. The question as to which factor, the positive or the negative, is the most important is largely related to time; if the demand is not a mere fad but rather is indicative of a fundamental change in the business school landscape, then universities will ultimately allocate more resources and assign greater importance to IS programs or risk falling behind in the increasingly competitive world of higher education. If the demand is a short-term spike, on the other hand, concerns over the short supply of resources are unfounded. However, no one seems to believe the spike hypothesis. All of the participants in our study agree that the increasing student demand for our services is not something that will go away any time soon but will continue into the foreseeable future.

The same is also the case with the second aspect of demand, the demand by industry for our products (i.e., our students). Demand by industry is an even more fundamental issue than student demand. Even though student demand seems to be the more immediate of the two, it is fueled by the critical need in the business world for IS professionals. This need implies more jobs and higher salaries for students, thereby increasing student demand for IS studies, and in turn reflecting well upon the field as ever growing numbers of IS graduates fill professional positions in industry. The recognition of the importance of our education by industry also created a demand for our training by professionals who realize that they will need IS skills to be able to continue to operate in the increasingly technological marketplace. Organizations as well as individuals are coming to this conclusion, and are constantly looking for new IS research, tools, and training to sustain or develop competitive advantage. As a result of this some of our research and consulting services are finding more customers in practice.

But the silver lining of industry demand is not without its cloud. The shortage of our available resources increases the chance that alternatives to what we offer will be found (see the Competitors to What We Teach and Research section).

The benefits and risks associated with high demand will, in the opinion of our study participants, most likely balance out in time. Several of the leaders pointed out that there is a cycle of demand in the IS world (such as the one currently created by the Y2K problem), but again, everyone agrees that the cycle has a definite and stable upward trend. The fundamental causes of the demand for our products and services seem to be permanent characteristics of the new economy. The IS field is uniquely suited to meeting the new needs. An indicator of this positioning is the interesting phenomenon that IS is growing at a much faster rate than not only other business school disciplines, but also other technological disciplines. Computer science programs (in schools that do not have integrated computer science and IS programs), for instance, have not enjoyed the same growth as IS, having a much flatter demand curve.

ICIS AND AIS

ICIS is widely regarded by the leaders as a “jewel” among the IS field’s treasures. Since its inception in 1980, it has been the field’s premier international research conference. Over the years it held “must attend” status among the field’s leaders and been a showcase for IS research. The leaders point out that it is well regarded by people in other disciplines and helped create a positive identity for the field.

Though highly successful, ICIS is unusual for a field’s leading conference. ICIS is neither organized nor run by an academic professional organization (in comparison to, for example, the Academy of Management or the American Accounting Association national conferences). ICIS’ charter is to be a research conference and the conference is not designed to address the full range of issues that are important to an academic discipline. As one study participant stated it, “ICIS is a great conference, but it masked the field’s problems, because it handled some, but not all, of the things that are important to a discipline.”

In the early 1990s, the IS field was experiencing difficult times -- job opportunities were down, some of the field's best young people were being denied promotion and tenure, and the IS course was being voted out of the MBA core curriculum at several leading schools. This condition led Bill King and other leaders in the field to create the Association for Information Systems (AIS) for the purpose of serving as "the premier global organization for academicians specializing in Information Systems." AIS was designed to perform those tasks-- participating in AACSB meetings, recommending curricula, publishing journals-- that are important for a profession but were beyond the charter of ICIS.

Several of the leaders mentioned that AIS is a strength in the field and that it will increasingly be so. Its activities are becoming more interrelated with those of ICIS, such as a shared business office and joint placement activities, which should lead to better integrated efforts on behalf of the profession. There were concerns expressed about AIS, however, and they have to do with the AIS Americas' conference (now called AMCIS to avoid confusion with the Australian Conference on Information Systems, ACIS). One leader worries about spreading scarce human resources over two conferences (AMCIS and ICIS) and the possible confusion associated with having two major conferences (e.g., which one to attend, if attending only one is possible). Another leader is concerned that the relaxed research standards of AIS Americas (much higher acceptance rates than ICIS) reflect poorly on the field. Another leader believes quite differently, however. He points out that the major purpose of AMCIS is to serve the entire IS academic community, not just the research community, and that this is consistent with the mission of AIS. AMCIS is a place where people from teaching as well as research institutions can go to participate. A wide variety of sessions are held (e.g., research in progress, doctoral student research, and tutorials). The conference is similar to INFORMS in this regard. The more restrictive nature of ICIS makes it difficult for many people to be on the conference program and receive the associated benefits (e.g., publication in the proceedings, university-paid conference expenses).

OTHER ISSUES

Two interesting topics were brought up that merit brief discussion. One is the maturity of the field itself. A few experts referred to items that relate to the relative youth of IS as an academic field, such as a lack of accumulated resources and high-level industry contacts. A lack of accumulated resources is related to the fact that IS has not been a part of business schools or universities for as long as more established disciplines such as finance and accounting. We have not had enough time to accrue many of the perks (such as professorships, chairs, outside financial support) enjoyed by the older disciplines. In a similar way, the newness of the field means that most of our graduates have not yet had time to achieve high-level positions in organizations; IS majors have not been in industry long enough to become CEOs or presidents of large corporations. Their relative youth also means that they seldom are large financial contributors to IS programs. These maturity related-issues will disappear with time, but they currently are a weakness of the field.

The second interesting issue is the Y2K problem. Dick Welke discussed this issue in terms of a “ping and a pong” effect. When the millennium turns, there may be a popular backlash (the “ping”) against IT and all of those who are associated with it as a result of whatever problems may arise from the millennium bug. This effect may create a feeling of distrust and resentment that could dampen our image briefly. The “pong” of this, however, is that industry leaders will certainly have a new understanding of the importance of IT and IT professionals. This, in turn, will result in an increased emphasis on IS over the long run. It will certainly be interesting to see how the field of IS fares through the potential impending millennium crisis and to what extent the ping and the pong affect what we do.

IV. CONCLUSION

“On the whole, I’m optimistic,” says Varun Grover about the future of the IS field. This sentiment is shared by almost all of the participants in our study.

Despite the field's problems, our leaders are glad to be part of the IS academic community.

The set of issues raised by the leaders is interesting; some issues were expected to be mentioned, such as the demand for our courses, but others, such as the potential impact of the Y2K problem, were unanticipated. As Table 1 shows, some issues were raised repeatedly, and the observations about them were often similar.

Most interesting, however, are the issues where the leaders have different opinions. These differences are largely research related and surfaced in the discussions of the quality and quantity of journals, legitimacy of the field, research rigor versus relevance, ICIS and AIS, and the core identity of the field. It is an oversimplification to say that there are two camps, but some of the perspectives put leaders at different ends of a continuum. For example, some leaders are especially interested in the quality of IS research. They want it to be rigorous, and while they also want it to be relevant, they are more interested in developing and testing theories that transcend the temporal issues of the day. They believe that rigorous research adds to the legitimacy of the field, especially if it follows commonly accepted social science research paradigms. These leaders would like to have only a few high-quality journals and are concerned that the AIS Americas Conference accepts too many weak papers. The other group of leaders is not against rigorous research; they would not have been included in our group of leaders if they were. Rather, they are concerned with the needs of additional constituencies, even if it means that research of lesser rigor is published. They believe that our research should be of interest and value to the current business world. Additional journals provide more opportunities for our junior faculty to publish and for specialized research to flourish, and the AIS America's Conference provides a useful variety of sessions with opportunities for many people to be on the program. These leaders are less concerned about having a common paradigm that defines the field and its own theories that help give it legitimacy.

Our study of the current status of the IS academic discipline is based on input from people who are “leaders” in the field. The criteria used to define a leader heavily favors academicians who are research oriented and publish heavily in leading academic journals. Furthermore, all of the study participants are at North American research-oriented universities. One might speculate that different issues would have surfaced if study participants with a different orientation had been used, such as faculty who are at more teaching-oriented schools. For example, none of the study leaders mentioned the difficulty of keeping up with the technology in their course offerings. In general, the leaders mentioned few teaching-related issues.

It would be interesting to study how other “leaders” and constituencies view the current status of the IS academic discipline. Possible groups include IS faculty at non-North American universities or at teaching-oriented schools, deans of business schools, and the business community. One would speculate that research issues would be less important for some of these groups.

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