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## The State of the Information Systems Field

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## THE STATE OF THE INFORMATION SYSTEMS FIELD

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**OPINION**

What is the state of the Information Systems Field? What can we do to help ourselves? What can AIS do to help the field?

I started teaching information systems in 1970 at a time in which programs were scarce, and faculties with more than two or three people in the field were rare. We had few senior faculty to help set direction in the field, and there were no journals devoted to information systems.

We did have a compelling need and interest on the part of students, both undergraduate and MBA, to learn something about technology before beginning their careers. By many indicators, our field has made tremendous progress, but it seems to be a continual struggle for survival.

There have been examples of IS courses being cut in the core of MBA programs. Is this because information systems are not important? Is it because we have failed to create highly popular core courses? Or is it because the "core" of an MBA program is a very political entity. It is not clear that an IS course is being cut (when it does happen) because of a careful look at what students need, or whether it is because IS faculty are often weak politically and have few votes when the faculty approves core courses. I suspect a combination of these factors is at work.

Another problem is a disturbing belief that has spread among some business school deans. The underlying question is, "Why won't IS go the way of Operations Research? IS will migrate to the disciplines, so the Marketing department will teach about IS in marketing, Finance will teach financial information systems, etc. This, after all, is what has become of OR in a number of schools."

To those of us in the field, this viewpoint is pretty naive, but maybe that is our fault for not having been more successful in educating deans (a tough

assignment). My estimate is that the merged entities of Citibank and Travelers, and B of A and NationsBank, will each have combined annual IS budgets of \$4 billion before any savings from their mergers. That means, for a bit anyway, we have two companies spending at a rate of a grand total of \$8 billion a year. I would be surprised if the world has spent \$8 billion in total on operations research since it was invented during WWII! OR never became a pervasive part of knowledge workers' tasks; it has had nothing like the impact of information technology.

OR has made a lot of contributions in certain industries, but I remember in the 60s and early 70s when every company had an OR or Management Sciences Department. Try to find very many of these today. At their maximum, one of these departments would have had a small fraction of the number of workers in IS. OR solved some interesting problems, for example, in transportation. SABRE Decision Technologies is one of the best-known OR groups in the country. However, it is information technology in the form of SABRE that solved the reservations problem created by jet travel and it is IT that keeps a rather creaky air traffic control system functioning, not OR.

To a large extent, IS faculty in business schools have failed to make faculty in other disciplines aware of our own discipline, and in all fairness, there are many non-IS faculty who just aren't interested in anything but their own fields. This failing has created problems for our young faculty when it comes time for a tenure review. Today, it is hard for faculty to get tenure in business schools in general. The state of our research is not as advanced as more traditional fields like Economics and Finance, but it is important to remember our discipline dates only to the 1960s. I would be happy to show most, but not all, of the articles in our journals like *Information Systems Research* and *MIS Quarterly* to colleagues in other departments and say we think these are as good as the publications in their fields.

We have three particular problems in research. The first is our size. An organization like AIS has between 1200 and 1500 members; if that represents half the people in our field, there are only 3000 or so of us. The vast majority of schools are not "publish or perish" (though more move into this column every day), so we do not have a very large critical mass of researchers.

Our second problem is something that I have always liked about our field: diversity. We have researchers who draw on a lot of other disciplines to study problems. The diversity means that we can look at problems from a variety of viewpoints. However, this diversity tends to make the field look disorganized, and it sometimes leads to research that does not contribute very much. Unfortunately, some of our colleagues are fairly narrow in their tastes for research, and can write quite negative promotion and tenure letters for people with other interest areas.

Third, the dominant paradigm for research in business schools comes from Economics and Finance. In most business schools, the majority of MBAs are majoring in Finance (50 to 70%), so Finance faculties tend to be large and influential. There are IS researchers who do the same kind of model-building and testing that one finds in Economics and Finance, but they are by no means in the majority in the IS field. Sometimes the criticism one hears of IS research is because it follows a different paradigm, rather than it lacks rigor.

We are all trying to promote our field because we think it is critical. Information systems have brought and are bringing incredible changes to nations, governments, organizations and people. IS programs are vital to preparing students to understand and participate in these changes as a new century begins.

There is a simple strategy that can help advance our field, and that is *to constantly strive for quality in all that we do*. I have participated in enough

promotion and tenure decisions across different disciplines to learn that most of our colleagues would rather see a candidate with a smaller number of outstanding publications than a long list of average papers. Quality in research means that we look for interesting topics, try to build on past research, and are concerned with rigor in the design and execution of the research. Quality in teaching means that we put extra effort into our courses, because we want to do the best job possible for our students. If we can excite students about our subject matter, then we will draw more and more people to our classes, and in most schools, teaching load is pretty highly correlated with faculty positions.

I have high expectations for AIS and for the *Communications and Journal of AIS*. I think both of these exciting, new publications will contribute to efforts to improve the quality of research and teaching in information systems. Our plans are for CAIS to improve communications in our field and stimulate the development and sharing of teaching materials. The *Journal* is designed to encourage, disseminate and showcase our very best research efforts. I hope you will contribute to these journals through submissions, readership, citations, and recommending AIS publications to others.

Note: This opinion paper was received on November 3, 1998. It was published on January 4, 1999 as one of the inaugural papers for CAIS.

## ABOUT THE AUTHOR

Henry C. Lucas is Professor of Information Systems at New York University's Stern School of Business. He was Vice President of Publications of AIS from 1995 to 1998 and is currently the Editor in Chief of AIS publications.

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