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Improving Consumption

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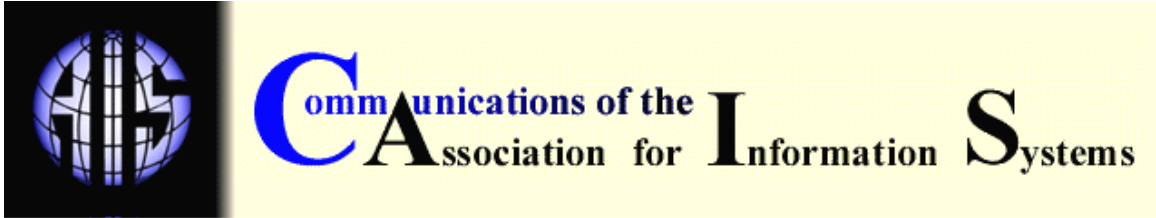
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IMPROVING CONSUMPTION

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ABSTRACT

The information systems (IS) research relevance debate was sparked by concerns that the research community is delivering products that are only sometimes considered useful. Symptoms of the problem include the marketability of IS graduates, our failure to lead industry, the proliferation of journals and conferences with overlapping themes, and a rewards system that is geared towards outputs. Relevance, in my view, is a function of addressing the right problem and packaging the results in a manner suitable for consumption. My recommendations therefore include: identifying the fundamental and applied areas; recognizing our limitations in these areas; providing research summaries; clarifying the research channels by avoiding overlaps in conferences and journals; and altering the rewards and control systems such that they are biased towards contribution to the discipline.

I. THE PROBLEM

The Information Systems (IS) research relevance debate was prompted by concerns felt by members of the community that go well beyond research outputs, research processes, and reward systems. For example, IS degrees need to be complemented by a strong dose of technical skills to be marketable. As a field, we do not seem to have the knowledge valued by industry. We also lack the technical expertise to advise on issues such as how to configure a distributed system and the managerial experience to advise an IT manager on how to transition to a new technology. We follow rather than lead in a large number of areas and continue to be amazed by the innovations that arise from industry (and non-IS sources) and take control of our discipline. The problems are embedded in our research processes and publications as well. Rather than focusing energies on performing valuable "mopping up" operations [Kuhn, 1963] in some unfashionable area, we shift resources towards the "hot spots" of the field driven by our rewards system and the need to be recognized as "current". The proliferation of journals and conferences and their changing themes leads to overlap and multiplicity of research areas, with the net effect of diffusing research communication. Not surprisingly, researchers and practitioners alike are unable to keep up-to-date.

The problem of relevance exists in the perceptions of the larger community and echoed in the comments of numerous participants of the debate and beyond [Benbasat and Zmud, 1999; Lee, 1999]. The stakes are high regardless of the degree of the problem since public perception can eventually turn into public policy and, indirectly, affect research funding and teaching loads.

II. FUNDAMENTAL AND APPLIED AREAS

In a mature scientific community, the set of problems to be solved are known by the members of the discipline. The lack of such shared understanding can lead to identity and other problems. This identity crisis is evident in the way textbooks and research areas are buffeted by the latest technological or business trends. The key to the self-identity lies in defining a collective research agenda that will include:

- the *fundamental* areas, which are widely recognized as enduring problems in the discipline (e.g., [NSF, 2001])
- the *applied* areas which are context-specific, system-specific, culture-specific, organization-specific, or functional-area-specific applications of the fundamental areas and,
- disciplinary-contributions that deal with the field itself.

[Davenport and Markus, 1999]. The problems in these three areas are shown in Table 1.

Table 1. Research Areas for the IS Discipline

Area	Representative Problems
Fundamental	<ul style="list-style-type: none"> • analysis and design of systems in general • storage, management and interpretation of information/knowledge • modeling of intelligence, decision, communication, business functions and administrative processes • improving and measuring productivity of the software development process • management of various systems • Information Technology (IT)-related organizational processes • understanding the usage and impact of technology
Applied	<ul style="list-style-type: none"> • the design of Enterprise systems is based on design methodology and business functions • IT-budgeting is an IT-related organizational process
Disciplinary contributions	<ul style="list-style-type: none"> • pedagogy • methodologies • disciplinary effectiveness

These three areas have different relevance implications. Practitioners will presumably be interested in the applied areas and will favor channels geared towards such areas as project

management, productivity metrics, and CASE tools. Conversely, a channel that commingles the fundamental and applied areas can lead to perceptions of irrelevance.

However, we cannot always carry out some of the relevant research due to our field's inherent strengths and weaknesses. The fundamental areas often require free access to organizational contexts and data sets (which are almost impossible to obtain) while the applied areas often require grounding and skills that are not native to the IS field. For example, a researcher proposing a new type of semantic model must ultimately implement and test it, but may lack the implementation skills. We also need to recognize that some of the applied problems such as workflow execution models, encryption methods, database management system's performance (not query optimization) and data transmission methods, while extremely pertinent to industry, are beyond IS's scope.

III. A KUHNIAN VISION

The following recommendations are intended to address some of the problems raised earlier and predicted by Kuhn [1963]:

1. Clearly identify all the fundamental, applied and disciplinary-contribution problems in an area as is done to some extent in the calls for papers for conferences. The areas should be visible, accessible, refutable and updated on a frequent basis. Appropriate research methods/standards (e.g., pilot study, case study, simulation) need to be defined together with the areas.
2. Ensure that all work published adheres to these areas and standards, i.e. guarantee relevance to the researcher/to the practitioner. Here I take the view that if critical problems are addressed using appropriate methodologies, the results will be relevant to someone in the community, although not necessarily to practitioners. Researchers and practitioners will not then need to sift through large number of articles to identify those that are relevant .

Provide for different venues and different research standards for the different types of problems addressed. Rigor will be most important for the fundamental areas.

3. Avoid overlap of areas in conferences and journals so that the channels are clarified. Researchers, practitioners and text-book authors would greatly benefit from having a "one-stop-shop" for keeping up to date. By the same token, all journal and conference information should be accessible from a single web site.

Periodically (e.g., every 5 yrs) post progress accomplished in each of the areas i.e. provide research summaries in a widely accessible form. The medium will take the form of a visible channel with contributions in all areas, solicited either from experts in the field or alternatively through a "call for papers." Given the short publication window and the need for accessibility, electronic journals will be the ideal media for the summaries. This action will have the effect of making research consumable and progress visible. In addition, it reduces the need for literature review sections in journal articles.

4. Remedy the control system by coupling the rewards systems to the type and extent of problem addressed. A rewards system geared towards addressing problems rather than publication counts would provide the equivalent of "lifetime employment" for researchers and will automatically control opportunistic behavior and promote scientific progress.

Such a rationalization can have the effect of clarifying the channels, making progress visible, making summaries available, streamlining the research process and improving relevance at the cost of initial overhead. However, it raises the obvious questions of feasibility and implementation. It would be relatively easy to create a "Journal of IS Research Issues" and require all doctoral dissertations to be drawn from this source. Similarly, it would be a simple enough matter for journal editors to require conformance to these areas. Keeping in mind that such decisions impact careers, special cases must be treated in a benign manner, carrying out due process. It also underscores the importance of carefully defining the areas. Changes to the rewards sub-system and the publications sub-systems would be harder to achieve as they are embedded in

institutional and political factors. However, we will not be able to silence our critics unless we deliver consumable products.

REFERENCES

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