NURTURING A THRIVING INFORMATION SYSTEMS DISCIPLINE: A CALL TO ACTION

ICIS 2011 PANEL STATEMENT

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Abstract

While the aspiration for the IS discipline's bright future is a shared objective, there is a controversy about what are the fundamental challenges ahead let alone how to approach them. This panel addresses the question of what should we do to nurture a thriving IS discipline? Opinions regarding how to solidify the position of the IS discipline can be classified into five interrelated clusters: research-oriented approaches, teaching-oriented approaches, practice-oriented approaches, scholarship-oriented approaches, and organization-oriented approaches. Building on crowdsourcing within the IS community to inform a panel of senior scholars, we will engage in a debate about possible approaches to nurture and invigorate the IS discipline in the coming decade. Overall, we aim to inspire and spark grassroots-based collective action in pursuit of thriving IS scholarship. At minimum, we hope to stimulate new insights about the desired and possible futures of the IS discipline, and the instrumental steps to realize them.

Keywords: *Future of IS, IS research agenda, collective action, crowdsourcing*

Introduction

What should we do now to nurture a thriving IS discipline in the next decade? This is the core question that drives this call to action. The history of the IS discourse is paved with anxious debates about the sad state of the field and suggestions about how to improve its scholarly and institutional standings. From Keen's (1980) call for building a scientific tradition in IS research, via Orlikowski and Iacono's (2001) plea to bring the IT artifact back to the front burner, to Benbasat and Zmud's (2003) argument for the development of core IS theories and multiple calls for action in transforming our teaching agenda (e.g. Dhar and Sundarajan 2007), the community leaders of the IS discipline have engaged extensively in self-reflection and self-accusation about the state and future of our field. The plurality of opinions is articulated in Lyytinen and King's (2006) seminal volume that portrays the controversy and ongoing debate about the nature and desirable futures of the IS field. Whereas early protagonists of IS scholarship focused mainly on the development of the emerging field into a respected discipline, since the turn of the century the focus has shifted to mitigating the intense institutional pressures in business schools in response to a sharp drop in students' enrollment in IS courses and programs.

A decade after the dot-com bubble burst IS scholars face a paradox: while IT-based innovation pervades everyday life, connotes progress and seems to be the key for the future of humankind, the overall status of the IS discipline is often marginalized. The decline of the IS discipline is evident by the lower than expected enrolment to IS courses, slowdown in the hiring of faculty members, reduced and slashed resources for doctoral programs, as well as a global wave of cutbacks or reorganizations that has shut down many IS departments or forced mergers with other departments. The seemingly temporary crisis following the dot-com bubble burst has appeared to many as evolving into a chronic disease.

The panel is designed to provide a shared platform for people of all orientations and positions who have insights about the underlying issues and solutions for the future of the IS field. We aspire to transform the discussion in the ICIS panel into a sustainable multifaceted collective action in pursuit of a thriving IS discipline. At a minimum, we hope that the panel will stimulate new thinking about the desired future of the IS discipline and the steps necessary for its realization.

Controversy

While the aspiration for the IS discipline's bright future is a shared objective, there is a controversy among IS scholars about what are the fundamental challenges ahead, let alone how to address them and how to nurture a sustainable discipline. The plurality of views is not necessarily a problem because we need diversity of interpretations and diversity of actions and contexts to shape the discipline. The challenge is how to solidify these voices to action, how to maintain a momentum, and how to focus our efforts. The discourse offers various ideas regarding how to mitigate these underlying problems and how to solidify the IS discipline's scholarly position through focused action. This can be classified into five interrelated clusters as follows:

Research-Oriented Approaches

The scholarly contributions to knowledge that are generated by IS scholars and their externally perceived value are the core concern of research-oriented approaches. They aim to seek legitimization through differentiation based on ownership of unique core knowledge (Benbasat and Zmud 2003; Grover et al. 2008) or successful competition in the market of ideas (King and Lyytinen 2006). In a general sense, they suggest pursuing research in a more holistic top-level view of the social systems domains (Agarwal and Lucas 2005) or new high potential and exciting blue ocean domains (Straub 2009). More specifically and in the same vein, they also offer a plea for a disciplinary-wide effort to focus on or exclude certain domains of inquiry—for example, to focus on theorizing the IT artifact (Orlikowski and Iacono 2001), to include design science (Hevner et al. 2004), to account for the entangled sociality and materiality (Orlikowski and Scott 2008), and to embrace sustainability as a dependent variable (Watson et al. 2010), just to list a few.

Teaching-Oriented Approaches

The pedagogic contributions that are generated by IS scholars and their perceived value by universities and related stakeholders are the core concern of teaching-oriented approaches. They aim to provide new frameworks that provide better alignment between the curriculum of IS programs and the needs of businesses and business schools (Dhar and Sundararajan 2007), overhaul the curriculum development principles (Topi et al. 2009), offer innovative teaching methods (e.g., Webster and Hackley 1997), and introduce new topics (e.g., Alexander 2006; Rai and Sambamurthy 2006) that have the potential to generate value in grooming the next generation of students and business leaders.

Practice-Oriented Approaches

The relevance of the contributions to practice that are generated by IS scholars and their externally perceived value are the core concern of the practice-oriented approaches. In the most fundamental way, they aim to balance between rigor and relevance (Lee 1999; Straub and Ang 2011) or to suggest Action Research in which the contribution to general knowledge is inherently driven by concrete problems of practitioners (Baskerville and Myers 2004). Most champions of practice-oriented approaches are driven predominantly by creating and delivering value to external resource-rich stakeholders (Davis et al. 2005) and tend to run industry-oriented research centers, such as *Center for Information Systems Research* at MIT, *Center for Applied Information and Communication Technology* at Copenhagen Business School, and Center for Digital Technology & Management at Technical University in Munich.

Scholarship-Oriented Approaches

The scholarly conduct and work practices of IS scholars as well as the normative systems that reinforce them are the core concern of scholarship-oriented approaches. Through change in the work practices of IS researchers, they aim to raise the standards and overall value of IS scholarship, which in turn can enhance its legitimacy and relative position in the scientific community at large. This includes, for example, improved data collection instrumentation as well as increased access to and use of large institutionally managed corpora of data as inalienable assets (Avital et al. 2007; Lyytinen 2009), utilization of more diverse and rigorous research methods (Boudreau et al. 2001; Schulze and Avital 2011), renegotiating our reliance on reference disciplines (Grover et al. 2006), and changes in reviewing and publishing practices (Avital et al. 2009; Gray et al. 2006; Grover et al. 2009; Straub and Anderson 2009).

Organization-Oriented Approaches

The governance of the discipline and the relationship among the various sub-communities are of the core concern of organization-oriented approaches. They aim to reexamine the way the IS discipline is organized and the prevailing governance models of its key institutions. For example, the role and conduct of the Association for Information Systems, the heavy reliance on business schools as a host, and the format of conferences as well as various outreach efforts. In particular, in the spirit of openness and the emerging agile forms of organizing, they look for ways to encourage grassroots participation in running the IS discipline community and shaping its policies. Moreover, looking for ways to boost membership and enhance worldwide representation and reach while maintaining a healthy balance between global centralization and situated needs. Although organizing, governance and other institutional matters are a frequent topic of discussion, they seem only peripherally addressed in the published discourse (e.g., King and Lyytinen 2006) thus warranting further attention.

Crowdsourcing: A Call to Action

While many calls to action and debates in our journals have been led by senior IS scholars, fresh and innovative ideas often come from marginal players who may be on the fringes of the community (Jeppeson and Lakhani, 2010). In this panel we propose to engage the IS community at large in voicing ideas that respond to our main challenge: what should we do now to nurture a thriving IS discipline in the next decade?

We propose to use information technology to engage the crowd in generating the ideas. Crowdsourcing is a term coined by Jeff Howe (2006) to refer to "the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call." While many people are familiar with crowdsourcing of basic "human intelligent tasks" on platforms such as Amazon Mechanical Turk or TaskCN.com, innovation-oriented crowdsourcing platforms such as InnoCentive.com, TopCoder.com, Jovoto.com and OpenIDEO.com have enabled companies to generate new ideas ranging from drug discovery to architectural design to raising kids' awareness of the benefits of fresh food (Levina et al., 2010). These platforms allow thousands of individuals to contribute ideas and develop products by responding to publicly announced challenges.

Given that our challenge requires knowledge of what the IS discipline does and what obstacles it faces, we do not believe that a call to the general public will be viable. Instead, we propose to engage the IS community (through AISnet and Academy of Management OCIS division list serves) in submitting solutions to the challenge. By design, the crowdsourcing approach involves grassroots participation, which is likely to result in greater ownership of the ideas presented in the panel as well as greater willingness to step forward and implement them in practice. The crowdsourcing approach serves not only to raise awareness of the underlying issues, but also to draw attention to the panel and the conference. Thus, we expect that people who contributed ideas in the process will also attend the panel discussion.

In the design of the crowdsourcing approach we have followed examples of crowdsourcing in the service design space such as the challenge involving designing a way of reducing paper cup waste for Starbucks (www.thebetacup.com) or designing a way of increasing the number of registered bone marrow donors (www.openideo.com). These challenges typically go through an idea generation phase, followed by clustering and feedback, and moving on to further development in conceptualization and design phases.

Logistically, we would use one of the web platforms to post our challenge and the five approaches we have identified above (research, teaching, practice, scholarship, and organization) to ask people for their ideas. We would be looking for short contributions (from one line and up to 100 words) during the idea generation phase. If people have multiple ideas, they will be encouraged to post them as separate entries. Contributors may post ideas anonymously or identify themselves. Whereas we will encourage non-anonymous posts, anonymous posts will be allowed to promote ideas that may seem controversial. A one-month window (October 1-31, 2011) will be used to collect the ideas. Subsequently the ideas will be clustered into major themes. These themes will be posted again on the web platform with attributions made to people who have contributed to the cluster.

A typical crowdsourcing platform also involves some type of feedback and evaluation mechanisms where a panel of expert and/or the crowd votes on the quality of the ideas. Given the anticipated multiple submissions of similar ideas (e.g., "IS scholars should focus their research on social media"), we do not believe that a contest among contributors would be feasible. Nonetheless, it would be useful to learn which ideas are more appealing to the community at large in terms if their impact and feasibility. Thus, we will cluster the ideas into key themes and present them for rating through a poll to the IS community members at large. Subsequently, the ideas and their ratings will be shared with our expert panelists and the panel audience who will comment on them in the live panel.

We envision that going forward, top idea clusters posted on crowdsourcing platforms will be further developed into proposals for action either by our panelists or by community members who will take on the role of "idea champions." A workable proposal may combine multiple themes from diverse clusters to generate cohesive solutions.

Discussion Format

Aligned with the conference theme--"East Meets West: Connectivity and Collaboration through Effective Information Systems" the panel is designed to touch upon our core values and to focus on the global state of the IS discipline and how its membership can work together to substantiate its position.

The panelists, senior IS scholars, will respond to suggestions that were obtained ahead of time from the IS community via crowdsourcing and will engage with the audience. Based on their diverse experiences, interests and origins as well as longstanding commitment to the development of IS discipline, the panelists can relate to the versatile membership of the IS community and contribute to the overall development of a broader understanding of the underlying issues. Michel Avital and Natalia Levina will moderate the panel. Overall, the session format is as follows:

- Panel Moderators will introduce the key issues, the call to action, the crowdsourcing process, and the panelists (10 min).

- Discussion of each of the five approaches to addressing the key challenge (70 minutes divided into five sections of about 14 minutes per approach[1]) as follows:
  - Panel Moderators will introduce an approach (described above) followed by a summary of the "crowdsourced" themes and the related ratings from the community members (2 min)
  - Several expert panelists will comment on the issue and the themes presented, debating attractiveness and feasibility of various options (7 min)
  - Audience participants will comment on the issues and themes (5 min)

- Panel Moderators will conclude with the key highlights of the debate and a call to subsequent development of actionable plans through a crowdsourcing website (10 min)

Overall, we seek to evoke provocative ideas, generative thinking, and compelling initiatives that can contribute to the discourse on the future of the IS discipline. We aim to inspire and spark collective action of senior and junior members in pursuit of a sustainable and thriving IS scholarship. At minimum, we hope that the panel will stimulate new insights about the desired future of the IS discipline and the necessary steps to realize it.

Participants

Michel Avital is Associate Professor of Information Management at the University of Amsterdam. The study of how information technology promotes innovation and extraordinary outcomes is a central theme of Michel's work. Building on positive modalities of inquiry, his research focuses on information and organization with an emphasis on the social aspects of information technologies. He has published articles on topics such as systems design, creativity, innovation, generative collectives, collaboration and competition, green IT and sustainable value. He is an editorial board member of seven leading IS journals and has served in various organizing capacities in ICIS, AOM, ECIS, and other topical conferences. Michel is an advocate of open design and an avid proponent of cross-boundaries exchange and collaboration. Further information at http://avital.net

Natalia Levina is Associate Professor at the New York University, Stern School of Business. She studies how diverse actors span organizational, professional, and cultural boundaries in the process of developing and using technology. Her phenomenon of study is global sourcing of professional services. Her current research focuses on open innovation and hybrid organizational forms that include crowdsourcing of innovation along with traditional organizational practices. She has organized two research panels on crowdsourcing and open innovation in the past. She has published widely in top IS and organizational journals. She currently serves on the editorial board of Organization Science and Information and Organizations and is a Senior Editor at ISR.

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[1] The actual time allocated for each of the five approaches will be dependent on the outcome of the crowdsourcing. We will allocate more time for more popular approaches at the expense of the less popular approaches.

Ritu Agarwal is Professor and the Robert H. Smith Dean's Chair of Information Systems at the Robert H. Smith School of Business, University of Maryland, College Park. She is also the founder and Director of the Center for Health Information and Decision Systems at the Smith School. Professor Agarwal is currently serving as the Editor in Chief of Information Systems Research and has held multiple senior editorial positions in various information systems journals. She has published over 80 papers on information technology management topics in journals such as Information Systems Research, MIS Quarterly, Management Science, Communications of the ACM, Journal of Management Information Systems, Decision Sciences, IEEE Transactions, and Decision Support Systems, and has made presentations at a variety of national and international conferences. Her current research is focused on the use of IT in healthcare settings, technology enabled strategic transformations in various industrial sectors, and consumer behavior in technology mediated settings.

Niels Bjørn-Andersen is professor at Copenhagen Business School, Denmark. He is generally accepted as one of the founders of the Socio-technical IS tradition in the Nordic countries. He has done extensive work in the area of IT management/governance, and more recently within the area of e-business. He has carried out more than 30 international research projects (larger than 1 person year) including the € 5.9 mill ITAIDE project with among others IBM and SAP on trade facilitation, and the € 4.0 mill 3gERP project with Microsoft. His work is almost always related to solving 'real' problems in industry, and he is a strong believer in the IS field 'co-creation of value' with industry and government in order to create value for our key constituents, industry, students and politicians.

Varun Grover is the William S. Lee (Duke Energy) Distinguished Professor of Information Systems at Clemson University. He has published extensively in the information systems field, with over 200 publications in major refereed journals. Nine recent articles have ranked him among the top four researchers based on number of publications in the top Information Systems journals, as well as citation impact (h-index). Dr. Grover is Senior Editor (Emeritus) for MIS Quarterly, Senior Editor of the Journal of the AIS and Database, as well as Associate/Advisory Editor of numerous other journals. He is currently working in the areas of IT value, digital transformation, and is co-editing a SI of MISQ on co-creation of IT value. He has also been keenly involved in a number of studies and panels on the IS field and its success. He is recipient of numerous awards from USC, Clemson, AIS, DSI, AoM, Anbar, PriceWaterhouse, etc. for his research and teaching. He is also a Fellow of the Association for Information Systems.

Eldon Y. Li is university chair professor and director of Innovation Incubation Center and the former founding director of Center for Service Innovation at National Chengchi University in Taiwan. He is also professor emeritus of MIS at the College of Business, California Polytechnic State University, San Luis Obispo, California, USA. He received his Ph.D. degree from Texas Tech University in 1982. He was professor and dean of College of Informatics at Yuan Ze University in Taiwan, as well as professor and founding director of the Graduate Institute of Information Management at National Chung Cheng University in Chia-Yi, Taiwan. His current research interests are in innovation and technology management, human factors, strategic IT planning, software engineering, quality assurance, and information and systems management. He is the founder of ICEB and TWAIS and editor in chief of several international journals. Further info at http://www.calpoly.edu/~eli/

Dov Te'eni holds the Mexico Chair for IS at Tel Aviv University. He studies how computers support people at work, with a special emphasis on people making decisions, communicating and sharing knowledge, and interacting with computers. His research usually combines model building, laboratory experiments and prototypes development. Integrative papers on this work appear in Organization Science (supporting distributed cognition) and MIS Quarterly (supporting communication). His approach to design is summarized in Human-computer interaction for developing effective organizational systems (co-authored with Jane Carey and Ping Zhang). He has published over 100 academic papers with over 70 colleagues. Dov is now President Elect of AIS, and was awarded AIS Fellowship in 2008.

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