

## EDITOR'S COMMENTS

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It is a great honor to become the 11<sup>th</sup> Editor-in-Chief of *MIS Quarterly*. It is also very humbling to be in the company of the 10 illustrious scholars who preceded me. I am thrilled to start my EIC tenure at this point in my career. I would like to give special thanks to the members of the *MISQ* Policy Council, who trusted me with the job, and to all my colleagues in the field who have supported me. In this first editorial, I would like to offer my reflections on IS research based on my 27 years of experience in the field, as well as some thoughts about how I see the future of the *Quarterly*.

IS research started to take shape in the early 1970s, when the first wave of IS dissertations appeared. The classic paper by Ives et al. (1980) provides a very interesting overview of those dissertations, with an early assessment of the field—then less than 10 years old—along with a unifying framework and definition: “MIS research is the systematic investigation of the *development, operation, use and/or impact* of an information (sub)system in an organizational environment” (p. 910, emphasis added).

Fast forwarding 33 years: *MIS Quarterly* currently states it publishes “knowledge concerning the *development* of IT-based services, the *management* of IT resources, and the *use, impact, and economics* of IT with managerial, organizational, and societal implications” (emphasis added).

The information revolution has changed many things since the 1970s, touching all facets of society. Exciting waves of technology brought about deep and broad changes to our world. But IS research is still about the *development, use, operation (management), and impact* of IT. The difference is that the boundaries have broadened, from inside the organization to society and everything in between, from mainframe computing to the current world of networked economies, social graphs, and the web of things.

Methodological approaches and reference research paradigms have also broadened in the last four decades. The first wave of dissertations of the 1970s paved the way for IS research to follow an explanatory paradigm investigating the *use and impact* of IT and anchored in the disciplines of cognitive sciences, psychology, and organization sciences. In the 1980s, Keen (1980) called for a broader categorization of IS research along the lines of reference disciplines: psychology, computer science, economics, organization behavior, etc. In 1991, two separate IS research communities, which found themselves outside the mainstream research models and approaches of the 1970s and 1980s, created their own pre-ICIS workshops—WISE (Workshop on Information Systems Economics) and WITS (Workshop on Information Technology and Systems)—as forums to advance their research agendas. Using Economics as its reference discipline, the WISE community flourished into a very vibrant community of researchers, approaching interdisciplinary phenomena brought about by the Internet and subsequent advances, and addressing the *use–management–impact* tenets of IS research through an Economic lens. The WITS community had more of an engineering and computer science reference, and emphasized the *development* aspects of IS research. This community also thrived and later defined itself around the *design science* paradigm, put forth in the seminal paper by Hevner et al. (2004).

As shown in Table 1, taken from Banker and Kaufmann (2004), the 2000s recognized a broad diversification of research approaches, theories, methodologies, reference disciplines, etc.

**Table 1. The Five Streams of IS Research** (Adapted with permission from R. D. Banker and R. K. Kauffman, "The Evolution of Research in Information Systems: A Fiftieth-Year Survey of the Literature in *Management Science*," *Management Science* (50:3), March 2004, pp. 281-298. Copyright © 2004, the Institute for Operations Research and the Management Sciences, 7240 Parkway Drive, Suite 300, Hanover, Maryland 21076)

Research Stream	Level of Analysis	Theories	Methodologies Used	Related Disciplines
Decision Support and Design Science	System level, mostly in conjunction with human users or business processes, up to the level of a strategic business unit	Decision theory, network optimization, microeconomics, control theory	Mathematical programming, forecasting, expert systems	Computer science, operations research, economics, marketing, strategic management
Human-Computer Systems Design	User-focused, involving both individuals and groups	Cognitive style, behavioral decision theory	Experiments, argumentation, simulation, system test-beds	Psychology, cognitive psychology, decision science, design science
Value of Information	Individual decision makers, technologies in business process context, firm actions in market contexts	Information economics, real options theory, information sharing theory	Decision trees, analytical models, statistical analysis, math programming, simulation	Economics, decision science, risk management
IS Organization and Strategy	Spans levels: greatest emphasis on individuals, groups, and business units, and on organizations, strategic interactions in the marketplace	Diffusion theory, media richness theory, resource based view of the firm, transaction cost economics, task-technology fit, technology acceptance model	Models, case studies, field studies, experiments, surveys, argumentation, blend of qualitative and quantitative models	Organizational theory, strategic management, social psychology, cognitive psychology, economics
Economics of IS and Technology	Span levels: individual decision makers, business process/product/project, strategic business unit/firm, industry, market, economy	Theory of the firm, production economics, game theory, contract theory, network externalities	Analytical modeling, empirical analysis and econometrics, cross sectional and longitudinal design, experiments, simulation	Economics, operations research, computer science, strategic management

### Where Is IS Research Now?

Today we continue to have the diversified approaches and influences along the lines presented in Table 1, which makes me very optimistic about where we are as a research discipline. We continue to build a critical mass of IS researchers that are trained well across all of the subfields of the discipline. Our top journals are in great shape. Submissions are very high, editorial boards are very solid. And, very importantly, the object of our research, the IS field, is going through exciting transformations that present us with incredible research opportunities.

There are two factors that are inherent to our discipline that will continue to create outstanding opportunities for us: the *fast technological changes* and the *interdisciplinary* nature of IS.

Ironically, these factors preclude our discipline from having a clear definition of its boundaries and identity. Over our history, the quest for formulating a research identity and unifying paradigms continues to elude us; as example, see the pertinent discussions over the years, such as Baskerville and Myers (2002), Benbasat and Weber (1996), Benbasat and Zmud (2003), Gray (2001, 2003), Grover et al (2006), Lyytinen and King (2004), Markus and Saunders (2007), Straub (2012), Wade et al. (2006), and Weber (2006, 2012), just to mention a few.

On the other hand, as seen in Table 1, IS research is composed of various subareas that look at the *development–use–management–impact* of technology through different lenses. Not having a unifying core or defined boundaries may actually work in our favor. There are limitless opportunities for the discipline at this juncture to collectively lead and generate impact.

We are living through a period of time in which, for the first time and concomitantly, exponential growth is driving advances in processor speed, network bandwidth, and storage. The innovating forces that are unleashed come at us through technology waves that impose dramatic changes to businesses, economies, societies. We have been through many of these over the years (client-server systems, the Internet, e-commerce, social computing, mobility, the cloud, big data analytics). More will certainly come because of the exponential rate of changes that spur IT-based innovations. As IS researchers, we are positioned very well to “arrive at the scene early.” We are trained to connect the dots, and are able to identify the phenomena of interest before other disciplines. We have to make sure we are the first to own the new phenomena, address the significant problems, and make relevant contributions. With the pace of technology change, we are fortunate to always have interesting problems to work on.

Undeniably, IS is an interdisciplinary field, both from a reference discipline standpoint and from the application areas it impacts. Value creation out of information and its impact cuts across all facets of business and society. Indeed, IS research has been making an impact on other disciplines. For example, the general area of reputation and trust, recommendation systems, arguably Marketing areas, have been fundamentally molded by IS research such as Dellarocas (2003) and Ba and Pavlou (2002), whose IS works are heavily cited by Marketing researchers. And more and more IS researchers are successfully publishing in top journals of other disciplines. A few recent examples are Acquisti et al. (2012), Aral and Van Alstyne (2011), and Ghose et al. (2012).

### **Where Is MIS Quarterly Now?**

*MISQ* is in great shape as the premier journal of the field. With a 2-year impact factor of 4.447 and a 5-year impact factor of 7.497 in 2011, *MISQ* towers above most business journals. It is widely viewed as the most prestigious journal of the IS discipline; publications in *MISQ* are highly considered in tenure all over the world.

### **The Future**

Given the landscape of the IS field, our diverse core competencies and capabilities as IS researchers, and the exciting opportunities that lie ahead, here are five goals that will allow *MISQ* to continue to lead and shape our future:

1. Be a broad and general platform that attracts and publishes the best IS research.

*MISQ* needs to publish the best work generated by IS researchers. Given the multifaceted aspects of our field, and the opportunities that lie ahead, *MISQ* has to continue to shape the discipline in a forward-looking way. More than ever it needs to provide an open, generalist, and diversified platform to attract and publish the best IS work. This has to be accomplished with the preservation of its traditional core competencies and philosophy that have taken it to where it is.

2. Recognize emerging areas and phenomena brought about by innovations.

By arriving at the scene early, and because IS researchers are well equipped to study technology-driven phenomena, we have to lead by defining and owning emerging streams. *MISQ* can play an important role through carefully selecting topics for special issues, inviting research essays and commentaries, and serving as a platform for screening these new phenomena, sorting the “fads of the day” from the developments that have lasting impact.

3. Foster an environment for interdisciplinary research.

The networked world, the immense computational power, and access to a variety of data sources have affected other disciplines and enabled their research approaches in ways never seen before. All the other business disciplines, entertainment, healthcare, biosciences, social sciences, just to name a few, can benefit from a better understanding and utilization of

information sciences and systems. Interdisciplinarity is in our DNA, and we have to take advantage of it. *MISQ*'s platform can serve as a catalyst for interdisciplinary research, by attracting editors from other disciplines, sponsoring special issues, and spearheading innovative interdisciplinary research.

4. Strengthen methodological approaches.

Thorough methodological approaches are the key to establish sound and sustainable work and elevate our own field. *MISQ* will continue to attract and publish works that focus on advancing research methods.

5. Promote *intradisciplinarity* as a way to address broad problems and generate impact.

There is so much to gain by bringing together the different approaches to solve larger problems. Design science, behavioral, and organizational IS go hand in hand in developing, testing, and validating the desirable proof-of-concept, and the higher levels of proof-of-value and proof-of-use of technology-based systems (Nunamaker and Briggs 2011). As technology enables more sophisticated and complex applications that include economic transactions and social interactions, economic and behavioral principles should be used together in the assessment of value creation of design science artifacts. The emerging field of behavioral economics brings evidence that psychology and economics are faces of the same coin, especially when it comes to explaining human and organization behavior. IS innovations and environments are natural test beds for the new theories that span all of our research streams. With the increased availability of observational data of human behavior (big data from social media, sensors, websites, etc.), the different research subareas can gain and learn from each other. The key is to rigorously understand the fundamental methodologies to build a solid platform for intradisciplinary IS. Large problems require multiple approaches for their solution.

### **A Word about Detmar Straub's EIC Tenure**

Thanks to the great work advanced by Detmar Straub in the last 5 years, the journal has already made significant progress toward the goals outlined above. Early on in his tenure, he removed barriers for publication of broader IS research, and made critical senior and associate editor appointments. He encouraged timely special issues on a wide range of topics. He dedicated tireless efforts toward his ambassadorial role, and did a great job overseeing the operations of the journal. *MISQ* has delivered on its legacy of excellence during his tenure, and is well positioned to continue to excel in the future. As the incoming EIC I am very appreciative of everything he did, and I am ready to build on it.

In closing, I would like to thank the University of Minnesota editorial office. Jan DeGross and Jennifer Syverson have been wonderful guiding me through all the details of the journal's operations, and preparing me for the job. I also look forward to working closely with Alok Gupta, *MISQ* publisher. I'm ecstatic to join such a high-caliber team.

### **References**

- Acquisti, A., John, L., and Loewenstein, G. 2012. "The Impact of Relative Judgments on Concern about Privacy," *Journal of Marketing Research* (49:2), pp. 160-174.
- Aral, S., and Van Alstyne, M. 2011. "The Diversity-Bandwidth Tradeoff," *American Journal of Sociology* (117:1), pp. 90-171.
- Ba, S., and Pavlou, P. 2002. "Evidence of the Effect of Trust Building Technology in Electronic Markets: Price Premiums and Buyer Behavior," *MIS Quarterly* (26:3), pp. 243-268.
- Banker, R. D., and Kauffman, R. K. 2004. "The Evolution of Research in Information Systems: A Fiftieth-Year Survey of the Literature in *Management Science*," *Management Science* (50:3), pp. 281-298.
- Baskerville, R. L., and Myers, M. D. 2002. "Information Systems as a Reference Discipline," *MIS Quarterly* (26:1), pp. 1-14.
- Benbasat, I., and Weber, R. 1996. "Rethinking Diversity in Information Systems Research," *Information Systems Research* (7:4), pp. 389-399.
- Benbasat, I., and Zmud, R. 2003. "The Identity Crisis Within the IS Discipline: Defining and Communicating the Discipline's Core Properties," *MIS Quarterly* (27:2), pp. 183-194.
- Dellarocas, C. 2003. The Digitization of Word-of-Mouth: Promise and Challenges of Online Reputation Systems," *Management Science* (49:10), pp. 1407-1424.

- Ghose, A., Ipeirotis, P., and Li, B. 2012. "Designing Ranking Systems for Hotels on Travel Search Engines by Mining User-Generated and Crowd-Sourced Content," *Marketing Science* (31:3), pp. 493-520.
- Gray, P. 2001. "Introduction to the Special Volume on Relevance," *Communications of the AIS* (6), Article 1.
- Gray, P. 2003. "Introduction to the Debate on the Core of the Information Systems Field," *Communications of the AIS* (12), Article 42.
- Grover, V., Ayyagari, R., Gokhale, R., Lim, J., and Coffey, J. 2006. "A Citation Analysis of the Evolution and State of Information Systems Within a Constellation of Reference Disciplines," *Journal of the AIS* (7:5), pp. 270-325.
- Hevner, A., March, S., Park, J., and Ram, S. 2004. "Design Science in Information Systems Research," *MIS Quarterly* (28:1), pp. 75-105.
- Ives, B., Hamilton, S., and Davis, G. B. 1980. "A Framework for Research in Computer-Based Management Information Systems," *Management Science* (26:9), pp. 91-934.
- Keen, P. G. W. 1980. "MIS Research: Reference Disciplines and a Cumulative Tradition," in *Proceedings of the First International Conference on Information Systems*, E. McLean (ed.), Philadelphia, PA, pp. 9-18.
- Lyytinen, K., and King, J. L. 2004. "Nothing at the Center? Academic Legitimacy in the Information Systems Field," *Journal of the AIS* (5:6), pp. 220-246.
- Markus, M. L., and Saunders, C. S. 2007. "Editorial Comments: Looking for a Few Good Concepts...and Theories...for the Information Systems Field," *MIS Quarterly* (31:1), pp. iii-vi.
- Nunamaker, J. F., and Briggs, R. 2011. "Toward a Broader Vision for Information Systems," *ACM Transactions on Management Information Systems* (2:4), Article 20.
- Straub, D. 2012. "Editor's Comments: Does MIS Have Native Theories?," *MIS Quarterly* (36:2), pp. iii-xii.
- Wade, M., Biehl, M., and Kim, H. 2006. "Information Systems Is Not a Reference Discipline (and What We Can Do About It)," *Journal of the AIS* (7:5), pp. 247-269.
- Weber, R. 2006. "Reach and Grasp in the Debate Over the IS Core: An Empty Hand?," *Journal of the AIS* (7:10), pp. 703-713.
- Weber, R. 2012. "Evaluating and Developing Theories in the Information Systems Discipline," *Journal of the AIS* (13:1), pp. 1-30.

