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Mutual Informing Between IS Academia and Practice: Insights from KIWISR-5

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Abstract:

The relationship between Information Systems (IS) scholars and IS practitioners has been debated since the birth of the IS discipline. How are academics interacting with practice, and how should we? In this article we propose that academia-practice collaboration, namely "mutual informing," is an existential aspect of the Information Systems field. This article is based on presentations, discussions, group work, and a debate that took place during the Fifth Kristiansand International Workshop on Information Systems Research (KIWISR), held at University of Agder in Kristiansand, Norway. The theme of KIWISR-5 was "For Whom Do We Toil? Mutual Informing Between Academia and Practice." As a synthesis of the workshop, we propose that mutual informing consists of, at least, topics such as choice of publication outlets, facilitation of collaboration, roles in research process, and delivery of teaching. Further, we suggest that mutual informing is concerned with transferring and transforming knowledge between the realms of design and development, use, and management of Information Systems. The biggest challenges to mutual informing are the different knowledge interests and timeframes between the realms of academia and practice.

Keywords: mutual informing, Information Systems

Editor's Note: The article is a report on the 5th Kristiansand International Workshop on Information Systems Research (KIWISR), held at University of Agder, Kristiansand, Norway, May 2010.

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Volume 29 article 7

I. INTRODUCTION: KIWISR 2010

Kristiansand International Workshop on Information Systems Research (KIWISR) is a biennial event hosted by the University of Agder (UiA) in Kristiansand, Norway. The objective is to examine the state of the art in IS research through discussions, presentations, debate, and dialogue. These intellectual discourses and dialectics could be useful to explore innovative, creative, and provocative ideas. Such new ideas could be methodological (e.g., innovative research approaches), theoretical (e.g., development of theories, integration of theories), and/or "out of the box" thinking. The papers presented at the fifth edition of this workshop, together with the responses and commentaries by workshop participants, form the basis of this article.

The continuing series of the two-day KIWISR workshops has previously taken place in 1999, 2001, 2006, and 2008. For each event, prominent international personalities in IS have been invited. Participation is by invitation, which was a policy decision made strictly in the interest of manageability. KIWISR aims to look at nascent and provocative topics. In addition, neglected issues in "traditional" or "mainstream" IS research (e.g., social responsibility and value systems in IS, contributing to a "better" world, IS and national development) have been brought into the light in order to be properly reflected upon.

Retrospectively, the theme from the previous edition of KIWISR, held in 2008, was "Mode 2 Knowledge Production" [Gibbons et al., 1994; Nowothy, Scott, and Gibbons, 2003]. In short, Mode 2 knowledge production is solution-focused and takes place in the context of economic and social applications. The research agenda is determined by the common interests of a variety of stakeholders, including academics and practitioners. Continuous mutual informing occurs between the fundamental and the applied and the theoretical and the practical. In general, knowledge is built in the contexts where it is put to use, and its products and results, as they materialize, contribute to further theoretical advances. Mode 2 success is defined not just in the traditional dimension of scientific excellence, as judged by disciplinary peers, but also efficiency, usefulness, and the ability to fulfill the expectations of multiple stakeholders. Thus, for Mode 2 success, scientific rigor without relevance becomes meaningless. In this perspective, constant and mutual informing and interaction between academia and practice are essential. The two can even be seen as intertwined. However, there is still a considerable debate over the relevance of academic research to practice, and this is an especially vital question in a practice-oriented discipline such as Information Systems.

The fifth KIWISR was organized in May 2010 to give continuity to this deliberation. The theme for the workshop was "For Whom Do We Toil? Mutual Informing Between Academia and Practice." Mutual informing is the process of bridging the knowledge gap between academia and practice. It involves participation, exchange of experiences, resource sharing, and engagement of IS scholars and IS practitioners to provide shared benefits through learning and knowledge creation. Typical outcomes of the mutual informing are value creation and problem-solving for practitioners, advances in theory development for academics, and knowledge transfer between the two.

The two-day event was successful in generating relevant controversy and excitement. The invited participants were Detmar Straub (J. Mack Robinson Distinguished Professor, Georgia State University and the editor-in-chief of *MIS Quarterly*), Carol Brown (Professor, Stevens Institute of Technology, and editor-in-chief of *MIS Quarterly Executive*), Matti Rossi (Professor, Aalto University), Joyce Elam (James L. Knight Eminent Scholar and Executive Dean, College of Business Administration, Florida International University), Hesham Ali (Professor of Information Technology and Dean of the College of Information Science and Technology at the University of Nebraska, Omaha), and Roberto Evaristo (Knowledge Management Program Office, 3M), and UiA professors Richard T. Watson (University of Georgia), Peter Axel Nielsen (Aalborg University), and Tero Päivärinta. The moderator of the event was Maung K. Sein (Professor, University of Agder). The event was attended by the majority of the UiA IS faculty.

Overall, this article raises important questions concerning mutual informing between IS scholars and IS practitioners. These issues are very relevant to the contemporary IS realm. Section II describes the workshop's first-day debate, while Section III offers the key points from the second day's presentations. In Section IV we discuss the concept of mutual informing in detail, and we conclude the article in Section V.

Volume 29

II. DEBATE: SHOULD ACADEMIC ARTICLES BE WRITTEN TO INFORM PRACTICE?

To highlight the theme, the workshop started with a debate organized in the memory of Willy Dertz, Assistant Professor in the IS department at UiA. Dertz epitomized the bridge between practice and academia, having joined UiA after years of experience in IS practice. He continued to pursue Mode 2 knowledge, especially in the field of benefits realization in e-government, until his untimely demise in January 2010. The debaters were two colleagues of Dertz: Professor Tero Päivärinta (UiA) and Professor Peter Axel Nielsen (UiA and Aalborg University).

The instigating motion for the debate was: "Academia and Practice are distinct and separate communities in Information Systems area. Hence academic articles should not be written to inform practice." Nielsen argued for the motion and based his arguments on theoretical frameworks, such as communities of practice (CoP), network of practice (NoP) and Information Infrastructure (II) [Brown and Duguid, 2000; Lave and Wenger, 1991; Star and Ruhleder, 1996; Vaast and Walsham, 2009]. As Brown and Duguid [2000] described, in NoPs "people have practice and knowledge in common" [p. 141], but "are mostly unknown to each other. Indeed, the links between the members of such networks are usually more indirect than direct—newsletters, Web sites, Bulletin boards, listservs, and so forth to keep them in touch and aware of each other. Members coordinate and communicate normally through third parties or indirectly" [p. 142]. NoPs can have an enormous reach. NoPs are loosely coupled systems that "don't take action and produce little knowledge" [p. 142]. CoPs on the other hand, represent "relatively tight-knit groups of people who know each other and work together directly. They are usually face-to-face communities that continually negotiate with, communicate with, and coordinate with each other directly in the course of work" [p. 143]. Due to these face-to-face relationships the communication reach is bounded. Likewise, information infrastructures correspond to socio-technical systems that provide global resources and help to connect multiple smaller entities [Star and Ruhleder, 1996].

Nielsen argued that we are only at rare occasions in a CoP with practitioners and only at rare occasions in NoP with practitioners, therefore, the trans-situated (lack of proximity due to organizational and geographical distance) learning of the researchers is distinctly different from that of the practitioners. The trans-situated learning processes rely on the local universality [Timmermans and Berg, 1997] (a certain degree of similarity in practices) of an information infrastructure (II) and on the emergent embeddedness of its use with other supporting infrastructures [Vaast and Walsham, 2009]. He further argued that mutual informing between IS scholars and IS practitioners can be done in different outlets, for instance, CoP through co-authoring, NoP through the publication process, and II through publications. Nielsen's presentation suggested that research methodologies, such as Design Science Research [Hevner et al., 2004], Action Research [McKay and Marshall, 2001], and Action Design Research [Sein et al., 2011] can bring academia and practice together. He gave further empirical examples to show how it is possible to develop both research-oriented [Persson et al., 2009] and practice-oriented [Persson and Mathiassen, 2010] publications from the same case study. His arguments concluded with the implication that there should be mutual informing, but through separate outlets.

Päivärinta opposed the motion and strongly argued that academia should educate practitioners through academic publications. His arguments were also supported by theoretical examples such as structuration theory [Desanctis and Poole, 1994; Giddens, 1984] and empirical evidence such as Scrum [Schwaber and Beedle, 2001], a practical method used for developing flexible software systems. He defended his argument by saying that just like agents and structure influence and are influenced by each other (in structuration theory), so do academics and practitioners affect and are affected by each other's activities. Scrum was greatly influenced by the academic knowledge management research of Ikujiro Nonaka and Hirotaka Takeuchi [1986]. Päivärinta concluded his arguments by suggesting that practitioners provide data, and academia transform them into knowledge. This knowledge is then again consumed by practitioners. In this way, it is a reciprocal system.

Eventually, based on debaters' opposite views, the workshop's participants from academia and industry provided their respective perspectives. For instance, academics suggested that articles written for different audiences or readerships such as *MISQ* for academia and *MISQ Executive* for practitioners, should be presented differently. The response from practice was delivered by Arild Sandnes, who is the CIO of Kristiansand municipality. He suggested that articles for practitioners should be written in an easy-to-read language using metaphors and rich descriptions of the context.

Throughout the workshop the theme of mutual informing was continuously explored through panels and discussions. Attendees were divided into three groups in which they discussed various channels of informing, the barriers in informing, and actions on informing. Based on the discussions, the ideas on mutual informing between academia and practitioners were synthesized into a number of suggestions:

- · university and industry partnerships
- · conducting workshops

- institutional changes in incentive programs
- · doctoral seminars for practitioners
- surveys of alumni to identify the practical value from an institution's programs

III. PRESENTATIONS DURING KIWISR 2010

On the second day, the workshop centered on presentations of specific topics by the panelists, each of whom presented his or her research projects that related to the theme of mutual informing. The following sections describe the key points from each presentation.

Researching for Mutual Informing

Matti Rossi and Roberto Evaristo presented their experience of doing research while working as practitioners. Matti Rossi described his involvement in the metamodeling research stream that took place at the University of Jyväskylä since the late 1980s. Metacase Consulting was a start-up company that was born as a spinoff of the metamodeling research. In mid-1990s, Rossi was a Ph.D. student at the University of Jyväskylä, studying advanced CASE tools, while also being a software developer, minority shareholder, and board member at Metacase Consulting. In this way, he wore two hats, being both an academic and a practitioner. Mutual informing was thus a day-to-day routine, connecting both worlds. Mutual informing between practice and academia helps to build the cycle of theoretical, conceptual, constructive, and empirical knowledge.

Likewise, Roberto Evaristo's presentation on 3M inspired academia to work on innovation. He advocated that this kind of innovative work attracts both practitioners and academics equally. He pointed to the importance of mutual informing. Not only are we, as academics, informing and helping to build the knowledge base, but also academia has to be willing to learn from practice. Together we can build the knowledge base, from which both will be able to benefit.

Publishing for Mutual Informing

Carol Brown and Rick Watson shared their insights into how we as academics can work toward mutual informing in our publications. They pointed out the importance of understanding the practitioner audience and how it differs from academia. Where academics value theory creation and testing, practitioners value useful knowledge. Practitioners want research that provides evidence about how best to act in a given situation, while academics are exploring new angles to solve problems. Not all research is designed to mutually inform, but when this is a goal, it needs to be practitioner-oriented in its design. Practitioner-oriented research uses a research approach seen as accessible to the practitioner. The topic should be important today, and the findings should lead to guidelines that practitioners can act on. Publishing for mutual informing is possible, but it requires a different strategy for writing up findings.

Publishing for mutual informing also requires close collaboration between academia and practice, as viewed in the submission guidelines for the largest publication outlets for practice in our field: *Harvard Business Review, Sloan Management Review,* and *MIS Quarterly Executive*. These journals try to bridge the gap between academia and practice. They aim to publish articles relevant to practice, written by academics, drawn on findings from the field and presented as rich stories. Also pointed out in this session was the lack of incentives for publishing through outlets that create a bridge between academia and practice.

Facilitating Mutual Informing

Hesham Ali and Joyce Elam gave their insights into facilitating higher education's possibilities toward mutual informing. Higher education is at a crossroads, and universities have to shift their focus. The ease of finding information enabled by global information flow makes students more active. They express a wider range of interests than previous generations have shown. With this shift in higher education, the focus on students is growing, and there is a higher integration of teaching, research, and outreach.

Bridging between disciplines in higher education was also one of the points made in these presentations. Where the different disciplines historically have been treated separately, the shift in businesses and the view of the world have caused a cross-disciplinary focus to emerge.

Further, both presenters pointed out the importance of a closer relationship between higher education and industry. There is a mutual dependence between the two parties as input from industry can help higher education institutions to achieve their goals. Feedback from industry on their expectations for graduating students is valuable, both to students and the university. Times are changing in the business environment, and businesses will also change. This means a shift in needed resources. Building a bridge across this boundary can be done by collaboration. Another way of bridging the gap between universities and industry can be faculty involvement on corporate boards. This can

Volume 29

Article 7

be a valuable link between business practices and educational experience. In addition, motivating faculty to meet the requirements by the U.S. business school accreditation criteria (AACSB), where knowledge transfer is an important element, may prove to be valuable for both academia and practice.

Closing Keynote: Is Information Systems Research Relevant?

In his closing keynote, Detmar Straub discussed what he termed "the real issue" in IS research, by stating that "We are applied scientists, then, not engaged in 'basic' research and training." As higher education institutions we are aiming to contribute knowledge to work practices within a certain discipline. When we understand the underlying goals of both academia and practice, the tension between the two fields may fade into the background and even fade away completely. As higher education institutions, we are educating the next generation of practitioners, which means our teaching has to be relevant for this aim. It requires us to teach students the skills and critical thinking that make them better practitioners.

When we do research, it has to be relevant to practitioners. Doing this means that our research has to be applicable to practice, and our findings need to be communicated to practitioners in an appropriate format. Journals are classified into three different groups, based on the audience of the publication. Academic journals target scholars. Academic–practitioner journals aim for a hybrid audience of both academics and practitioners. Practitioner journals aim for practitioners. The fact there are three types of journals shows the true colors of IS research; we target different audiences through different journal types. Straub points at academic journals not being the outlet that practitioners should read. There are other outlets in which we as academics can communicate our research to practitioners. These outlets include textbooks, courses, education programs, seminars, and speeches made by academics in an industry settings.

Straub ended his keynote address by pointing to the importance of the IS field as an applied field. The students being educated by us will be future practitioners. We are obligated to contribute to society through our students and our research. The point is not to be aligned with practice, but our research should be useful to practitioners, either to the current or to the next generation.

IV. DISCUSSION

As demonstrated by the KIWISR-5 presentations, there exists a general consensus on the importance of mutual informing. Nevertheless, there is also a disagreement on the actual meaning of this concept. In this section we discuss the multiple meanings that "mutual informing" entails.

One area of mutual informing materializes in the outcome of a research process, namely in publications. As written communication has always been highly valued in the scientific community, it is logical to emphasize publications as an important means of informing. Therefore, scholarly publications are seen as central to disseminating information from academia to the major audience.

Academia-practice collaboration is often linked to the "rigor vs. relevance" debate (see, for example, Gulati, 2007; Benbasat and Zmud, 1999). This debate traditionally has been centered around the worry about practitioners' low interest in reading IS scholars' academic publications. An underlying assumption is that practitioners would be interested in reading scientific Information Systems publications if the articles would better address the contemporary problems of Information Systems practice [Straub and Ang, 2008].

According to Myers [2009, p. 13] "the issue of rigor versus relevance seems to be discussed at almost every conference. Most academics tend to agree with the notion that research in information systems and business schools more generally should be more relevant to business professionals." Myers defines rigorous research as something that is "scientific," e.g., meets scientific standards, has been subject to academic peer review process, is published in an academic journal, and provides a theoretical contribution. Likewise, relevant research offers something practical that practitioners can apply in near future. Often "relevant research" is not published in an academic publication outlet, but in a consulting report or an industry magazine.

Lately the concern about scientific articles' lack of relevance has noticeably diminished, as eyes have opened for the plethora of venues for mutual informing. Straub and Ang [2011, p. vii] describe eighteen different venues: "textbooks and other books that reflect the best theoretical and practical thinking in the business disciplines, higher education courses, and degree programs, noncredit continuing education programs for edification, short courses, or seminars (e.g., for continuing education units), public speaking engagements by academics, newspaper articles, brochures that describe in lay terms the ongoing research of research centers, teaching students the principles of IT consultancy, corporate training by academics, certificate programs, collaborative research between academics and practitioners, sponsored conferences based on research findings, faculty internships, findings presented to

university advisory groups, white papers, and policy briefings, executive doctoral programs, academic–practitioner journals (e.g., MISQ Executive, Academy of Management Executive), and scholarly journals."

Several respected scholars have argued for a multi-audience publication strategy. Simply put, academic audiences can be approached through academic publications, while practitioner-oriented publication outlets are meant for practitioner-targeted articles. If both audiences have to be reached at the same time, the academic–practitioner outlet is the right choice. Therefore, top IS journals, such as MIS Quarterly and Information Systems Research, are best suited for articles that are meant to be read by other researchers. The better ranking a journal has, the more respected the article will be by academics. The academic–practitioner journals include MISQ Executive, MIT Sloan Management Review, Harvard Business Review, Communications of the Association for Information Systems, Communications of the ACM, among others.

While the multi-audience publication strategy is becoming accepted by the majority of IS scholars, it is not easy to follow in the earlier stages of a career. Myers [2009, pp. 13–14] states that in veracity scholars "are faced with the need to gain tenure and promotion. In order to gain tenure, most business schools in research universities require faculty members to have a record of publications in reputable academic journals. This job requirement means that most faculty members end up postponing indefinitely their desire (if they have one) to conduct 'relevant' research."

In his KIWISR presentation, Rick Watson described how he has widened his scope of publication outlets outside of traditional academia-oriented journals only in the later stage of his career, e.g., targeting MISQ Executive. In general, strategies for mutual informing may vary highly during different stages of a researcher's career. In early stages, the institution-set incentives are more explicitly defined, with academia-oriented outlets strongly favored. As an example, Robey [2001] recommends that junior Ph.D. holders submit two manuscripts from his or her dissertation to top IS journals, with at least one of these being sole-authored. The more merited a scholar becomes in his career, the more freedom there is to choose publication outlets.

In addition to publications, i.e., research outcomes, as a means of mutual informing, the research process itself offers various possibilities to inform and be informed. Research data is gathered from interactions with practitioners, processed by the researcher, and written into the format of an article. While the concerns for research are separate from concerns for practice, there are still several research methods that can bridge this gap, including action research, design research, action design research, case study, and field survey methods.

We have used the traditional dichotomy of researchers and practitioners. Here the researcher is primarily seen as a scientist who can inform practitioners and be informed by them in research-embedded efforts. But since the Information Systems discipline is an applied discipline, there are, and should be, many shades of grey between the polar opposites of "scholar" and "practitioner." Indeed, we believe that these shades of grey are needed to address the gap that would result if we were to live in a bipolar world of research and practitioner fundamentalists.

Therefore, the role of the researcher can take many different forms. It is becoming more and more accepted that the researcher and the practitioner are actually the same person [Jarvis, 1999]. This requires people who can manage multiple roles and who have good social skills. For example, "industrial Ph.D. student" is a typical multirole approach. A multirole researcher informs and is being informed by working every day in her practitioner community and by synthesizing her experiences into publication outlets of choice.

Even though there might be interest in collaboration between academia and practice, often this relationship does not come without problems. It is widely acknowledged that knowledge interests are different in scientific and practitioner communities. Scientists value theoretical knowledge that can be applied as widely as possible. Practitioners are often more interested in solving contemporary problems in the context of their work. The knowledge-interest gap leads to varying requirements for contributions and outcomes of a research project.

What is often neglected in discussions concerning mutual informing, but was explicitly addressed during KIWISR-5, is the importance of teaching. Teaching is one of the core services universities offer, and students today will be the practitioners of tomorrow. After graduating, the students will put the learned theoretical knowledge into use. Thus, our day-to-day bachelors and masters level teaching is an important form of academia that informs practice

Volume 29

Article 7

The UT Dallas ranking list of Top 100 Business Schools (http://som.utdallas.edu/top100Ranking/journals.php) is based on highly rated top journals within business and management. On this list, there are only two IS journals: MIS Quarterly and Information Systems Research. Various other lists and rankings exist to define the top journals in the field of Information Systems. Another popularly referred IS journal list is the Senior Scholars' Basket of Journals (http://home.aisnet.org/displaycommon.cfm?an=1&subarticlenbr=346), also known as the Basket-of-Six. This includes the Journal of MIS, European Journal of Information Systems, Information Systems Journal, and Journal of the Association for Information Systems, in addition to the already-mentioned MISQ and ISR.

[Davidson, 2011]. Of course, this does not exclude the possibility that additional teaching is targeted to current practitioners as well, for example, as a form of continuing education.

One of the barriers of mutual informing between academia and practice is diversity in knowledge forms, and the different nature of experience and motivation hinders communication between the two realms [GillandBhattacherjee, 2009]. With the previously discussed crossroad in higher education where we are educating future practitioners, the opportunity to create a common language and terminology between the two realms is highly present. Also facilitating part-time education for practitioners, both at the masters and the Ph.D. level, may increase mutual informing between the two realms.

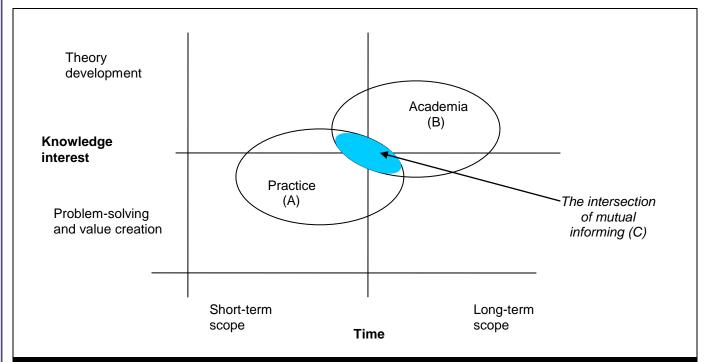


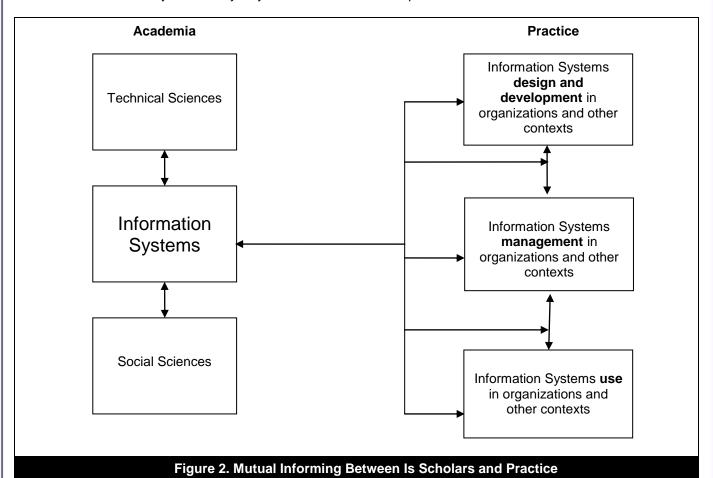
Figure 1. Differences Between Temporal and Knowledge Interests Between Academics and Practitioners

Information Systems is a cross-disciplinary applied field, and those who work in it are interested in understanding and changing the real world, combining both social and technical sciences. By definition, the "application" in "applied science" involves "boundaries" that are crossed. We take something from one realm and apply it in another. In IS, these boundaries exist within academia, within practice, and between academia and practice. Mutual informing, the art of crossing the "boundaries," is existential to Information Systems research. As depicted in Figure 1, the intersection of practical solutions for practitioners and long-term theory building for academics is the perfect situation to offer value to both camps. Roberto Evaristo (representing both academia and practice) also discussed boundary spanning and the nature of problems suitable to academia-practice collaboration. He divided problems into three buckets: (A) those that require an immediate solution (consulting), (B) those that are mostly long-term theory building/testing, and (C) those that have characteristics of both (A) and (B). Evaristo proposed that (A) is not wellsuited for academia, and (B) offers little enticement to practitioners. (C), on the other hand, is the perfect situation to offer value to both camps and, therefore, a fertile area for joint work. The difficulty is that such problem types are inherently hard to find because they ride on an overlap of characteristics that are not fully transparent to both sides—unless you have access to the boundary spanner individual. As the knowledge interests and temporal interests differ between these two realms, fruitful and sustainable research partnership might require institutional facilitation, as Hesham Ali and Joyce Elam expressed in their presentation, in addition to sole researcher's efforts to facilitate. In institutionally-facilitated collaboration settings, practitioners (i.e., companies) can provide funding, access to data, research topics, and so forth. In addition, the university can provide research and development, teaching, and an educated workforce (see Figure 1).

Historically, IS research has been most concerned with Information Systems in business organizations. While this remains a valid approach, it is only one approach among many. We are free to study any context where IS is designed or developed, managed or used, including governments, nongovernmental organizations, informal groups, tribes, fraternities and sororities, criminal organizations, online communities, or societies, among others (see Figure 2).

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Some "pure" sciences have defined themselves using an *island of knowledge* metaphor [Hinchcliff, 2006]. The researcher is an inhabitant of an island of knowledge, trying to grow the island. Information Systems researchers are not like this. We are sailors and nomads, traveling from island to island. Information Systems science is not an island, it is a ship sailing on the sea. We take something from one island and bring it to another. Baskerville and Myers [2009] observed that IS researchers are unfortunately followers, not leaders, of Information Systems fashion waves. While we are interested in problems oriented from practice, we could perform better at being presents when the problems occur. We propose that we must extend the intersection of academia and practice and take a more central role in it. That may be the only way we can better influence practice.



V. CONCLUSION AND FUTURE DIRECTIONS

While the Information Systems field is considered to be an applied field, there are indicators which contradict this fact, as we have reported in this essay. The cultural differences between academia and practice may make mutual informing difficult. However, as academics, we need to gain access to industry to conduct our research, to build on our knowledge base. Also, industry is eager to collaborate with academia to solve their immediate problems and issues. Together these two notions indicate there are interests from both industry and academia to conduct research toward mutual informing.

Higher education is reported to be at a crossroad, where collaboration among disciplines and collaboration between academia and industry will become more important, as presented by Hesham Ali. With this shift in mind, the responsibility that will be put on academia to decrease the gap toward practice will grow, and we need to be able to undertake the changes we will encounter.

To increase mutual informing we should focus on the incentives for academics to use various outlets for their research. Today, as reported, academics do not have the right incentives or possibilities to engage in the mutual informing strategies that practice may see as the most valuable. In Scandinavian research engaged scholarship is a strong tradition [Mathiassen and Nielsen, 2008], where both those in practice and academia are deeply involved in research and mutual informing. This focus might prove to be the future for the IS field, where academia and practice work closely together to create better and more valuable knowledge for both camps.

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Volume 29 Article 7

