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Building the bridge between academia and practice

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Abstract

Debate has persisted over the raison d'être of the Information Systems (IS) discipline. There are many facets to this complex issue, including two closely related ones, namely rigour and relevance in IS research, and the relationship between IS academics and practitioners. The aim of this paper is to further explore and affirm the practitioner perspective of relevance, and to develop a shared understanding of improved models of the academic-practitioner relationship. This understanding develops through a series of three perspectives, viz: the literature, the practitioners, and the academics' reflection. Mixed methods are employed for the data collection, including structured interviews, a focus group and a survey. The findings highlight the important role that stakeholders play, with both practitioners and academics desirous of a closer association. The medical model appears to have the most promise in bridging the gap in the relationship.

Keywords

IS Research, Rigour, Relevance, IS Theory, Practitioner perspective, Academic perspective

INTRODUCTION

The so-called 'IS crisis' has been under scrutiny for decades, almost as long as the existence of the discipline itself (Benbasat, I. & Zmud 2003; Straub 2003, 2004). Of the many facets of this topic, this research is focused on two that are inextricably linked: that of rigour and relevance (referred to as the 'crisis of relevance in IS' by Robey and Markus (1998)); and the relationship between academia and industry.

The academic and practice wings of the IS discipline represent an enormous resource of intellect and knowledge. Glass (1989; 1990) lamented the lost opportunities for both the academic and practitioner sides of the IS discipline as a result of lack of research relevance. It would seem that justification for relevance would be naturally forthcoming for either simple altruistic reasons or in response to the law of economic scarcity. If this is not the case, then surely pragmatism will prevail in addressing the lack of relevance through the current push by government toward greater accountability from the university sector. The resultant synergy arising from the union of academia and practice will deliver rich prizes.

Two useful definitions of relevant research are from Benbasat and Zmud (1999) who define it as 'one that is potentially useful for, as well as accessible by, its intended audience'; and Fallman and Gronlund (2002) who define it as 'the act of making efforts into research issues of concern to a perceived audience'. An appropriate philosophical metaphor for IS research relevance may be Glass's (1998) statement that 'he loved having his Head in the academic side of software engineering, but his Heart in its practice'.

Historically, the analysis of the situation has been overwhelmingly from the academic perspective, leaving a serious gap regarding the practitioner perspective. This was again affirmed when a journal editor commented on a special issue on relevance, that none of the suggestions for change were 'pitched at managers' (Saunders 1998). Perhaps that is because they were not consulted, and the recommendations were based on assumptions by the academic researchers. One of the aims of this paper is to further address the gap of the practitioner perspective. Another aim is to use the enhanced understanding of the practitioner perspective to explore the academic-practitioner relationship. This understanding develops through a series of three perspectives, viz: the literature, the practitioners, and the academics' reflection. As such, this paper continues the process of growing a constructive exchange of ideas and understanding between the two parties, thus responding to Lee's (1999) so far unanswered call for empirical evidence of the relevance of IS research. This is in stark contrast to comments by others, including 'I would never need a handful of interviews to find out why the two worlds overlap so little' (Schneider 2005). Part of the problem is that until now, the story from the practitioner side has been largely based on anecdotal evidence and the assumptions and opinions of the academics who have written about it. As with any sound academic research, if the situation is to be properly understood and addressed, it requires that the

issue be rigorously researched. Indeed it was felt that not only was it imperative to get the practitioners story (via the interviews), but that it was helpful to affirm some of the interview findings via a survey of practitioners. Furthermore, the feedback from academics regarding the practitioners' perspective makes a useful contribution toward a shared meaning and understanding.

The paper is structured as follows: the next section describes the research methods used in this study, followed by the evidence of the divide, the conclusions, and finally, future research directions. The main body of the paper is divided into three interrelated sections: starting with a review of the literary evidence which forms a framework for considering the next section, namely the practitioner perspective, which is then followed by reflections from the academic perspective.

METHODOLOGY

This research employs a multi-method approach including a case study, a small survey and a focus group. It is a pilot study which will inform a further more extensive, exploratory study. The broader study is being conducted under a pragmatist philosophical paradigm, i.e. the research methods used will be 'simply what works' acknowledging the 'inseparable link between human knowing and human knowledge' and 'concrete consequences' (Goldkuhl 2004). Such sentiment is consistent with the intent of this research which is also concerned that 'Research should be part in changing the world, not just a disinterested observer standing aside' (Goldkuhl 2004).

The use of qualitative methods to study software development issues allows the researcher to study selective issues, without the pre-determined constraints of 'categorised' analyses. Semi-structured, in-depth interviews were conducted with four industry professionals. This approach enabled the development of a deeper understanding of the issues as they emerged, and suited the exploratory nature of this research. Being an exploratory study, the interviews, while based on a guideline, were allowed to follow-up on other themes that emerged. Interviews were transcribed and reviewed for accuracy by the interviewees, thus enhancing the internal validity of the researchers' accounts of the interview in accordance with Yin (1994).

The cases were chosen according to Creswell's (1998, p. 62) purposeful sampling technique whereby they are chosen for a specific reason that assists the exploration of the problem. In this situation the overall aim was to explore the practitioner perspective as broadly and as inclusively as possible (within the constraints of the number of interviews). Hence, interviewees were chosen for their qualities of being proactively interested members of diverse organizations. Interviewee roles cover senior application developer, team leader and CTO; while their organizations cover large and small, public and private domains.

A follow-on survey was conducted at a practitioner-based conference (Software Development Conference 2005) to gather a wider perspective and potentially seek confirmation of the issues addressed by interviewees. The conference was attended by 90 participants and 21 usable surveys were collected. While the limitations of the small number of attendees and responses are acknowledged, the response rate was acceptable (23%) from a theoretical perspective if not disappointing from a practitioner-interest perspective.

The focus group was in the form of an interactive presentation session that was conducted at ACIS 2004 in Hobart. It was attended by approximately 15 IS academics.

THE LITERATURE

The IS research literature abounds with evidence of this 'crisis'. Many prominent IS researchers such as Benbasat and Zmud (1999) have added their voices to the chorus that academia does not serve practice. Benbasat and Zmud (1999) raised many important issues in their examination of IS research relevance from the perspective of the IS research community. This generated further lively debate on many of those issues from Applegate and King (1999), Lee (1999), Lyytinen (1999), and Davenport and Markus (1999). Most recently Arnott et al (2004) raised their concerns about 'the professional relevance of Decision Support Systems research', stating that their project was 'principally motivated by a concern for the direction and relevance of DSS research'.

The main themes that emerge from the extensive debate that has taken place in the literature are analysed hereunder. Many of these are interrelated.

The academic-practitioner relationship model

One of the most important aspects of the debate centres on what model of interaction between academia and practice would be most appropriate. Moody (1999) broached the topic from the perspective of practitioners, and argued that since IS is an applied discipline, that the medical model would serve as a good base for the development of stronger links between academia and industry. The following remark on an ISWorld discussion

group: 'Practice don't respect us because we don't respect them.' (Glass 2001) is another insightful comment on the state of the relationship. Moody (1999) describes the current situation as 'a major "disconnect" between research and practice'. Glass (1998) refers to it as the 'Communication Chasm', and states that 'Research in the computing field is all too often focussed on theory to the exclusion of practice', and goes on to point out that 'there is a great deal that theory can learn by studying practice, and computing theorists are not taking advantage of that possibility', thus, affirming the potential benefits of a closer alliance.

Another important aspect of the relationship relates to the current academic career progression and tenure processes and the lack of academic involvement in industry which exacerbates the academic-practitioner divide. This has been persistently noted in the literature, where it is explained that the resultant emphasis is almost solely on getting publications, regardless of relevance (Applegate & King 1999; Borchers 2001; Davenport & Markus 1999; Moody 1999). "The impact frontier" is a positive and inclusive concept wherein researchers may contribute to both business and academic communities (Davenport & Markus 1999). In determining a way forward, many have advocated what Borchers (2001) terms the "practitioner scholar" or the medical (or law) disciplines as being an appropriate model for IS (Davenport & Markus 1999; Moody 1999). Clearly, there are apparently viable models which could be adopted.

In defining the 'core' of the IS discipline metaphorically as 'a market of ideas in which scholars (and practitioners) exchange their views regarding the design and management of information and associated technologies in organized human enterprise', Lyytinen (2004) is acknowledging the desirable role of practitioners and their relationship with academia. One of the three drivers of the resultant model of disciplinary legitimacy proposed by Lyytinen and King (2004) is the 'salience of the issues studied', thus affirming the importance of engaging in research that is meaningful to the practitioner community.

It is important to identify and review the different foci between researchers outside academia such as consultants and research institutes, and those within (Loebbecke 2002). Important points of difference include: topic choice, expected outcomes, research approaches, research project initiation and client relationship (Loebbecke 2002). Some examples of vitally important intersects between academia and industry are: research centres with involvement from both industry and academia, company sponsored faculty research, research paper awards, industry advisory boards, and academic and student internships (Watson & Huber 2000). However, since such programs tend to be quite rare, the potential, highly positive impact is not widely experienced.

Rigour and relevance

The relevance crisis in IS research has been well documented (Robey & Markus 1998). Much of the debate has centred on whether IS research emphasis should be on rigour or relevance. It is interesting to note that rigour has been claimed to be the defining and respected differentiator between consultant and academic output (Benbasat, Izak & Zmud 1999). Moody (1999) discusses the issues of excessive rigour whereby it has become 'the primary measurement of the quality of IS research' and relevance which 'should be determined by the needs of practice and society rather than driven by theory'. Lee (1989) advocated guidelines for identifying when sufficient rigour is achieved, and cautions against excessive rigour at the expense of professional relevance.

Casting the problem in terms of rigour versus relevance is problematic. Applegate's (1999) stance of a 'strong plea for more relevance' while not 'abandoning rigour', concurs with Robey and Markus' (1998) viewpoint that the two are not in conflict, and both are highly desirable. Fallman and Gronlund (2002) present a 'richer model of the rigor–relevance relation', the central idea affirming that the relationship is not dichotomous, rather that the two concepts support one another, where relevance implies rigour and vice versa. They also discuss the role of research process, research product, and audience.

A variation of the relationship between these two concepts is provided by Fallman and Gronlund (2002) who define rigour of relevance as 'the rigor by which researchers are able to find out and answer to the concerns of their perceived audiences without drifting to achieve other goals'. They define relevance of rigour as 'the degree to which the researcher is able to maintain the decided-upon kind of thoroughness suggested by relevance'.

IS as an applied discipline

Applied disciplines such as IS, should direct their research efforts in an applied manner toward improving practice (Moody 2002). Research questions should have relevance, interest and significance for both practitioners and academics (Darke, Shanks & Broadbent 1998). Galliers (1994) also raised the crucial issue of the relevance to practice of IS research topics, claiming that it was equally applicable to doctoral and post-doctoral researchers. This can be seen in the lack of attention IS academic research pays to the Agile system development methodologies which have been widely embraced by the practitioner community. Fitzgerald (2000) noted how out of date much of the research into system developments methodologies is. The basis for Galliers (1994) argument is that IS is an applied discipline. His stated hope in the paper was to fuel debate that would

generate improved IS research practice. In this context, the more relevant of his 'debating points' are: 'To what extent should we include arguments as to why it is important that we pursue research on our chosen topic area?'; 'To what extent should the research agenda for Information Systems and the list of issues that are of most concern to practising Information Systems executives be aligned?'; and 'To what extent is there a place for the subjective/argumentative style of research in the field of Information Systems?'

There has been an increasing recognition of the suitability of certain research methods for IS as an applied discipline. It has been proposed that case studies are very suitable for 'sticky, practice-based problems', and for generating theories from practice (Benbasat, Izak, Goldstein & Mead 1987; Darke, Shanks & Broadbent 1998). Action research has also been recommended as a method that 'produces highly relevant research results' (Baskerville 1999). Reflective practice is a common research method in other applied disciplines such as health and education, and has potential as a method in IS. The close involvement with practice greatly increases its potential to improve research relevance (Imel 1992). Another of Lyytinen and King's (2004) above-mentioned drivers of disciplinary legitimacy is 'the production of strong results' which means that in an applied field such as IS with 'praxis at its center', that research processes should focus on strengthening the results that relate to practice.

Journals and conferences

The import of the issue of the identity of the IS discipline is reflected in its having been the focus of special issues of top journals such as Management Information Systems Quarterly (MISQ) in 1999 and the Communications of the AIS in 2001 (where Gray (2001) described it as a 'raw nerve'), as well as a special panel topic at the International Conference on Information Systems (ICIS) 2002 and the Australasian Conference on Information Systems (ACIS) 2003. It also surfaced at a Pacific-Asia Conference on Information Systems (PACIS) 2004 panel session, wherein the Korean delegate, Jae Kyu Lee, summed up his concerns with the statement 'Research should not be an intellectual hobby'. The fact that the ACIS conference and MISQ journal have a criterion for acceptance of 'significance for practice', adds weight to the importance of resolving this issue. Furthermore, despite having a stated mission of appealing to MIS Managers, MISQ has experienced a serious decline in the practitioner component of its readership (Benbasat, Izak & Zmud 1999).

Stakeholders

Various aspects of stakeholder issues have been addressed in the IS literature. However, it is a concern that when discussing relevance to practice, many (such as MISQ) seem to only consider the interests of CIOs, thereby miscasting the problem. The majority of practitioners (future CIOs) fall in ranks below the CIO level, and they play an enormous role in how the industry is conducted. Davenport and Markus (1999) suggest that students (future practitioners), should also be considered. The role textbooks play in teaching future practitioners, also mimics the problematic relationship in that they too, are quite divorced from IS research (Lyytinen 1999).

THE PRACTITIONER PERSPECTIVE

Following the above literature analysis, this section provides the practitioner perspective from the interviews and the survey, within a framework informed by the literature. The first part explores the practitioner perspective structured around four 'challenges' for IS research posed by Benbasat and Zmud (1999). The second part focuses on themes that emerged some of which mirror the literature. This research was motivated by the aforementioned dearth of evidence from the practitioner viewpoint.

Benbasat and Zmud's Major Challenges for IS Research

In introducing an important Issues and Opinions paper by Benbasat and Zmud (1999), Applegate (1999) gave prominence to four questions they raised as the major challenges to the academic community regarding the relevance of IS research. These questions were incorporated into the interviews and the survey as a means of exploring the practitioner perspective, and overwhelmingly affirmed Applegate's (1999) assertion that the response to them would largely be "no". This section is structured around a framework of these four pivotal questions, with evidence drawn from the interviews and survey responses.

Does IS research produce the knowledge that today's IS professionals can apply in their daily work?

Evidence from the interviews supports Applegate's (1999) above-mentioned assertion. One of the problems for practitioners is that research findings are not presented in a form that can be readily implemented, and it does not take account of their domain. The problem manifests itself in practitioner ignorance as they are frequently not aware of what research has been done, which has the serious and unfortunate consequence of lost opportunity. It also indicated a strong relationship with the accessibility issue addressed below (Applegate 1999). A

contribution to an ISWorld discussion group (Glass 2001) echoes this sentiment 'I never read a journal when I worked in industry, and I honestly don't know anyone who did'. Only one survey respondent gave a positive response to this question.

Does it address the problems or challenges that are of concern to IS professionals?

Again the response tended to be in the negative both for the interviewees and the survey respondents. Only two survey respondents were positive about academic research in this regard. Seemingly the research and practitioner foci do not often converge, and not surprisingly a major contributor to this is the lack of direct communication. The material produced by consultants was much more valued than academic research. This sentiment is echoed by Paper (2001) who raises the concern that rigour should not be concerned only with measurement, but also the research question, where it is also often lacking.

Does it focus on current technological and business issues?

The overall perception from the interviews was that academic research is in touch with current technologies, but not business issues. However survey respondents did not discriminate between these issues and all except one were negative about academic research foci. Again, it seems that the common denominator here is a lack of awareness by researchers of the real problems and needs faced by business, and such an appreciation can only really be addressed by direct communication and a will to do so. Another common issue is the compromise it represents in producing research outputs that are useful to industry. An aspect of this is the real-life issue of budgetary constraints that drive business decisions that tend not to be considered in academic research. Concern was expressed that the research agenda is driven by researchers' personal interests and identifying knowledge gaps, without any concern as to whether the research fulfils a real-world need.

Are IS research articles accessible to professionals?

This proved to be a major stumbling block with serious implications for interviewees although survey respondents were more positive about this issue than any of the earlier ones (four positive responses). It is clear that if information is not readily available through easily accessed, suitably formatted, and identified channels, then it effectively precludes dissemination to that audience. It is interesting to note that practitioners see this as a loss of a potentially valuable resource and influence in their practice-based implementations. Practitioners access many resources such as online special interest groups, but not academic literature.

Issues that emerged from the interviews

A number of important themes emerged from the interviews (some echo the literature), that have serious implications for the academia-practice relationship, and the issue of relevance.

'Them and Us'

All interviewees strongly identified academics and practitioners as being from distinctly different groups. Practitioners considered that these differences act as barriers between the two groups. Practitioners feel that they live in the real world at the 'coal face' where 'the rubber hits the road', while academics are 'living in the clouds' in ivory towers, immune to relevance. This is reflected in a statement on an ISWorld discussion group (Glass 2001) 'Academics and practitioners have a different world view'. Survey respondents were particularly scathing of the lack of respect between the two groups with only five responses indicating respect was evident.

Desirability of a closer association

The interviewees were emphatic that it would be beneficial to industry if there was a closer association and better communication channels with academia. It was also recognized that the communication channel should be two-way. There was also the perception that academia could play a useful role in disseminating best practice, and that academic research should act as a beacon for introducing new ideas.

Information overload and time constraints

Another pervasive theme was that information overload and time constraints were both serious problems that limited the prospects of accessing and using academic research. There are several mechanisms in the medical model proposed by Moody (1999) that provide systematically reviewed, quality assessed, collated and Internet-delivered information to practitioners from medical researchers. This closely aligns with an industry service that is a valued resource of one of the interviewees. There is no equivalent resource available for practitioners (or others) to access IS academic research.

Rigour prevails over relevance

Another salient issue that was also raised by Applegate (1999) is that the influence of political power in institutional practices in academia has led to a situation which has tended to sacrifice relevance whilst

simultaneously becoming almost dysfunctionally obsessed with rigour. This was also reflected by one of the interviewees who at the time he did his PhD felt that he was 'cocooned by his academic department' where all the advice he received was from his supervisor and other academics, and consequently did not have enough exposure to the real world.

Using this practitioner perspective as a base, it was considered useful to elicit comment by the academic community on the issues that had been raised. This research was motivated by a desire to initiate dialogue between the two parties through the exchange of ideas, the substance of which appears below.

ACADEMIC REFLECTION

Unless otherwise referenced, the empirical evidence/material in this section arises from the aforementioned interactive presentation session, which was attended by IS academics. The discussion was a response to the practitioner's perspective detailed in the previous section. This discussion is structured around the three guiding questions from the session, the first of which was:

What are the barriers to 'building the bridge'?

In response to this question, a number of important issues emerged (some of which reflect the literature), which are detailed below. Obviously, addressing these barriers is critical, as they will form an important foundation on which to further explore the academic-practitioner relationship and the issue of research relevance. Ultimately they will determine the design for the construction of the bridge.

The academic-practitioner relationship – the great divide

A major divide currently characterizes the relationship between academics and practitioners. One of the reasons put forward was that academics generally do not have a background in practice, and vice versa. Feedback was to the effect that even those who have experience in the 'other side', find that the transition is initially difficult and usually permanent, thus impairing meaningful long-term exchange. Another barrier to a good relationship is that practitioners do not access academic literature. Furthermore this was affirmed to be the case with practitioner converts, including an ex-IT project manager who indicated that he did not read the academic project management literature. The reasons proffered for this were that practitioners do not see any direct benefit, and that the manner in which academic literature is structured and accumulated means that they have to read 'twenty papers to read one paper'.

Clearly there is a need for a better relationship model, and it was agreed that any of those such as law or medicine could work, and in fact any model would be better than what we have now. It was unanimously agreed that such a model would be highly beneficial to the discipline as a whole. It was also noted that the bridge metaphor was a good one as it infers a continuous, two-way transmission thus allowing movement of knowledge, resources and people back and forth. The medical model allows for people to be concurrently active in both academic (research and teaching roles) and practice. A further suggestion is to extend this model to allow for concurrent roles as academic, practitioner and consultant. It is recognized that there are isolated cases where academics have mixed roles, and in fact one of the group participants worked part-time as a consultant. However, the clear message is that it is very difficult to arrange, and discouraged by universities. Therefore it is crucial that there be an explicit commitment to the support of individuals at both the discipline and institutional levels. Of course not all academics would want to follow such a path; however indications are that it would be sufficiently popular. Even with a small number of academics involved, there would be greatly enhanced cross-pollination opportunities. It was also suggested that such an arrangement would help address academics' image problem of lack of professionalism.

Joint industry-academic projects are another aspect of the relationship that was identified as having much greater potential than is currently occurring. Some excellent examples were cited such as the Australian Defence Science and Technology Organisation and its relationship with the Defence Department. One area that would be particularly suited to being under the auspices of both academia and industry is the software development process. It was suggested that a beneficial, natural follow-on to such projects would be exhibitions/demonstrations for practitioners.

Students are another facet of the relationship that should be improved. Various suggestions were forthcoming including greater student involvement with industry projects and making course content more industry focussed.

Stakeholder issues

The discussion forum highlighted the fact that the present involvement and relationship among stakeholders is a key barrier to building the bridge. The importance of the role that stakeholders play was highlighted. The

discussion confirmed the range of stakeholders includes academics, practitioners, industry, government, students and professional associations.

The group felt that one of the main problems to be addressed was the meaningful engagement of stakeholders such as government who it was suggested has little respect for academia. Discussion about the role government should take covered collaborative agreements, grants and tax breaks to industry.

Industry was identified as another significant stakeholder in the relationship. Suggested means of engagement with industry stakeholders included industry advisory groups and industry scholarships. One member had been in receipt of an industry scholarship to undertake a PhD, in return for which she conducted a series of seminars for the sponsoring company. The matter of organizations being reluctant to have academics involved in their business and taking up their time is another relevant aspect that was raised. Hence it was noted that it is necessary to provide organisations with some tangible benefit.

Academic reward mechanisms

The group unanimously agreed that the matter of academic reward and career progression/promotion is a serious barrier to research relevance, and one which exacerbates the academic-practitioner divide. The fact that academics become focussed on the 'process' at the expense of the product/content was another aspect that was raised. An extension of this is the long lead times for the development and publication of academic research, again emphasizing the need for change. Not only do practitioners not access the academic IS research, but the group noted that academics do not tend to publish in the industry/practitioner publications as there are no career rewards in it. Clearly the reward mechanisms militate against a beneficial relationship.

Having identified some of the main barriers, a second question (below) was posed to take the discussion forward.

What can we do to break the stalemate and 'boot' bridge building into action?

In response to this question, the group identified a number of potential mechanisms; the two main ones are discussed below. Of course some of the discussion about the above-mentioned barriers such as the academic-practitioner model and reward structures is also relevant to this question.

Conferences as a bridge pillar

Conferences have a pivotal role to play in building the foundations for the bridge. The current dichotomous structure of separate industry and academic conferences perfectly mimics the divide identified between academics and practitioners. The issue of conferences has been raised in the literature, and was affirmed by the academics' feedback, as being one of the key facilitators to building the bridge. Opinions vary, but Schneider (2005) suggests that 'Most of the thousands of people who know both worlds simply pick those conferences and meetings that best suit their mix.', which reflects the unfortunate reality of the situation, but is disappointingly defeatist given the inherent recognition of the problem. The feedback from the academic focus group covered a range of potential models.

As an initial starting point it was suggested that academics should attend industry conferences in order to have more contact with practitioners and be exposed to their interests and concerns. A problem associated with this is the cost of attendance, as academics are usually funded only for academic conferences, and often only if they have had a paper accepted. Another proposal was to have parallel conferences with separate academic and practitioner streams. There are already examples of this, such as the Global Information Technology Management Association Conference which is broadening to include non-peer reviewed practitioner contributions (but peer review for academics). While this is an improvement, it still means that academics who prepare material for such a conference will probably be presenting to a predominantly academic audience, thus still stemming the flow of research into practice. In order to maximize attendance at sessions by non-academics, it is necessary to ensure that there are criteria that will ensure that the research is demonstrably relevant to practice. While the 'relevance' criterion for conferences such as ACIS is a laudable move, it should be extended such that papers and presentations are structured and presented in a manner that makes them interesting, and clearly spells out the relevance and application to industry (potential areas of application, lessons learned etc).

The role of the professional associations

It was widely agreed that professional associations such as the Australian Computer Society (ACS) represent another resource that should play a key role in bridging the divide between academia and practice. One reason it is well placed is that it draws its membership from academia and practice, as well as students. The group identified several aspects of the problem that professional associations could address, including: contribute to the design and conduct of conferences; appoint working parties to address specific issues aimed at bridging the divide; and improve the professional image of the society and its members. It was noted that unlike some other professions such as accounting, the ICT industry does not demand that its workforce be accredited members of a

professional society. This was seen as a negative, as it limits the influence that may be drawn from such societies, and also contributes to the unprofessional reputation often attributed to the industry.

Having discussed what might be done to push the agenda forward, the third question (below) was raised in order to convey the gravity of the situation and need for assertive action.

Is this enough? Is there a need for a 'revolution' to effect the necessary change to make real progress?

Kuhn (1962) coined the phrase 'paradigm shift' to mean a significant, new move in knowledge, or a completely refreshed mindset that challenges and abandons what has gone before, rather than simply adding to what is already there. It was agreed that such a 'paradigm shift' is appropriate here, given the seriousness of the situation and the fact that the agenda seems 'stuck' on the discussion roundabout (as noted by Gray (2001)). Davenport and Markus' (1999) statement is also reflective of this: 'We strongly agree with Professors Benbasat and Zmud.... However, we believe that (they) have not gone far enough in their recommendations for change.'

Timeliness is an important issue for this topic. Applegate (1999) described this as a 'timely and important issue' and Benbasat and Zmud (1999) identified it as an important piece of work. These sentiments were affirmed by one of the delegates who noted that this research is timely in terms of the potential for improved accountability, as there is increasing pressure from government on universities to 'deliver'.

While the group also agreed that the current situation represents lost opportunities for both sides (Glass 1989, 1990), there were no additional, specific suggestions forthcoming as to how to meet the challenge of moving the issue forward. Nonetheless, Davenport and Markus's (1999) challenge of 'What will it really take we have only ourselves to change' seems appropriate. Lee's (1999) observation that a change in direction for the IS research community is something that is more likely to be achieved by (and therefore the responsibility of) its senior members maybe the most feasible option, and thus should serve as a serious challenge to those who are empowered.

It is interesting to note that the academic participants in the interactive session affirmed the key points that have been raised repeatedly in the literature. In summary, the academic response was one of positive optimism, tinged with the recognition that such lost opportunity could not be willingly sustained. This augers well for future efforts to meld a strong and meaningful partnership.

This paper has taken another step toward defining the shape of the academic-practitioner relationship.

CONCLUSIONS

There has been extensive debate in the literature about the IS academic and practitioner relationship, and research relevance. In the past, the examination has been overwhelmingly from the academic perspective. This project has further explored the practitioner perspective, and begun the process of developing a meaningful dialogue and exchange of ideas between academics and practitioners about how their relationship should be shaped. The medical model of researcher-practitioner appears to offer the most prospects.

Indications from the interactive feedback session are that incorporating the practitioner perspective has been an important step forward in this issue. As was found in the earlier study with practitioners, academics' desire a closer association, and recognize the potential benefits of being involved in relevant research partnerships. What is clear is that while there is broad support for change, there is still much work to be done in order to effect the necessary paradigm shift.

FUTURE RESEARCH DIRECTIONS

There are many more building blocks to be cast that will form the foundations of the bridge that will ultimately span the academic-practitioner divide in the IS discipline. These blocks must be forged in an atmosphere and spirit of positive and proactive cooperation that will harness the synergy of a union between academia and practice.

This paper represents developmental work on one of the bridge pylons, namely the practitioner perspective and its contribution to a productive model for the academic-practitioner relationship. This research is part of a larger research project which will address the major components of IS research relevance and the academic-practitioner relationship divide.

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