Methodological practice and policy for organisationally and socially relevant IS research an inclusive-exclusive perspective

Davison, Robert M; Martinsons, Maris G

Published in:
Journal of Information Technology

Published: 01/12/2011

Published version (DOI):
10.1057/jit.2011.19

Publication details:
Davison, R. M., & Martinsons, M. G. (2011). Methodological practice and policy for organisationally and socially relevant IS research: an inclusive-exclusive perspective. *Journal of Information Technology*, *26*(4), 288-293. https://doi.org/10.1057/jit.2011.19

Davison, R. M., & Martinsons, M. G., Methodological Practice and Policy for Organisationally and Socially Relevant is Research: An Inclusive–Exclusive Perspective. Journal of Information Technology, (26, 4) pp. 288-293. Copyright © 2011 (Association for Information Technology Trust). DOI: 10.1057/jit.2011.19.

IS Research Methods: Inclusive or Exclusive?

Robert M. Davison
Dept of Information Systems
City University of Hong Kong
isrobert@cityu.edu.hk

Maris G. Martinsons
Dept of Management
City University of Hong Kong
mgmaris@cityu.edu.hk

Abstract
In this research essay, we argue that the tendency of IS researchers to work with a rather parsimonious set of research methods, notably those that follow the positivist tradition, demonstrates a significant degree of methodological exclusiveness. We contend that such an exclusive practice is both counterproductive to good IS research and unethical. Further, it severely and unreasonably limits the extent to which IS research and researchers can contribute to both pressing organisational problems and the scholarly literature. We synthesise our position in a set of four arguments that guide our discussion of the nature and consequences of methodological exclusiveness as well as possible solutions. We end the paper with an exposition of steps that could be taken to address the current situation.

Keywords
Research methods, epistemology, rigor, relevance, IS researchers, inclusiveness, exclusiveness

INTRODUCTION

Since the founding of Information Systems (IS) as an academic discipline some 30 years ago, the critical importance attached to the social and organisational relevance of our research has been recognised. In parallel with this focus on relevance, we have devoted significant resources to ensuring that our research is conducted rigorously, i.e. by correctly applying methods to research problems (Zmud, 1996). In order to achieve these complementary objectives, the vast majority of IS studies that involve organisational problems and actors have been informed by a positivist epistemology, employing such methods as field experiments (e.g., Dennis et al., 1990; Vogel et al., 1990), case studies (e.g., Lee 1989; Maznevski and Chudoba 2000) or surveys (e.g., Kankanhalli et al., 2005), often in isolation from other methods, i.e. monistically. This almost exclusively positivist approach to IS research has now moderated and is complemented by interpretivist and critical analyses (e.g., Orlikowski and Baroudi 1991; Orlikowski 1993; Lee 1994; Walsham 1995). Lee's (1991) exposition of how positivist and interpretivist approaches could usefully be combined demonstrated one way forward. With the growing acceptance of a diversity of methods and perspectives, IS research has been enriched by studies involving methods such as ethnography (e.g., Myers 1999; Ward 1999), hermeneutics (e.g., Boland and Day 1989; Lee 1994; Myers 1995) and action research (e.g., Baskerville 1999; Kohli and Kettinger 2004; Mårtensson and Lee 2004). Nevertheless, while IS researchers now espouse a more inclusive attitude to methods, a more detailed analysis of the methods actually used in organisational IS research shows that the positivist paradigm is still very much dominant, especially in work undertaken by junior researchers and PhD students.

In this research essay, we revisit the scenes of earlier epistemological struggles from social, ethical, community-oriented and political perspectives. Our aim is to demonstrate that we, as a research community, need to be more sensitive to the negative consequences of epistemological and methodological monism, and indeed to explore how a more pluralist approach to IS research can be realised. This essay is offered as a belated reaction to Lee's (1991) belief both that positivists and interpretivists can learn from each other (not to mention critical theorists). It is also related to Lee's (2010) much more recent reflection on the last 25 years of IS research. Although we believe that a methodologically pluralist approach to research is preferable to a monistic approach, this need not be evaluated solely at the level of the single research paper. Instead, we argue that the reflective researcher (or team of researchers) should be able to devise a research plan that incorporates a diversity of methods across epistemologies through a linked series of studies, enabling a research problem to be tackled from a number of complementary perspectives. This is likely to result in a more holistic analysis and a more effective outcome with corresponding implications for both practice and scholarly learning. Further, we argue that any restriction placed on the application of methods by researchers would be profoundly unethical. IS researchers should enjoy both the intellectual freedom and the ethical obligation to avail themselves of whichever methods are most suitable for investigating the problem at hand. Following Sen (2000), methodological exclusion is a form of both "capability deprivation" and an instrumental "cause of diverse capability failures". In other words, restricting the methods open to use also restricts our capability to solve problems.

Notwithstanding the above arguments, we agree that a more methodologically inclusive approach to IS research is by no means easy to achieve. As Zheng and Walsham (2008) observe "social inclusion in the information society entails great complexity". As a form of social inclusion, methodological inclusion requires a spirit of intellectual and epistemological open-mindedness, so as to ensure that a diversity of methods is represented in the work that we conduct and publish. In order to achieve such inclusiveness, changes are needed in the way we: select research problems; approve funded research; train and socialise research students; hire new professors; undertake peer reviews; establish editorial requirements; and even set up our own expectations as readers. Further, even as we advocate methodological inclusiveness across epistemologies, we do not wish to create a new form of political correctness, mandating individual researchers to adopt specific methods. Instead, as we argue below, we believe that we need to develop awareness of the advantages for organisational IS research that will accrue through the adoption of a pluralist approach to research and so encourage scholars to engage in a pluralist fashion with their colleagues in research teams.

The essay is organised around four key arguments designed to capture the essence of the phenomenon. Some of the arguments are more controversial than others, but the spirit of the paper is to encourage both a healthy academic debate and a reassessment of the methods that we use. Finally, we consider how a more inclusive, ethical, approach to IS research methodology could be developed and sustained in our community.

FOUR ARGUMENTS

Argument 1: Research that is constrained to a single methodology will be impoverished in terms of the improvements it can stimulate or effect on social and organisational reality.

In IS research, a number of methods from different epistemological positions can be applied to research problems. Examples of methods include experiments, surveys, case studies, critical research, ethnography, action research, phenomenology, simulation and hermeneutic interpretation. Each of these methods has been established for a specific purpose and each has a more or less well defined set of rules or principles that govern its application and that help to assure it is applied rigorously. Significantly for our thesis, each method has its own strengths and weaknesses. Some of the methods are objective, with the researcher maintaining a distance from the phenomenon and its key actors; other methods are more subjective, requiring that the researcher work in close proximity with the organisational context, the research problem and the organisational stakeholders.

Given the richness of the problems that we tackle in IS research, as well as the complexities of organisational phenomena and the challenges associated with that work, we argue that it is important for IS researchers to obtain as holistic an understanding of an organisational situation as possible, if they are to undertake research that will enable them to make significant scholarly contributions. However, it is seldom the case that a holistic understanding of a situation can be achieved if only a single method is applied.

Studies of knowledge sharing in organisations provide a good illustration of this situation. For example, consider a survey of individual employees' attitudes towards and perceptions of knowledge sharing, whether in a single organisation or across organisations. Such a study may enable a researcher to test specific hypotheses in the context of a structural model related to knowledge sharing. An example of such research is that of Kankanhalli et al. (2005), an investigation into the antecedents of the intention to share knowledge via Enterprise Knowledge Repositories. However, respondents to such surveys are seldom given the opportunity to provide more detailed feedback on related aspects of the situation as they experience it in their work life, with the consequence that the researcher is not able to gain as holistic an understanding of the situation as is potentially available.

Alternatively, a hermeneutic interpretation of instant messenger texts sent by knowledge workers to each other in the course of their work may reveal much of interest about what they share and don't share through this informal channel, including whether what they share consists of work-related knowledge at all. However, this analysis will also conceal much of the contextual richness of the work that is actually undertaken if it is not reported in the texts. Furthermore, it will not enable the researcher to probe any deeper into issues not surfaced through the hermeneutic interpretation.

A case study of knowledge sharing practices in a software house may provide a higher level view of knowledge sharing behaviour, as well as the incentives provided by senior management, the efficacy of the organisational culture and the overall impact of knowledge sharing on employee productivity. However, this study may fail to get to grips with the precise knowledge sharing techniques applied by individual employees and the extent to which these techniques are effective in enhancing individual, team or organisational productivity or agility.

Finally, an ethnographic study of the same software house could reveal much of the detailed daily life of the knowledge workers and the effectiveness of their work practices at the individual level, yet conceal the broader context within which these work practices are conducted.

Each of the methods mentioned above has significant value to researchers. Each is likely to be appropriate for revealing certain aspects of the phenomenon under study. However, even as each reveals part of the phenomenon, so each also conceals part of the phenomenon, offering a view of the organisational situation and research problem that is simultaneously focused yet restricted. In consequence, while the rigor of the research undertaken is not in question, the likely impact, contribution and relevance of the completed study will be to some extent impoverished. Consequently, we suggest Argument 2, below, in order to overcome this limitation.

Argument 2: Research will make a more significant scholarly and organisational contribution when it incorporates different methods from a diversity of epistemological perspectives.

A single methodological perspective can only illuminate a partial and restrictive view of the natural richness and complexity of any given phenomenon (Avison and Myers, 1995; Landry and Banville, 1992; Orlikowski and Baroudi 1991). Thus, IS research will be both richer and more likely to produce both valuable scholarly knowledge and organisationally relevant outcomes when objectively analytical rigor is coupled with a contextually proximate and intimate investigation of the research situation, uncovering organisational phenomena in detail (Lee, 2010). This combined set of outcomes, which mitigates or eliminates the impoverishment described above, can be achieved if a pluralist approach to research methodology is undertaken. Such a pluralist approach is particularly appropriate in situations that involve rich and emergent phenomena that change over time and where individual human beings are functioning in a complex social reality. Such contexts are not always amenable to more objective, hands-off research methods such as surveys, which assume a relatively high degree of contextual constancy, or at least are not sensitive enough to detect significant contextual variance, and where it is not appropriate to control for the variance. Case studies do permit a closer set of observations to be undertaken, particularly if the case study protocols are allowed to evolve as the case is in progress, i.e. to be adapted to the shifting or emergent circumstances. Indeed, case studies sometimes incorporate more intensive methods such as ethnography and hermeneutics in order to afford researchers a more intimate view of certain aspects of the phenomenon under investigation.

However, a methodologically rich approach that combines objective and subjective stances requires strict discipline from the researcher or research team, who should be sufficiently familiar with each methodology applied to ensure that appropriate levels of rigour are maintained, even as relevance is sought. This form of disciplined methodological pluralism in IS research has been lauded both by those who would promote the diversity of the field (e.g. Robey 1996), and by those who believe that our research is best served by multiple perspectives (Avison and Myers, 1995; Landry and Banville, 1992).

Such disciplined methodological pluralism is particularly appropriate in complex organisational situations that involve a variety of circumstances, whereas trivial or artificially constrained research designs may well not benefit from a pluralist approach to methodology. Notwithstanding the strong levels of espoused support from prominent members of the research community, there are fewer examples of methodologically pluralist research than might be expected. Nevertheless, Galliers (1991) documents how such a pluralist approach to methodology could work in practice and it is notable that Galliers includes both positivist and interpretivist methods in his exposition.

A strong argument in favour of a pluralist approach is that it enables the tackling of a wider variety of valid organisational problems in contextually sensitive ways. Thus, rather than the IS researcher wielding one method (the hammer) at every problem, there is instead a richer tool-box of methods, each of which can be applied, alone or in combination, according to the specific circumstances – providing that the researcher or research team is comfortable with and competent to apply these methods. In practice, this means that methods from different epistemological persuasions may be deployed, if they are commensurable.

For example, Lee and Dennis (forthcoming) recently undertook a hermeneutic re-interpretation of a failed laboratory experiment (Dennis et al., 1998). In the original paper, Dennis and his colleagues had devised an experiment to demonstrate that IT (in the form of a Group Support System) (GSS) could ameliorate decision making processes. In this study, undergraduate students were employed as proxy decision makers and were set a decision making task with all communications mediated by a GSS. To their surprise, four of eight hypotheses were rejected and three were only partially supported. Although Dennis et al. (1998) had collected GSS discussion logs, these were not analysed at the time and so were not reported. In their subsequent re-interpretation, Lee and Dennis (forthcoming) revisited the experimental context and the discussion logs, discovering that the student subjects had essentially ignored the study's protocols and instead "imported their own world" to the experimental task. This enacted world behind the text (Ricoeur, 1981) was then used by the students as a basis for their participation in the experiment. Unsurprisingly, the students' world was irrelevant to the study's context – even though it was relevant to them – and so the theoretical assumptions underlying the study were not supported by the data. Whilst this example neatly illustrates the dangers associated with students masquerading as decision makers, it also demonstrates how a satisfactory explanation for an unexpected research outcome can be realised when a different methodological perspective is taken.

Organisations themselves are naturally interested in not only the research process, but also the research outcomes. Practically, this means that they may be willing to contemplate organisational change as a result of, or even as a procedural aspect of, the research process. Action research methods are particularly suited to this kind of organisational change research, since they demand that researchers be actively engaged with the organisational problem and its stakeholders, even as they develop scholarly knowledge (Davison et al., 2004). Action researchers need to combine both objective and subjective stances in their research. The objective position is clear in the diagnostic phase of the research, since the researcher is not an organisational employee but an outsider who brings a fresh pair of eyes to the initial diagnosis of the problem situation. In the planning phase, the researcher must identify and apply a theory, as well as additional tools that can be used to provide an objective measurement of organisational performance and change, i.e. before and after the intervention that is to come. However, this objectivity must sit alongside a degree of subjectivity associated with the researcher's personal engagement with the organisational phenomenon and actors, not to mention an interpretation of emerging circumstances and establishing the causes of specific problems, as well as the most appropriate remedies.

For example, in a knowledge sharing project undertaken by the authors (references withheld for review), where Action Research formed the guiding framework, we deliberately employed a methodologically pluralist approach, blending methods from the positivist and interpretivist epistemological paradigms. We collected survey data from organisational employees, conducted an ethnographic observation of selected employees, hermeneutically interpreted instant messenger logs in order to distill knowledge content, evaluated organisational work processes with business process modelling tools and the Value Shop (Stabell and Fjelstad, 1998), and both planned for and measured organisational change with the Balanced Scorecard (Kaplan and Norton, 1992). The above activities constitute parts of an extended study (i.e. more than a single article), where it is highly improbable that a single article would attempt to include each and every method. Instead, a series of articles, co-authored by different combinations of members of the research team, focusing on different aspects of the problem and drawing on different methods and epistemological perspectives are more likely to result, thereby demonstrating a pluralist approach to methodology across a stream of linked articles (cf. Lee, 1991).

Whilst we can make the case for methodologically pluralist research, we recognise that the skills required to conduct such research effectively take time to develop, and time is a key resource that is in short supply, in particular for junior researchers and PhD students who race against tenure and completion clocks. This leads to our third argument.

Argument 3: Junior professors and PhD students are both discouraged from undertaking and lack the skills to undertake methodologically pluralist research, especially in the interpretivist and critical traditions.

This third argument is an unfortunate one in our view, yet it appears to reflect academic reality. Based on our observation of PhD students and junior professors in a number of institutions and across several countries, it would appear that there is often a quasi-deliberate policy of encouraging the application of research methods that are perceived to be less risky.

Although such a policy is unlikely to be formally stated, we have encountered senior professors, supervisors and other mentors, as well as recent PhD graduates and current senior students, who have warned of the dangers of straying far from the safer realm of quantitative methods such as experimental laboratory studies and surveys, if students want to complete their research on time and also publish it with relative ease. Such warnings may be uttered with the best of intentions, i.e. a recognition that more complex methods are less well understood by reviewers/editors and so may be subjected to more critical scrutiny, rendering publication more difficult. Nevertheless, these warnings are symptomatic of a worryingly exclusive attitude towards less safe, more complex research methods, to say nothing of the impact of IS research in organisations.

Informal warnings apart, research methods from the interpretivist and critical epistemologies are seldom taught in any depth during PhD study, perhaps because few qualified professors are comfortable to teach them and fewer still students take the trouble to take up the challenge of learning how to apply them in their research. Consequently, many PhD students and junior professors lack the requisite skills to apply interpretivist and critical research, being instead firmly socialised into a narrow positivist tradition that does not encourage the inclusion of methods from other epistemological perspectives. With so little multi-method research being undertaken and with no active research culture to promote research methods outside the realm of the safer positivist methods, future generations of PhD students will be denied the opportunity to acquire competence in a broader set of methods that would be applicable to organisational problem solving.

The unfortunate consequence of this socialisation process is that these researchers are often relatively detached from the real organisational world where IS applications can be found, and so are unable to offer deeper explanations of their findings, or indeed of the organisational relevance of their findings if they are relying on student subjects as proxies for organisational personnel. We recognise that multi-method research in organisations is more complex than single method research, requiring more time to complete an investigation, given the situational vagaries of working with organisations, and an intellectual dexterity associated with methods that do not necessarily share the same fundamental assumptions or values. Time is a critical issue, given the pressure under which PhD students and junior professors operate, and the expectation that they will complete their dissertations efficiently or achieve tenure with an appropriate number of high quality research publications. Taken together, these characteristics of the junior professor's or PhD student's life seem to favour a single-method and epistemologically positivist approach to research.

Argument 4: In order to change the status quo, we must change our values with respect to the research that we conduct. A key aspect of this change will be changing who we are.

As we have demonstrated in the above three arguments, whilst there are practical advantages associated with adopting a more pluralist attitude to IS research, there are also many obstacles. Lee (2010) suggests that in the next twenty-five years, we need to focus more on what really matters to organisations, since this will provide us with ample material to investigate. A more effective way of investigating these organisational problems will involve research designs that incorporate multiple methods – assuming that we genuinely wish to achieve outcomes that enable both scholarly learning and practical advantage for the organisation that hosts the research endeavour. Such an assumption does not favour one research method or epistemology over another, but it does favour a holistic approach to research. Since each researcher may be familiar with a limited number of methods, so researchers may work more effectively in teams, with different members investigating different aspects of an organisational problem situation. In order to achieve such an outcome, team members will need to be familiar with a wide variety of methods – certainly more than a narrow sub-set of methods from a single paradigm.

In order to form teams that are skilled in applying a variety of methods from different epistemological positions, we will need to hire junior professors with a variety of skill sets and from a variety of academic backgrounds. These should include both the more traditional B-school and I-school disciplines, and such disciplines as sociology, psychology and anthropology. In parallel, we should expect to train our own PhD students to be familiar with and competent to apply a variety of research methods – since this will enhance their own employment prospects. The only way to enable long-term change in ourselves is through our PhD students. Rather than training them to be the apples of our own eyes, we should train them to be the professors who will guide the field in the future, though the next twenty-five years. To be successful academic leaders in the future, they will need to critique and reflect on the research undertaken in IS so far and will need also to chart their own directions. We suggest that they should be aware of the many opportunities afforded by multi-method research.

Discussion & Conclusion

The four arguments developed in this paper serve to highlight both the methodological monism in IS research and some of its consequences. There is an espoused respect for an inclusive diversity of research methods, at least from senior scholars in the field. However, relatively little published IS research is based on multiple methods. This situation alarms us, particularly given the impoverished contribution of IS research to social and organisational realities. Furthermore, the methods that are adopted regularly tend to exclusivity – there are relatively few of them and they account for the vast majority of IS research conducted.

We suggest that the current situation represents a malaise that lies at the heart of the IS discipline. The malaise is not so evident in the conduct of the research, which conforms well to narrow standards of rigor – the correct application of methodology. Rather, it appears when we consider the relevance of the research. Research based on an exclusive set of methods limits the advancement of knowledge in our discipline.

We believe that this malaise must be addressed if IS research is to be more relevant to the often complex situations encountered by and in organisations. Rigor, as traditionally defined, is necessary but insufficient. Holistically, rigor should also encompass the appropriate selection of method(s), not just it's (their) application. Ethically, we have an obligation to our practitioner colleagues and the organisations that provide contexts and problems for our research, whether directly or vicariously. This obligation suggests that we should not restrict ourselves to a set of research methods that we find most convenient to use or indeed easy to publish. If we do, the likelihood is that our research will become increasingly irrelevant to practice, increasingly exclusive and inaccessible to anyone but ourselves. Such an outcome would be disastrous for IS as a discipline, both academically and practically. We cannot divorce ourselves from the world of practice; quite the opposite, we should do much more to engage with organisational practice (Lee, 2010).

We recognise the complexities associated with multi-method research, notably methods associated with the interpretivist and critical epistemologies. However, we believe that such complexities are necessary and permit a richer diagnosis of organisational problems, as well as the development of contributions to both scholarly and practical knowledge that will be more significant and of longer duration. Nevertheless, given the exigencies of publication venues, it is unlikely that a single research article will contain a rich set of methods. Instead, we argue that each article in a linked stream of studies emanating from the same research project may usefully adopt a different epistemological or methodological perspective.

Each epistemology and method has its own distinctive strengths and weaknesses in the context of IS research in organisations. It is not reasonable to expect that every IS researcher should be an expert with every research method, but it does not seem unreasonable to suggest that every researcher could be an expert at recognising the strengths and weaknesses of every research method. The same researcher could then be expected to recognise where the benefits to be realised from one method end and where those of another method begin. Achieving such recognition would require a degree of genuine methodological integration, not to mention social and political acceptance in the research community.

Any methodological integration needs to be undertaken as part of the formal training and socialisation process for PhD students. Before engaging in their mainstream dissertation work, PhD students could be given an opportunity to conduct several smaller projects where they explore different research methods from different epistemological persuasions, alone or in combination. Such projects will at least give them a sense of the value of each of several methods and help them to choose the method(s) that they later apply in their own dissertation. At the same time, undertaking such projects will require them to read a wider literature from a methodological perspective, and so encounter research that does adopt multiple methods.

Given the realities of the tenure process at most universities, untenured colleagues will naturally prefer to reduce their risks and focus their efforts on simpler and better-defined research problems that can be addressed with the methods with which they are more familiar. Ideally, these colleagues will not have been hired purely on the basis of their familiarity with traditional IS research or their ability to publish in a limited sub-set of our journals. We need a more (not less) diverse set of colleagues as teachers and researchers, if we are to ensure our continued relevance in both academia and organisational practice.

After securing tenure, we believe that IS researchers have an ethical obligation to apply a wider range of tools and methods so as to tackle the important and complex research problems that organisations face and that form the basis for much of our research. We hope that our call to action will increase their ability and propensity to do so by cultivating greater awareness and understanding of research that adopts multiple methods in a spirit of social, and methodological, inclusion.

REFERENCES

Avison, D.E. and Myers, M.D. (1995) Information systems and anthropology: An anthropological perspective on IT and organizational culture, *Information Technology & People*, 8, 3, 43-56.

Baskerville, R. (1999) Investigating information systems with action research, *Communications of the AIS*, 2, 19, 1-32.

Benbasat, I. and Zmud, R. (1999) Empirical research in information systems: The practice of relevance, *MIS Quarterly,* 23, 1, 3-16.

Boland, R.J., and Day, W.F. (1989) The experience of system design: A hermeneutic of organizational action, *Scandinavian Journal of Management*, 5, 2, 87-104.

Dennis, A.R., Heminger, A.R., Nunamaker, J.F. and Vogel, D.R. (1990) Bringing automated support to large groups: The Burr-Brown experience, *Information & Management*, 18, 3, 111-121.

Galliers, R.D. (1991) Choosing information systems research approaches, in: R.D. Galliers (Ed) *Information Systems Research: Issues, Methods and Practical Guidelines*, Alfred Waller: Henley-on-Thames, 144-162.

Kankanhalli, A., Tan, B.C.Y. and Wei, K.K. (2005) Contributing knowledge to electronic knowledge repositories: An empirical investigation, *MIS Quarterly,* 29, 1, 113-143.

Kaplan, R. and Norton, D. (1992) The balanced scorecard - measures that drive performance, *Harvard Business Review*, 70, 1, 71-79.

Kohli, R. and Kettinger, W.J. (2004) Informating the clan: Controlling physicians' costs and outcomes, *MIS Quarterly*, 28, 3, 363-394.
Landry, M. and Banville, C. (1992) A disciplined methodological pluralism for MIS research, *Accounting, Management and Information Technologies*, 2, 2, 77-97.
Lee, A.S. (1989) A scientific methodology for case studies, *MIS Quarterly*, 13, 1, 33-50.
Lee, A.S. (1991) Integrating positivist and interpretivist approaches to organizational research, *Organization Science*, 2, 4, 342-365.
Lee, A.S. (1994) Electronic mail as a medium for rich communication: An empirical investigation using hermeneutic interpretation, *MIS Quarterly*, 18, 2, 143-157.
Lee, A.S. (2010) Retrospect and Prospect: Information Systems in the Last and Next Twenty Five Years, *Journal of Information Technology*, 25, 4, 336-348.
Lee, A.S. and Dennis, A.R. (forthcoming) A Hermeneutic Interpretation of a Controlled Laboratory Experiment: A Case Study of Decision Making with a Group Support System, *Information Systems Journal*, 25 pages.
Mårtensson, P. and Lee, A.S. (2004) Dialogical action research at Omega Corporation, *MIS Quarterly*, 28, 3, 507-536.
Maznevski, M. and Chudoba, K. (2000) Bridging space over time: Global virtual team dynamics and effectiveness, *Organization Science*, 11, 5, 473-492.
McKay, J. and Marshall, P. (2001) The dual imperatives of action research, *Information Technology & People*, 14, 1, 46-59.
Myers, M.D. (1999) Investigating information systems with ethnographic research, *Communications of the AIS*, 2, 23, 1-19.
Myers, M.D. (1995) Dialectical hermeneutics: A theoretical framework for the implementation of information systems, *Information Systems Journal*, 5, 1, 51-70.
Orlikowski, W.J. (1993) Organizational change: Investigating incremental and radical changes in system development, *MIS Quarterly*, 17, 3, 309-339.
Orlikowski, W.J. and Baroudi, J.J. (1991) Studying information technology in organisations: Research approaches and assumptions, *Information Systems Research*, 2, 1, 1-28.
Ricoeur, P. (1981) The model of the text: Meaningful action considered as text. In: *Hermeneutics and the Human Sciences*, Thompson, J.B. (ed.), pp. 197-221, Cambridge University Press, New York.
Robey, D. (1996) Diversity in information systems research: Threat, promise and respectability, *Information Systems Research*, 7, 4, 400-408.
Sen, A. (2000) Social Exclusion: Concept, Applications, and Scrutiny, Social Development Papers No. 1, Office of Environment and Social Development, Asian Development Bank.
Stabell, C.B. and Fjelstad, O.D. (1998) Configuring value for competitive advantage: On chains, shops and networks, *Strategic Management Journal*, 19, 5, 413-437.
Vogel, D.R., Martz, W.N., Nunamaker, J.F., Grohowski, R.B. and McGoff, C. (1990) Electronic meeting system experience at IBM, *Journal of Management Information Systems*, 6, 3, 25-43.
Walsham, G. (1995) The emergence of interpretivism in IS research, *Information Systems Research*, 6, 4, 376-394.
Ward, K.J. (1999) Cyber-ethnography and the emergence of the virtually new community, *Journal of Information Technology*, 14, 1, 95-105.
Zheng, Y. and Walsham, G. (2008) Inequality of what? Social exclusion in the e-society as capability deprivation, *Information Technology and People*, 21, 3, 222-243.
Zmud, R. (1996) Editor's comments: On rigor and relevancy, *MIS Quarterly*, 20, 3, xxxvii-xxxviii.