

A Special Issue Editorial

Initiating a North-South Dialog: A reflection of Information Systems Research in Australia

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Why would a special issue in the Scandinavian Journal of Information Systems that focuses on Australian Information Systems research be of interest to Scandinavian researchers? What do the Scandinavian and Australian Information Systems research communities have in common? On the surface there would appear to be little our two regions share. The Australian land ends before the 430 parallel South and Copenhagen is just below the 560 Parallel North. The Australian culture has been shaped by that of the United Kingdom and more recently the United States whereas the Scandinavian culture extends much further back and has through the Vikings, implanted some of its culture on Britain.

Australian ties with Scandinavia however extend beyond the wedding of a Tasmanian woman to a Danish prince. “As the Danish Crown Prince Frederik admitted at his wedding to Mary Donaldson—he was not the first Dane to visit Australia ‘with just as high hopes and just as much confidence’ ”¹. Australia’s connection with Scandinavia and in particular Denmark as Prince Frederik was referring to in this quote, date back to convict days with the Dane Jørgen Jørgensen (1780-1841). Jørgensen arrived in Tasmania on a convict boat in

1826, a carving of Jørgensen can be found on the Historic Ross Bridge in Tasmania. Moving forward some 150 years, arguably Australia's most famous land mark, the Sydney Opera House, was designed by Jørn Utzon another citizen of Denmark.

Geographically there are similarities; the population of Scandinavia (including Finland) is just over 24 million, while Australia's population is 20 million. Both Australia and Scandinavia have relatively small dispersed populations and it could be argued that our two regions are geographically isolated.

Over recent years Scandinavian researchers have visited Australian universities and contributed in different ways to the Australian Information Systems (IS) community. Some Scandinavians have come to the country and stayed, others visit on a regular basis, and student exchanges are common. Academic relationships have been built and have extended over time. We therefore pose the question what is it that we share in terms of our research? Our research traditions are certainly similar, Australians have, as one of the authors in this special issue has so aptly described it, an 'eclectic' approach to research. Australian IS researchers embrace both qualitative and quantitative research approaches. This enables them to relate well to both the European as well as the North American research traditions.

Australia and Scandinavia both have strong IS communities, we share similar approaches and thinking towards IS research. Given the influence the dispersed populations and geographic similarities of the two regions have had on research it was an opportunity to explore this further with leading IS researchers in Australia. In particular this special issue has given us the opportunity to reflect on the direction taken by the Australian IS research community and to position it with regard to Scandinavian and mainstream (mostly North American influenced) research.

To provide a context for this special issue some background on the Information Systems discipline in Australia is needed. Australia has 36 universities and all, to our knowledge, have some IS representation as an academic discipline. Most Schools/Departments in Australia are located within Faculties with a business or commerce focus. However, IS Schools/Departments are also found within Faculties of Science and Technology. Most Schools are in separate IS discipline groupings, some are combined with other disciplines such as IT, Computer Science and Accounting. At the most recent Australian Council of Heads and Professors of Information Systems it was reported that the size of an IS discipline group ranged from 3–40, with the average around 20 academic staff. Some schools however have in excess of 40 academic staff. The research undertaken by IS academics in Australia is very broad and reflective of the research work undertaken internationally in our field. A special issue of the *Australasian Journal of Information Systems* (AJIS) published

in 2006 on “The State of the IS Academic Discipline in Australia” provides more information. It can be accessed at <http://dl.acs.org.au/index.php/ajis>.

A workshop in late 2005 hosted by Monash University, Melbourne, Australia was organized whilst Karlheinz Kautz from Copenhagen Business School was visiting Australia. During the visit Professor Kautz had the opportunity to speak and interact with a range of Australian researchers from Sydney to Perth. His visit thus provided the impetus and opportunity for us to reflect on Australian Information Systems research and to discuss how Australian research directions compare with IS research undertaken in Scandinavia. A number of themes reflecting the breadth and wider interest of research work undertaken in Australia were identified and these are considered representative of much of the work undertaken in Australia by IS researchers. We acknowledge however, that the breadth of Australian research extends beyond the topics we covered. The themes identified for the workshop were:

- Philosophy and Information Systems research
- Electronic commerce
- Knowledge management
- Information Systems development
- Ontology

A group of key Information Systems researchers from across Australia known to be working in these areas were contacted and asked to put together a short paper describing how they saw the IS research field, in their area, in Australia. The researchers selected represented those who were working in the identified areas of Information Systems research and are amongst the leading Australian researchers in their field. Each group presented a discussion paper to the workshop. The papers after presentation and debate were further considered and a number identified as potential papers for publication in this special issue. The resulting papers went through a further rigorous review process. The final outcome is this special issue of the SJIS. Each of the authors has made some significant contribution to their particular area of IS research in Australia. The authors come from a wide variety of backgrounds in education and research traditions and currently work in four different states in Australia across seven different universities. Their work can therefore be regarded as well grounded and representative. In the following we also provide some background detail on the authors.

The theme of Philosophy and Information Systems research in Australia is an interesting and well established field. The first paper of this special issue describes the Australian IS research landscape. The authors, Gregor, Bunker, Cecez-Kecmanovic, Metcalfe and Underwood provide an historical context for Australian IS research. The authors provide the readers with a description

of important historical events which they argue, have influenced research. The authors reflect on the work that has been undertaken in Australia in the area of theory, selecting a number of key theoretical areas that are representative of Australian IS thinking. They refer to authors who come from a variety of backgrounds and universities and whose work has been important in the Australian field. Gregor et al conclude that a wide range of research methods, both qualitative and quantitative are used by Australian researchers and they propose that the term 'eclectic' describes the Australian IS research approach.

Professor Shirley Gregor is Head of the School of Accounting and Business Information Systems at the Australian National University in Canberra. Professor Gregor spent a number of years in the computing industry in Australia and the United Kingdom before beginning an academic career. Her current research interests include the adoption and strategic use of information and communications technologies, intelligent systems and human-computer interface issues, and the theoretical foundations of information systems. Professor Gregor has for a number of years sought to foster and encourage discussion and debate in this area through a workshop series that focuses on 'Information Systems Foundations.'

Dr Deborah Bunker is a senior lecturer at the School of Information Systems, Technology and Management at the University of New South Wales, in Sydney. Her research interests are in IS philosophy, IS management, IS diffusion, and e-commerce/e-business. Deborah is a founding member and the current vice chair of IFIP TC 8 WG 8.6 on the adoption and diffusion of IT.

Dr Dubravka Cecez-Kecmanovic is a Professor and Head of School of Information Systems, Technology and Management at the University of New South Wales (UNSW), Sydney, Australia. She has published in the field of social systems of information and government information systems, decision support systems, Web-enhanced cooperative learning and teaching, and electronically mediated work and communication. Her recent research interests include a sensemaking theory of knowledge, knowledge management and organisational learning and the co-emergence of IS and organisations. Many of her empirical studies have been informed by critical theory focusing on IS impacts on increasing rationalisation and control in organisations, and their implications for power structures, domination and emancipation.

Dr Mike Metcalfe came to Information Systems from the Pragmatic decision making, strategic planning and management inquiry literature. He now teaches research strategy at the University of South Australia in Adelaide with an emphasis on evidence based or argumentative research.

Dr Jim Underwood is a senior lecturer in the Department of Information Systems at the University of Technology, Sydney. He previously worked at the Canberra CAE and, a long time ago, in several IT consulting companies. He

has also held visiting positions at UC Berkeley, LSE, Birkbeck College, Staffordshire University and University College Cork. His interests include the politics of information systems development, the dynamics of learning, and the meaning of knowledge and self in a virtual society. These are approached through the philosophical lenses of Foucault, Latour and Deleuze (amongst others). He has a PhD in Information Systems, a BSc in Pure Mathematics and Diplomas in Administration and Recreation Planning.

Electronic commerce is one of the more heavily researched areas in Australia with many leading IS researchers working in the field. Researchers such as Steve Elliot (University of Sydney) have made an impact in the field of e-business. Robert Johnson's (University of Melbourne) work has focused on e-commerce adoption and business to business processing, while Paula Swatman (University of South Australia) has published work on e-business models. Judy McKay and Adi Prananto's (Swinburne University) research on e-commerce and small-business has also been significant. Fisher, Scheepers and Scheepers is the second paper in this special issue. The paper looks at IS research in Australia from the perspective of papers published, in this case in the field of electronic commerce. The authors analyse papers from key high-level, journals and conferences published by Australian IS researchers from 2000 to 2005. The research found that the use of case study as a research method was very popular and again Australian IS researchers are concentrating their publications on conferences rather than journals. The paper tracks the trends of research in electronic commerce both from the perspective of the number of papers published each year, from which we are able to tell how the field has progressed, as well as the area in which the research has been undertaken.

Dr Julie Fisher is an Associate Professor in the Faculty of IT at Monash University. She has taught and researched in the information systems field for the last 17 years. Her work includes research in the area of usability, technology and health, particularly in relation to systems development. She also has interests in small business and technology use and women in computing.

Dr Helana Scheepers is a senior lecturer at the Caulfield School of IT, Monash University, Australia. She received her PhD from Aalborg University in Denmark. Her research interests include the development of information systems and implementation of information technologies such as RFIDs and mobile technology in organizations.

Dr Rens Scheepers is an associate professor at the Department of Information Systems, The University of Melbourne, Australia. He earned his PhD from Aalborg University in Denmark. His research focuses on the implementation of, and benefits derived from, complex information technologies organ-

izations. He currently serves as Regional Editor (Asia Pacific) for the *Journal of Information Technology*.

The third paper selected for this issue, Linger et al discusses the important area of knowledge management. The authors Linger, Hasan and Burstein have worked in the area of knowledge management in Australia for many years and are well recognised in the field. Others working in the field include Leonie Warne, Dubravka Cecez-Kecmanovic and Robert Kaye (UNSW). This paper describes an important development in Australia, the development of an Australian standard for knowledge management the authors contributed to this development. The paper describes how the standard was developed with input from industry, practitioners and academia. The standard Linger et al, describe brings together two theoretical frameworks, one is task based and the other is activity based. The authors then describe how the new standard was applied in the Australian Defence Force, concluding that the new standard is both appropriate and applicable.

Dr Henry Linger is the Deputy Director of the Knowledge Management Research Program at Monash University and a Senior Lecturer in the Faculty of Information Technology. He has been a Research Associate at Defence Science and Technology Organisation (DSTO) for the past 8 years. Henry conducts research in the area of knowledge work, knowledge management and the design of systems to support professional work. His research involves collaborations addressing a broad range of domains including biology, immunology, epidemiology, meteorology, clinical and management aspects of healthcare.

Dr Helen Hasan is an Associate Professor in Information Systems in the Faculty of Commerce at the University of Wollongong. She has a Masters in Physics followed by a PhD in Information Systems, is a member of the Australian Standards Committees on Knowledge Management and Small to Medium Enterprises. She has published extensively in the areas of Human Computer Interaction, Decision Support Systems (DSS) and Knowledge Management (KM) and more recently Network-Centric Organisation. Helen is Director of the Activity Theory Usability Laboratory at the University of Wollongong.

Dr Frada Burstein is an Associate Professor in the Faculty of IT at Monash University. She holds a Masters of Science (applied Mathematics) from Tbilisi State University, Georgia, USSR (1978) and PhD in Technical Cybernetics and Information Theory from the Soviet Academy of Sciences (1984). She researches and teaches in the areas of knowledge management and decision support systems at Monash University since 1992.

Information Systems development (ISD) is a very broad area that attracts many researchers. It is an area where there has been a significant research by Australian IS researchers. Other leading researchers working in this area

include Michael Rosemann (Queensland University of Technology) and Peter Seddon (University of Melbourne) both research ISD from the perspective of Enterprise Resource Planning systems. John Venables (Curtin University) and Graeme Shanks (Monash University) have researched and published in the area of modelling and Information Systems design. Within the area of ISD we could also include work in decision support systems where people such as David Arnott (Monash University) and Graham Pervan (Curtin University) work. The fourth paper by Dawson and Gibson, examines papers relating to systems development practices. Dawson and Gibson, similar to the Fisher et al paper, use a categorization method employed first by Wynkoop and Russo, to examine papers covering Information Systems development methodologies (ISDM) by Australia researchers between 1998 and 2005. The authors identified papers from the leading journals and conferences in our field and describe the trends that have occurred in ISDM from the perspective of these publications. They found that publications in the area has steadily increased over time with a significant increase in the last three years. The most common research methods for examining ISD methodologies were case studies and conceptual research work. The authors also find that the majority of publications are to be found in conference proceedings rather than in journals. A trend in what Dawson and Gibson refer to as the 'post methodology era', is not surprising, that is the move to development methods for web based systems.

Dr Linda Dawson has over 20 years experience in information systems and information technology as a programmer, systems analyst, and as an academic. She is currently a Senior Lecturer in the Caulfield School of IT at Monash University. Dr Dawson has published several articles relating to the use of object-oriented methods by practising professionals in requirements engineering. Her recent research interests have been in the area of the application of mobile and wireless technologies in healthcare.

Marcus Gibson is a PhD candidate at Monash University, Australia and has worked as a research assistant on the project reported here. His current research areas include business intelligence, evaluation, data warehousing, information systems development, and research methods in information systems. He is the author of several papers in the areas of decision support systems, business intelligence and data warehousing.

Arguably Australia's leading IS researcher is Ron Weber whose work with Yair Wand, in the area of ontology was groundbreaking. Other Australians who have contributed to the field include Peter Green (University of Queensland). The last paper continues with a theory perspective. In this case Milton explores the use of ontologies in Australian IS research. This paper complements the Gregor et al. paper through a more indepth exploration of one popular theory the Bunge-Wand-Weber (BWW) ontology. It begins with a

discussion of the work by Wand and Weber and the foundations for their work. The paper provides a broad overview of Bunge's original work and how this has been adapted by Wand and Weber. Milton explores in more detail other work undertaken in the field of ontology by Australian IS researchers and suggests that other ontological positions need to be explored as he argues that Bunge's ontology is not necessarily appropriate for describing Information Systems.

Dr Simon Milton received his PhD from the University of Tasmania in 2000 in which he reported the first comprehensive analysis of data modelling languages using a common-sense realistic ontology. He continues his interests in the ontological foundations of data modeling languages and the implications of top-level ontological commitments in information systems modelling. He holds a senior lectureship in the Department of Information Systems at The University of Melbourne.

The Australian IS research community is also strong in a range of other areas, for example Liisa Von Hellens (Griffith University) and Sue Neilson's have contributed significantly to the area of women and IT. Other growing research areas include e-government where researchers such as Peter Shackleton (Victoria University) are working, mobile computing undertaken by Steve Howard (University of Melbourne) and Jennie Carroll (University of Sydney), IT strategic management and investment with researchers such as Peter Marshal (University of Tasmania).

This special issue has provided an opportunity for Australian researchers to explore IS research and to pose the question, how does Australian IS research compare with Scandinavia, what do we share in common?

We suggest to our Scandinavian colleagues that they may like to look at their research in a similar way to help us both answer this question.

Notes

1. <http://www.abc.net.au/rn/talks/brkfast/stories/s1355144.htm>.