Pragmatism in IS Development, Evaluation and Use: An Introduction to the Proceedings of the SIGPrag 2010 at ICIS in St. Louis, MO, USA

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Background

Let's cut to the chase. The mainstream approaches we use to develop systems, don't allow us to understand the effects those systems have on organisations and those who use them. The same practices don't allow us to derive systems from practices used in these organisations very well at all. There has been decades of work attempting to address some of the fundamental problems with information theory and descriptions of these attempts within the IS literature were already old when Land (1985) wrote so clearly about them. Most pernicious of these problems includes the absence of any theorisation of the organisational context of information systems, and the asemantic view of these technologies. Mainstream approaches that employ information theory loose the fight to understand organisations before it has begun. Some would argue that they work because we obviously can and do build systems and information technologies using them. In defence of those who use methods based on information theory, skilful and hard working practitioners know how to bend them considerably to fit their particular development circumstances. Of course, design practices of all shapes and sizes can be employed to engineer actual system solutions. We can use formal modelling techniques to specify systems. We can even use combinatorial approaches and artificial selection to 'evolve' them. So if information theory does not hold an exclusive license on design practice, why not try alternatives that avoid or bypass some of its known problems. The AIS Special Interest Group on Pragmatist IS Research (SIGPrag) strives to utilise and develop approaches that enable information systems to be understood as part of the ongoing processes of work, not only as technologies or artefacts but also as meaning making in organisations. We are all in our different ways trying to understand and theorise information systems and technologies using the perspectives that take into account the organisational and societal contexts in which their selection, development, deployment, evaluation, and use occurs.

Pragmatism in the information systems discipline refers to research that theorizes information systems and technologies and their organisational and societal contexts from pragmatic, semantic, communicative, and action-oriented perspectives (Ågerfalk 2010). To those who advocate Pragmatist research, human life is a life of activity and these activities effect the environment and also our own subjectivities because they permeate and shape our sense of self and other. Activities are construed through language both at the level at which we can understand a given range of activities as a system, but also in the way that the activities we conduct unfold as processes. Human subjectivity can also be considered as action in social contexts. The activities that we conceive and do can be supported, augmented or conducted through the use of technologies, of which information systems and technologies are some of the most pervasive and significant for society. The main way we can gain access to human life,

subjectivity and activity is by means of language. As information systems and technologies are fundamentally symbolic language systems, language is a way of gaining an understanding of them as well. Depending on the theory of language being used, information technology can be seen as collections of norms, categories, collective presuppositions, or communication patterns that serve human and organisational activity and life. Indeed it is a central tenant of Pragmatist IS Research that the value of information systems and technologies lies in their potential and ability to support human and organisational activity and life.

To understand some of the potential of the Pragmatist movement in IS, we can borrow a term first coined by the famous North American semiotician Charles Saunders Pierce, and refer to the dual aspects of organisations and systems in Pragmatist research as having an abductive perspective. One view is oriented from the organisation and looks 'down' at its constituent work practices and activities in an attempt to construe how they are arranged to achieve (or not) particular organisational ends. This perspective may be extended downward through these work practices to consider something of computation and machine execution. There are long established parallels between natural and artificial language for example, see Andersen (1990). The other view is oriented from the work practices and activities looking 'up' to the organisation, attempting to understand not just the usual or typical ways in which they are negotiated by organisational actors, but also the other ways in which they may be appropriated and reused to create new and unexpected work practices. This perspective can be extended out to encompass other organisations in physical and virtual relationships with each other, like those found in supply chains or e-communities for example. When the focus of our interest is information technology, then this research should concentrate on understanding how these technical artifacts scaffold or support the work practices and activities of interest. At a meta-level, we also want to account for our own design and development processes and practices as meaning-making using the same theorisations that we use when we create information systems and information technologies. In the middle of next year an International and Inter-disciplinary Workshop on Practice Research will be held in Helsinki, Finland (June 8, 2011) in conjunction with the 19th European Conference on Information Systems (ECIS-2011). It will consider precisely this meta-level of disciplinary practice; not surprisingly it is sponsored by SIGPrag. The implication here is that of a unified theorisation of technical artefact and organisation, a distinctive feature of pragmatic, semantic, communicative, and action-oriented perspectives in general and of the Pragmatism specifically.

There have been several important paths that have influenced Pragmatist research in information systems. One of these paths has been the long, rich seam of research established by Börge Langefors (1966) that includes amongst other things the notion of an information system itself. Today the idea that someone actually invented this term is astonishing especially to those of us that have been raised outside of Scandinavia, and yet Langefors also developed concepts like elementary message (e-message), an interest in semantics (meanings) and a respect for organisations, all features that sit naturally within the Pragmatist Approach. Along with this extraordinary body of work, another of Langefors contributions was the establishment of the Information Systems work and Analysis of Changes (ISAC) Research group and the development of his first clutch of doctoral students- now senior professors and emeriti in their own right- that have so influenced the Scandinavian approach to Information Systems (e.g. Mats Lundeberg, Göran Goldkuhl, Anders G. Nilsson and Hans-Erik Nissen). For a coherent exposition of the work of this team the reader is directed to Mats Lundeberg's (2006) chapter 'On Methods in the Early Days of a New Discipline'. The many and varied contributions of Göran Goldkuhl loom especially large for the Pragmatist Movement, and were celebrated by his colleagues and friends last year on his 60th Birthday! Some of these contributions have included the development of intellectual capital around the generic aspects of processes, work practices and change management on the one hand, and in the development of academic structures and occasions in which this kind of work could be incubated, for example ISAC, HUMOR, and VITS research groups and the Language Action Perspective (LAP), and the Action in Language, Organisations and Information Systems Workshops (ALOIS) amongst others.

Another rich seam of research relevant to information systems has been the application of semiotic theories and techniques to the information systems discipline (Clarke 2001). Semiotics is the study of meaning and so you might suppose this discipline could have some useful things to say about information systems in organisations, and surprisingly these ideas have been said relatively early in computing as well. Some of the early moves in this area were in fact made by none other than Langefors- the e-message looks remarkable like Pierce's sign, see Nöth (1990, 89). The first international symposium and workshop in

what became known as the Organisational Semiotics community was conducted at Twente University, The Netherlands between the 10th and 15th of February 1995. It was convened by Ronald Stamper, the Professor of Information Management at Twente, Doeda Nauta, the Professor of Automation and Meaning also at Twente (one of the most provocative and daunting named professorships, don't you think?), and Rodney J. Clarke who was at the time a tenured lecturer in Information Systems from the University of Wollongong, Australia. Parenthetically, what do you think are the chances of having the leading Dutch Piercean semiotician working in a computing school just up the path from Information System discipline's first advocate for semiotics? Ronald Stamper (1973) had published a book called Information in Business and Administrative Systems which looked at organisations and information from pragmatic, semantic, and syntactic perspectives — a division introduced by Charles William Morris, a student of Pierce. To that same workshop I invited Peter Bøgh Andersen, a semiotician and self-taught computer scientist, Professor of Information and Media Studies at Aarhus University, Denmark. He had published a book called A Theory of Computer Semiotics (1990) that emphasised the importance of language as well as signs in the development and assessment of actual systems. Peter's work was very influential for the Pragmatist community as well as the Organisational Semiotics community. He was also a co-developer of the ALOIS workshops and co-editor of the Systems, Signs, and Actions (SySiAc): An International Journal on Communication, Information Technology and Work (www.sysiac.org).

The 2010 Workshop

The Pragmatist community exchanges research findings, approaches and views, and develops networks at its SIGPrag meetings. The first SIGPrag scientific event was held in Paris at ICIS 2008 and a second event was held in Phoenix at ICIS 2009. This third SIGPrag event consolidates submissions under the theme of theorizing the IT artefact and its organizational and societal contexts from a pragmatic, design and action-oriented perspective. The papers presented at the SIGPrag 2010 and published here were:

• "Data Matters: An Analysis of Data Practices in IS Research" by Wietske van Osch and Michel Avital

• "Understanding Multi-Organizational Collaboration Using Pragmatic Foundations" by Sandra Haraldson

• "How Does the Lens of Pragmatism Help in Understanding, Using, or Improving Work System Theory?" by Steven Alter

• "Designing Collaborative Infrastructures to Support Distributed Work" by Uri Gal and Sean Hansen

• "The Emergence of Information Systems: A Communication-Based Theory" by Roland Holten and Christoph Rosenkranz

In addition, the author of one paper, Nelson King, unfortunately could not make it to St. Louis:

• "A Synthetic Representation of Inter-Organizational Multi-Actor Collaborative Structures: A Pragmatic Look at U.S. E-Prescribing"

These submissions underwent peer-review and accepted papers were presented at the SIGPrag meeting held in conjunction with ICIS 2010 in St. Louis, MO, USA. The program committee (Rodney J. Clarke, University of Wollongong, Australia; Pär J. Ågerfalk, Uppsala University, Sweden, and Jeffrey V. Nickerson, Stevens Institute of Technology, USA), selected members from the SIGPrag advisory board as well as members of SIGPrag to conduct the paper reviews. As before the Proceedings has been published through Sprouts and the AIS eLibrary.

The program also featured an invited panel, chaired by Mark Aakhus, with editors and authors of recent papers published in high-ranking journals. The focus of the panel was to discuss how to get pragmatist research into the mainstream IS literature. The panel participants included:

• Kalle Lyytinen, former Editor-in-Chief of Journal of the AIS

• Owen Erikson, co-author of "Rethinking the Meaning of Identifiers in Information Infrastructures", recently published in Journal of the AIS (Eriksson and Ågerfalk, 2010)

• Carol Saunders, former Editor-in-Chief of MIS Quarterly

• Matti Rossi, co-author of "Action Design Research", to appear in MIS Quarterly (Sein et al., to appear)

As program chairs it has been an honour and a pleasure to facilitate both this meeting in St. Louis, USA and also this research. Our thanks are extended to the Organising Committee members Mark Aakhus, Rutgers University, USA; Mikael Lind, Viktoria Institute, Gothenburg, Sweden; and Daniel Rudmark, University of Borås, Sweden.

In Memorium

Peter Bøgh Andersen's recent death at the beginning of this year was a deeply felt personal and professional loss for many in this community. We dedicate these proceedings to his memory, work, and friendship.

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