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Philosophical Foundations of Information Systems: A Review of the First 10 Years

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ABSTRACT

This paper updates and extends the work by Bunker, et al. (2004) that reviewed developments in the Philosophical Foundations of IS (PFIS) mini-track from 1996 through 2003. We first describe the history of the mini-track, concentrating on 1996, when C. West Churchman served on a PFIS panel and presented a luncheon address. His work on inquiring systems continues to be the basis for many of the papers in the mini-track. Papers in 2004 and 2005 are reviewed briefly and some trends and themes are noted. Unfortunately, one trend is a declining number of papers submitted. We discuss factors that may have led to this and hope that next year's conference venue may lead to an increase in submissions. For convenience, the chronology published in Bunker, et al.'s 2004 paper is included as an appendix.

Keywords (Required)

Philosophy, epistemology, inquiring systems, inquiring organizations, ethics, knowledge, knowledge management

INTRODUCTION

The Philosophical Foundations of IS (PFIS) mini-track was initiated in 1996, the first year that the AMCIS conference had mini-tracks. The mini-track had somewhat of a pre-history, as Jim Courtney, the Chair of the Decision Support Systems track at the Decision Sciences Institute meeting in 1994, had organized a session on philosophy and information systems. Jaana Porra, William Hodges and John Haynes presented papers in what turned out to be a sparsely attended session. In spite of the low turnout, those brave souls decided to propose PFIS when it was announced at the 1995 AMCIS meeting that the conference would be organized by mini-tracks beginning the next year. We were hoping to get enough papers for one or two sessions. Surprisingly enough, the IS philosophers seemed to emerge from the global woodwork and 22 papers were submitted. Nineteen of these papers were accepted and PFIS was born. Even in that first year, papers were accepted from 26 authors representing 21 institutions in 7 different countries. In total, over 150 papers have been presented in the 10-year period of PFIS existence.

The 1996 meeting was held in Phoenix. At that time, Jaana Porra was conducting a series of interviews with C. West Churchman, author of the very influential book *The Design of Inquiring Systems* (1971), concerning his views on philosophy and information systems, among other things (see Porra, 2001 for a synopsis of these interviews). Churchman was invited to serve on a panel that year and did make the trip to Phoenix, despite his already failing health. Rudy Hirschheim and Richard O. Mason, one of Churchman's students who helped popularize inquiring systems with his 1973 *Management Science* paper with Ian Mitroff, served on the panel as well. The panel was conducted before a standing room only crowd of over 80 people (PFIS as typically been assigned small meeting rooms, which often have been packed). Churchman also gave a luncheon speech in which he expressed his views on global ethical management and events of the 20th century and how it had been so poorly managed. His presentation was very touching and actually brought tears to the eyes of many in the spell-bound audience. He ended his speech by imploring the audience to become the "information imagination association," a plea that we hope that PFIS has been able to answer at least in some small way.

Inquiring systems has remained a recurring theme of the mini-track, with at least 18 papers over the years having something to do with this topic. Notably, the seminal paper on “inquiring organizations” (Courtney and Croasdell, 1996) was presented that year and has ultimately led to a significant stream of research culminating in a recent book on the subject (Courtney, Haynes and Paradice, 2005). However, as noted in the appendix, a wide variety of topics have been covered in the mini-track over the years. The nature of PFIS is perhaps best characterized by diversity rather than one or more narrowly focused themes.

The remainder of this paper updates and extends the paper presented last year in this mini-track that reviewed contents of the mini-track up to 2003 (Bunker, et al., 2004). This paper adds summaries of 2004 and 2005 and examines trends and recurrent themes beyond the inquiring systems theme. The previously published chronology up to 2003 is reproduced in the appendix for convenience.

PAPERS IN 2004

For a variety of reasons, only 8 papers were accepted in 2004. The conference organizers decided to reduce the overall acceptance rate to 50% - 60% and meeting rooms were at a premium. Only two sessions were allocated for the mini-track. Several other papers related to philosophical issues were presented in other mini-tracks in the philosophy and epistemology track.

Papers by a total of 13 authors representing universities in 5 countries, the United Kingdom, France, the U.S., Sweden and Australia, were presented in 2004. Andrew Basden (2004) found the philosophical basis of IS research to be fragmented and suggests Dooyeweerd's thought as a unifying basis. Emmanuel Monod (2004) reviewed French theories in IS research. Dirk Hovorka (2004) differentiated between explanation and understanding as objectives of research and suggest that both are useful in conducting in IS-related scientific endeavors. Martin Andersson (2004) developed a zigzag theory structure and related it to IS research. Randall Brown, Sridhar Nerur and Craig Slinkman (2004) trace the shifts in software development from structured to object-oriented and finally to agile systems development, and suggest that we have moved from a basis in Leibnizian to Singerian inquiring systems. George Widmeyer (2004) discussed Peirce's trichotomy of knowledge and applied it to knowledge management systems. Adam Jenkins (2004) presented an interesting paper questioning whether it is necessary for us to define knowledge in order for knowledge management to advance. Artificial intelligence research has advanced with no satisfactory definition of intelligence. Finally, Deborah Bunker, Melissa Cole, Jim Courtney and John Haynes presented a paper that summarized the first 8 years of the mini-track.

PAPERS IN 2005

This year, 14 papers were submitted to the mini-track and 9 were accepted. Two of those were transferred to the mini-track on critical theory, as it received only two submissions, one of which was rejected as not being suitable for the mini-track theme. The 9 accepted papers included 17 authors from 13 different universities, but only 3 different countries, the U.S., the U.K. and Australia. The number of submissions is down this year, especially submissions from countries other than the U.S. It's pure speculation to say so, but perhaps this is due to the conference being held at a relatively inaccessible location to many international travelers and one that is probably not as well known as the larger, coastal cities in the Americas. We hope that this is not a trend and that the number of submissions picks up again next year.

Of the 9 accepted papers, Dianne Hall and her colleagues (2005) continue to extend their work on inquiring systems and organizations by developing the technological foundation for their learning-oriented knowledge management system. And Peachy and Hall (2005), in another inquiring systems related paper, discuss evidence for supporting research in knowledge management via inquirers. John Beachboard (2005), in an intriguing play on words, juxtaposes concepts of knowledge, discussing knowledge as both an object of research and a product of research. Emmanuel Monod and Heinz Klein (2005) provide a phenomenological framework for interpreting cultural heritages using Heidegger's concept of historicity. Dirk Hovorka (2005) describes the use of functional explanation in information systems. Ethical issues continue to be a topic of interest in the mini-track, as Sutirtha Chatterjee (2005) provides us with a model of unethical use of information technology. Vlad Krotov and Leiser Silva (2005) consider case study research, exploring the question of whether it is science or a literary genre. Richard Taylor (2005) discusses the growth of scientific knowledge in MIS research and the development of an MIS paradigm. Finally, this paper (Bunker, et al., 2005) describes the last two years of PFIS and discusses some trends and themes that have been noted in the 10 the mini-track has been in existence.

TRENDS AND THEMES

In addition to the inquiring systems theme, several others have emerged. There have been over 27 papers dealing directly with research theory and epistemology and at least 16 papers have dealt with IS design and development approaches, concentrating mostly on human-centered, pluralistic methodologies. At least 12 papers have dealt with ethical issues or privacy concerns. The remaining papers deal with a diverse set of issues, illustrating that PFIS maybe more accurately characterized by its diversity rather than focused themes. We embrace this diversity and welcome papers on new topics related to any aspect of philosophy and information systems.

One somewhat disturbing trend that can be observed is the declining number of submissions to the mini-track over the last two years. In 2004, this seemed to be due to a large number of competing mini-tracks within the overall Philosophy and Epistemology track. However in 2005, because of the small number of meeting rooms available, only two mini-tracks were approved in this track, and a total of only 16 papers were submitted. Hopefully this is due to the conference venue, but only time will tell whether that speculation is correct. Next year's meeting is in Acapulco. Hmm... Omaha, Acapulco. Maybe we will get more papers next year. J

CONCLUSION AND ACKNOWLEDGMENTS

We'd like to thank all the authors, session chairs, and reviewers for their hard work, their "information imagination" and contributions to PFIS during its first 10 years. We are very pleased that this mini-track has served well as a forum for those interested in developing a philosophy of information technology. We'd like to encourage all that have participated to continue to do so and for you to encourage your colleagues and doctoral students to join in. We've had some lively discussions that have been thought provoking and stimulating. We hope to continue this forum well into the future, and hope to see more submissions of quality papers on diverse topics, as has been the case in the past.

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* These are just the references that are not in the AMCIS proceedings. For brevity, we have omitted the references that are in the conference proceedings, as the are all available on the AIS website (<http://www.aisnet.org>).

APPENDIX

The following chronology was published in 2004 (Bunker, et al., 2004) gives an insight into the mini-track through 2003.

1996 – Topics in this year were very diverse representing everything from IS education to ethics in the area of IS creation and use. Some of the topics also relate to IS usability, and some theories are proposed regarding the validity and applicability of the current research methodologies in this area. The mini-track was looking at a set of very wide ranging issues within the area. It is difficult to identify any particular pattern or trend in the representation of particular research topics at this stage.

1997 – This year represents a further development of the diverse range of themes that this mini-track appears to attract. There were 2 papers that focussed on information searching and retrieval techniques (Karamuftuoglu 1997, Duncan & Acar 1997). 4 papers also covered different kinds of IS modelling in the areas of information and social context, enterprise, process, and informational modelling (Vance 1997, Glynn 1997, Weber 1997, Martin & Dobson 1997). There were also 4 papers on ethics including Y2K, e-mail privacy, and ethics failures (Cappel & Kappelman 1997, McGowan 1997, Carlisle 1997, Byrne & Wood-Harper 1997). 3 papers covered management topics in the areas of decision processes, social context, and dualism in information systems (Eom 1997, Kakola 1997, Dalal & Bhatt 1997). 2 papers focussed on WWW topics such as virtual communities and Heidegger's philosophies as applied to the Web (Cass 1997, Duncan & Acar 1997).

It is in this year that the WWW appears as a major subject of interest.

1998 - Emerging areas of enquiry include: 3 papers covering ethics and privacy issues (Griffin 1998, Shaw 1998, Probert 1998), 2 papers which look at linguistic philosophy and approaches to understanding IS (Lopez & Babbitt 1998, Stephens 1998) as well as 1 paper which addresses the issue of IS cultural bias and global technology transfer (Bunker 1998).

1999 - Highlights of this year include: 4 papers relating to Churchman's inquiring systems approaches and their relation to IS (Richardson & Courtney 1999, Nelson et al. 1999, Keinholtz 1999, Haynes 1999) as well as 2 more papers building on the ethics theme (Stephens 1999, McManus 1999).

The first paper also appeared specifically dealing with e-business (Nelson et al. 1999).

2000 - Major topics covered in this year include a further development of inquiring systems specifically dealing with Churchman and Hegel (Wernick et al. 2000, Hall & Paradise 2000, Chae & Courtney 2000, Haynes 2000, Bennetts & Wood-Harper 2000). From this year onwards inquiring systems becomes a major area of focus.

The first paper on B2C e-commerce appears (Robbins & Stylianou 2000).

2001 - Major areas of further development include Churchman, Hegel, and inquiring systems (Chae et al. 2001, Bennetts & Wood-Harper 2001, Haynes 2001, Vo et al. 2001, Guo & Hall 2001). The first legal and socio-economically themed papers appear covering such topics as law, music piracy and Napster.com as well as the equity (or lack thereof) of access to computer technology (Kwong & Lee 2001, Lauer, 2001, Friedman 2001).

The first gender-studies and IS paper appears (Laosethakul & Bartczak 2001).

2002 - More papers on Churchman and inquiring systems are published (Haynes 2002, Bennetts & Wood-Harper 2002) a newly emerging focus on linguistic philosophy and IS was created (Carlisle 2002) and global technology transfer issues are further developed within the context of SMEs (Bunker 2002).

The first paper discussing the value of IT appears as a post-bubble response (Tanpong 2002).

2003 - Included 5 papers on factor analysis versus process analysis (Friedman 2003, Taylor 2003, Pankaj & Hyde 2003, Mattia, 2003, Widmeyer 2003).

The first paper (invited) on theoretical foundations of IS appears (Lyytinen 2003).