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A Philosophical Foundations of Information Systems (PFIS): Past, Present and Future Directions

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ABSTRACT

This paper represents a record of the historical review of the PFIS mini-track, and the subsequent proceedings that discussed this review, at the final session in the PFIS mini-track at AMCIS 2003. It is the intention of this paper to illustrate the lessons learned from the conduct of such a review and membership suggestions for future directions, so as to illustrate the benefits and generic value that such a process holds for the research community at large.

Keywords

Information systems, philosophy, history.

INTRODUCTION

In 2003, the Co-chairs of the AMCIS mini-track “Philosophical Foundations of Information Systems” (PFIS) decided that an analysis should be done of the mini-track, in order to better understand how it had evolved over its 8 year history and to allow mini-track members to have input into its future direction. During AMCIS in Tampa, 2003, there was a short presentation given by Deborah Bunker on the analysis of papers presented in the last 8 years of this mini-track. John Haynes then proceeded to describe the papers presented in the current year of the mini-track and Jim Courtney offered some comments on the overall direction of the mini-track based on the previous analysis. Melissa Cole then facilitated a dialogue between the audience and panel members regarding future directions of the mini-track.

This paper represents a record of the analysis done before the conference and the proceedings at this very important session, but it also chronicles the mini-track past, present and future directions. This has been done to illustrate the development of ideas in such a research venture, so as to allow those within and outside the process to understand the lessons learned.

MINI-TRACK HISTORY

This AMCIS research mini-track emanated from a session at the Decision Sciences Institute (DSI) conference in Honolulu, Hawaii in 1994. Jim Courtney was chair of the Decision Support Systems mini-track that year and invited Jaana Porra, William Hodges, and John Haynes to present papers on possible relationships between philosophy and information systems research. When it was announced by AIS in 1995 that mini-tracks could be proposed at subsequent meetings, this announcement was formalised as the AMCIS PFIS research mini-track in 1996 (by the same original members). The mini-track was established as a means of engaging the international IS community in a dialog regarding the philosophical underpinnings of the discipline. This came about as a direct result of the many debates which surrounded the definition of the discipline at this time in such areas as appropriate IS research methods, IS research coverage and emerging IS curricula. It was felt that a focus on philosophical issues surrounding the discipline might assist in the contextual understanding of IS creation and use.

The mini-track has had an illustrious history during the past 8 years, moving from strength to strength and meeting the needs of the international IS community to debate the philosophical underpinnings of our disciplinary area. The mini-track has published a total of 156 papers over this period covering topics as diverse as Churchman’s work on inquiring systems (a recurrent theme), IS from a phenomenological perspective, colonial systems, IS and ethics as well as IS in context.

Membership of the group over this time has come from US, Australia, Finland, France, UK, Spain, New Zealand, Taiwan, Hong Kong, Republic of Korea, Malaysia, Canada and Germany.

The following **chronology** gives an insight into the mini-track over its 8 year history.

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 focused on information searching and retrieval techniques (Karamuftuoglu 1997, Duncan & Acar 1997). 4 papers also covered different kinds of IS modeling in the areas of information and social context, enterprise, process, and informational modeling (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 focused 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).

GENERAL AREAS OF FOCUS AND RESEARCH TRENDS

In summary papers have been published (in larger numbers) in the following areas:

20 – dealing directly with research theory and epistemologies

16 – which have Churchman, Hegel and inquiring systems approaches as their philosophical underpinning

15 – focusing on IS design and development approaches

11 – covering ethics and privacy issues

5 – dealing with e-business and e-commerce issues specifically (this is interesting more for the lack of attention to these topics)

In general terms, this appears to be a highly fragmented mini-track. It is quite difficult to identify specific patterns from year to year, although looking at papers over the past 7 years yields some clustering of ideas and themes as described above.

If we look closely at papers that deal with the issues surrounding research theory and epistemologies, we see the idea of interpretivism versus positivism as a recurring theme. There is also a general trend within the focus of these papers to openly question the definition of “scientific research” and how this relates to the discipline of information systems.

THE DIALOGUE BETWEEN THE MINI-TRACK CHAIRS AND THE MINI-TRACK MEMBERS (AMCIS 2003)

As those of us in the social science research community acknowledge, the object under study is always difficult to integrate and reconcile with the subjective viewpoints of those who are studying it (Haynes 2001). There are many different viewpoints regarding this mini-track within our own PFIS membership.

After the presentation of the mini-track history by the co-chairs at AMCIS 2003, the floor was thrown open to the audience (38 were in attendance) for their comments and input to the future direction of the mini-track. A lively discussion ensued and the following points were recognised as important to the future development of the mini-track.

- It was seen as necessary to develop some themes for each year without compromising the diverse nature of the mini-track and the research papers presented within it (representing a critical analysis of broad ranging IS issues and multiple points of view). The diverse and broad nature of the research was seen as a major strength in a mini-track that purports to develop the research output on Philosophical Foundations of IS.
- The members also felt that it was critical to consider how to foster debate within the mini-track (laying bare epistemological beliefs). This gave rise to suggestions of conference sessions other than those purely for the presentation of research papers i.e. ideas such as roundtables and workshops.
- Consideration of how to map reference areas to the PFIS mini-track was also an area of importance to the members. It is hoped that the interest generated by this paper, and subsequent efforts to develop an overview of the mini-track areas of research will give rise to the identification of and communication with other mini-tracks and research groups with reference interests.
- It was also suggested that the mini-track could be organised under topics (not themes). Whilst this suggestion was somewhat at odds with maintaining the diverse nature of the mini-track, it would seem over the history of the mini-track that from time-to-time certain topics have been of significant interest to mini-track members (Churchman’s inquiring systems springs immediately to mind). There is obviously a fine balancing act between developing cohesive research topics and themes within the mini-track whilst not stifling the ability to address a broad range of research areas.
- The members were also concerned about how to list and record the mini-track topics/themes (categorisation). Once again there were concerns about representing the mini-track as a cohesive group with a focused agenda without suppressing the creative and developmental side of our mini-track research area.
- Concerns were also raised as to the provision of mentored sessions (roundtables or workshops) to tackle various IS philosophical issues which have a student focus (especially helpful for PhD students). This particular comment was insightful and it also led to the raising of important student concerns regarding where students fit into the research development process and how this can be facilitated in the PFIS mini-track.
- Members also suggested that as a mini-track we must explore how to constantly inform other mini-tracks at AMCIS (and the IS community in general) about the PFIS mini-track in terms of our reputation and areas of interest. It is hoped that this paper will be a first step in the development of communications mechanisms such as joint sessions and papers, close analysis of conference scheduling and joint social activities.
- Many members also raised the issue of how to further explore and promote the particular “worldviews” of the mini-track. Issues such as post conference publication of papers in appropriate journals, development of special interest groups and the further development and promotion of the PFIS website and list were flagged as appropriate mechanisms for further consideration. The best 3 papers from the 2003 conference were published in the Australian Journal of Information Systems.

- There was also a call to consider how to promote the ideas and research generated by PFIS external to the mini-track and AMCIS. Promotion of our ideas in other conferences, IS curricula worldwide as well as the diffusion of PFIS approaches in research and consulting assignments were all seen as good methods of promoting the area.
- Members were also very positive about the promotion of some well known researchers as invited presenters to the mini-track as a good idea to attract mini-track participants (the invited paper for 2003 by Kalle Lyytinen was particularly well received and it assisted in underpinning the resultant discourse at the mini-track sessions).
- There was also discussion regarding the possibility of the development of online PFIS journal sponsorship with the special interest group (SIG) so as to make it an AIS sponsored journal.
- Members were also very positive about the possibility of the online PFIS journal as a publishing outlet for the group (subject to the rigors of academic publishing criteria).
- There were also calls to explore ideas of how to make the mini-track paper review process more transparent (what constitutes grounds for acceptance /rejection). Every effort has been made in this year's review process to ensure that adequate and consistent feedback has been given to authors.

CONCLUSIONS

This paper represents the history and suggested future directions of the AMCIS mini-track "Philosophical Foundations of Information Systems". It is hoped, however, that it does more than that for PFIS members but also for other IS researchers outside of this area, in highlighting the lessons learned in the analysis of the mini-track history and comments from the membership about issues of importance to them.

These lessons learned include the ongoing development of mechanisms to encourage:

- Development of mini-track focus in the form of themes and topics (but mini-track diversity and breadth must not be sacrificed);
- Debating of mini-track research, ideas and "worldview" (both within the mini-track but also in fora outside of it);
- Development of a PFIS "map" which includes reference research areas, groups and AMCIS mini-tracks;
- Facilitation of communication and the sharing of ideas with these reference areas;
- Development and mentoring of our student researchers by the more experienced group members through mini-track and external mechanisms; and
- Development of a transparent review process for the PFIS mini-track but also further development of research outlets for PFIS researchers.

Other mini-tracks within the AMCIS conference may find these lessons learned and future development directions, useful ideas to incorporate into their own mini-track development and management. In reading this paper they might also find it as useful starting point with which to enter into a dialogue with the PFIS Co-chairs and members.

We have (as Co-chairs) found this process of review and membership reflection an extremely valuable one in developing appropriate and effective mechanisms for the ongoing evolution of the mini-track. It is useful, from time-to-time to sit back and take stock of where you've been in order to gain a better and more insightful idea of your potential.

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