COMMENT

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General Introduction

Before discussing each of the three contributions separately, it may be helpful to provide some general personal comments about the conference theme and discussions. It is clear both from the question posed in its title and what the colloquium speakers have generally discussed so far that Information Systems research and discipline development activities are quite naturally meeting all the philosophy of science problems that its parent disciplines—Management Science and Computer Science—are presently grappling with. But quite understandably, none of these fledgling, infant disciplines can be expected to solve them yet in any general sense in their present periods of rapid, "awkward" growth and immature, confident energy.

This morning's papers, and the previous ones, exhibit a variety of approaches to the basic philosophy of science problems with which they are inevitably beset as new, thriving knowledge seekers. Most prominent is perhaps the tendency by some to solve these problems by ignoring them on the grounds that such activity is unnecessary, undesirable and unhelpful. Such researchers and "doers" wish to get on with "the job" and assume that they know what the job is. Yet others seem to solve the philosophy of science problem expeditiously and unequivocally by implying a unity of science through their willing and ready espousal of the scientific method on the terms of "natural science." They appear to favor a narrower view of scientism which relies heavily upon a statistics-based view of "truth" and to generally fall foul of the disease of "quantiphrenia"—an over-willingness to accept the results of quantitative analysis.

It seems to this discussant that colleagues in the area of Information Systems research and discipline development, judging by many attitudes revealed in this colloquium, need to be convinced about some related academic and ethical matters. I would in particular like to instance:

(1) A greater need to address and answer the questions: In whose interests is the present growth in Information Systems (IS) knowledge being generated? What interests are served by the production of IS knowledge?

(2) Given the tendency for specialization and fragmentation of IS knowledge, there is a clear danger of leaving out *the social context* in which this knowledge is being used. In a situation in which "clients" increasingly define needs and requirements and the professional researcher and developer is provided with a "technical" brief, the client is defining what is to be researched and the researcher becomes less autonomous and less aware of the social context of the research.
(3) How is the effectiveness of IS research measured and by whom and to what end? In this context it may be helpful to quote Richard Bernstein (*Beyond Objectivism and Relativism*, London: Blackwell, 1983, pp. 171-172):

> In order to gain a fruitful perspective on the rationality of science itself, it is necessary to see that reasons and arguments employed by the community of scientists are grounded in social practices and that there is an essential openness in the very criteria and norms that guide scientific activity.

I would now like to make some particular, brief comments on each of the three papers presented this morning which follow from the above more general comments.

Professor A. M. Jenkin's Paper

The speaker has presented his model which he uses for the general guidance of student participants in a doctoral program into research into MIS. His Figure, 1 which is the focus of his presentation is in fact a more general model of the research process and is not particular to MIS, although this may mean that it also embraces MIS, even if not highly specifically. As a research methodology , it seems highly rationalistic in its general nature as a process description of research and in a sense everything might be said to be contained in his model but only in a very formalistic sense. As Dick Boland reminds us, "reasoning only takes place in discourse"! For instance the following critical comments are offered:

(1) It seems hardly representative of a human process: circumstances, values, objectives and ambitions of the researcher are nowhere to be seen.
(2) In some ways, it may be said that the description of the process might itself encourage a certain lack of integrity on the part of the researcher, at least by "fudging."
(3) The "experimental design" box assumes that there is a complete tool-kit of methods for IS research. This is surely unrealistic in the case of such an "infant discipline." Indeed Professor Jenkins' comments about data analysis do themselves raise strong doubts about the adequacy of the experimental design component.
(4) There is no consideration of the creativity element which is a crucial part of all successful research!
(5) There is no consideration of the conflict element in most research situations and how this can be resolved.
(6) The author refers to one such important conflict of interest: publication of research and the obstacle to it—the viewpoint of editors. Whilst it is important to see this in

personal terms as Professor Jenkins has, it is also vital to ask the questions in a social context: whose interests are served by a particular pattern of accept and reject decisions by particular editors? If that pattern is changed in a certain way, will the editor's appointment be renewed?

Professors K. and J. Kendall

I found it difficult to accept the basic assumptions of this paper and in that sense was unable to "get off the ground" as it were in evaluating its detail. However, if one can accept the authors' broad assumptions, then their paper raises many intriguing questions of research.

Given their academic backgrounds and interests, the speakers seemed able to accept a selection of techniques which they refer to as "film theory" and to be comfortable in using it as a basis of application to behavior in organizations generally. I would in particular wish to raise the following points for consideration and discussion:

(1) The selection of a particular theory (such as "film theory") is vital in the circumstances of attempting to understand and explain any particular human behavior. Why choose that theory in preference to other kinds of theories, especially as film may be termed an art form and therefore has a quite different (non-scientific) justification. In other words, the choice of a particular theory excludes others and that needs justifying surely. Neither is a particular justification offered for the basis of "film theory."

(2) How does STROBE enable you to see the decision-making abilities, objectives and cognitive maps of the research subjects? This is by no means clear.

(3) It seems that there is no explicit model of the human being in the development of STROBE yet basic to that technique's application is a listing of seven attributes of human decision-makers. Those seven attributes surely need justification as well as the corresponding list of seven elements in the "play environment." This correspondence is clearly no coincidence but there is no proper justification offered for this one-to-one transformation as between two distinct and quite separate models.

(4) The researchers surely need to justify, from the viewpoint of their morality and intellectual integrity, the seemingly throwaway comment: "People don't know what you are doing," when referring to the observation and analysis of behavior in the "play environment."

(5) There appears to be no evident justification for eliminating "the detail" of data in the scenes of the play environments in order to arrive at a tractable set of variables. The authors appear to argue that this is itself "an art"! Mystification in artistic processes may well be justified but surely not in (social) science.

(6) Above all, perhaps, organizations are socially constructed in a manner different from films.

Klein and Lyytinen

It seems to this discussant that this paper offers an excellent framework for considering what seems to be the basic intellectual and moral questions facing an "infant discipline" in its formative years. At the expense of laboring the point, may I repeat these:

(1) In whose interest is this knowledge produced? How can we elucidate that question within its complex social context? (See particularly J. Habermas, *Knowledge and Human Interests*, 2nd ed., London: Heinemann, 1978.)

(2) What interests are served by the process of its production? Three cases are especially considered:
   (a) There are no worthwhile, genuine problems, in which case the matter is one of scholasticism in its worse excesses. Such as: how many angels can dance on a pin head?
   (b) The problems are worthwhile and genuine and are perceived to be such, but there are no methods available to the primitive, would-be science, such as Physics before Newton, Economics before Adam Smith, Geometry before Euclid, or Information Science before Weiner, Cherry, or Simon.
   (c) These are legitimate problems but the wrong methods of science are used or perhaps even worse still the infant status of the subject is such that its practitioners are uncertain as to their own scientific standards and criteria and are often unable to distinguish between scientific and non-scientific research. In the context of the present development of Information Systems as a discipline, it seems very appropriate to consider examples of "recognized work," as judged by the community of researchers and professional practitioners; to identify the essential methods used by them; and come to some tentative conclusions about what appears to be the scientific status of the subject at present. And to do so in terms of the perceived credibility of the subject as judged both by its researchers and practitioners on the one hand and by its users on the other.

Conclusions

May I conclude simply and briefly: it seems to me that as would be Information Scientists we should:

(1) Distance ourselves somewhat from "clients."
(2) Possibly break our "umbilical cord" with some referent disciplines.
(3) Not be afraid to philosophize, morally and scientifically as IS scientists.