

## COMMENTS

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I have been asked to discuss the contributions by Lyytinen and Klein, Brittain White, and Vitalari to this colloquium. As a systems man, I'm always searching for wholes and that is what I intend to do with their papers. My plan is simply to describe briefly the meanings I found in each of the papers and derive from these descriptions some general, and a few specific, comments.

The paper by Lyytinen and Klein is a discussion of the social meaning of both information systems and information systems development (ISD). They use this discussion to bring to our attention important methodological issues.

The authors want to broaden the epistemological foundations of ISD:

The traditional interest of information systems development to support organizational effectiveness is augmented by an interest to increase mutual understanding and to expand human intersubjectivity and by an interest to emancipate people from unwarranted social and physical barriers, distortions in communications and unjust organizational power.

However, after establishing a convincing case for individual liberation and the need to have methodological support to make possible emancipatory information systems, they come, in the last page of their paper, to the conclusion that:

The possibilities to realize the emancipatory interest through ISD appear to be dim.

While I'm in great sympathy with their diagnosis, and their concern for a synthesis of the positivistic and hermeneutic views as it is made apparent by their use of critical

Social Theory, I have doubts about their methodological assumptions. Their tacit assumptions are heavily rooted in phenomenology and it may well be that they are the ones limiting the scope of their discourse to the point of despair.

Since the authors approve Checkland's methodological approach and seem to think that his methodology is the best available today to satisfy their concerns for "discursive action," I will concentrate my comments in this methodology to make apparent my concerns about what I see as Checkland's "strong" phenomenological approach.

Checkland takes the view that there is a need to orchestrate debates, communications, in order to agree to changes which are both "systemically desirable and culturally feasible." The methodology does not deal with the fact that these very debates or communicative actions may be reinforcing the same kind of problems (oppression, injustices) that they want to alleviate.

Indeed, in the phenomenological stance, there is a risk of extricating epistemology from ontology. This stance gives primacy to the mental processes of the observers rather than to the sensorial evidence of an external world. Perhaps I would agree with this view if all the relevant observers had similar chances to access the space of possible sensations, yet clearly this is not the case, there are structural constraints which produce fundamental differences in the knowledge that can be produced and used by interacting individuals and groups in society. Social systems appear to have identities of their own, identities which, while not independent of the community of individuals defining their organization, are clearly imposing constraints to the formation and use of knowledge. Hence the design and adjustment of organization structures seem to be essential not only for strategic action but also for communicative and discursive actions. Indeed debate and communicative actions should recognize that changes should be "systemically feasible and culturally desirable." Once this is accepted, then it may as well be accepted the need for structural changes as a means of increasing the space of feasible solutions.

Åke Sandberg's talk during the first session of this colloquium goes clearly to the point: I heard him saying that there is a fundamental mismatch between trade unions and management in their possibilities to generate and use knowledge. The processes necessary to create and use knowledge in democratic systems are much slower compared to authority-based systems. Indeed this should have fundamental implications in the design of their conversations, that is in the development of their information systems.

I believe that the possibilities to realize the emancipatory interest through ISD can be increased by accepting a revised "structuralism." Not surprisingly, because of my own work, this is a contribution that I believe the cybernetic paradigm can offer to the research community.

The paper by Brittain White is a much lighter one; in my view it is about the need to increase the researcher's possibilities to produce valid knowledge. The paper is focused in the researcher her/himself and advocates the need for self-awareness. Unfortunately its content is too general, in fact it says little that is specifically relevant to methodological issues in information systems development. I was left with the feeling that the chosen theme was of great relevance but its discussion was too vague.

As a matter of illustration, I want to suggest two themes that the author could have developed in the context of the paper.

Firstly, I missed a discussion about possible means to help researchers to find out more about their tacit assumptions while doing research. The work by Cohn Eden and

associates at Bath University in the U.K. seems to me relevant for this purpose. Using ideas about the psychology of personal constructs, they have developed methodological aids and computer tools to help anyone who wishes so to make more explicit his/her tacit assumptions in solving problems. This might be a relevant and practical tool to make possible a larger degree of self-awareness in researchers.

Secondly, I think the author missed the opportunity to discuss the relationship “researcher-organizational actors,” so relevant to our current concern for action research. Indeed further work about “learning” as developed by Argyris and Schon, and referred to by the author, could be of great relevance for both researchers and organizational actors.

The paper by Vitalari, the third and last of this session, is about the shortcomings of current research in Information Systems and the advantages of the longitudinal research method as an approach to produce valid knowledge about their development, that is, about the relationship between information technology and social change.

Perhaps because it is a clearly written paper and transparent to the reader, it lends itself to conceptual and practical criticism. The paper is addressing a fundamental problem today: the rate at which information technology is being introduced in our institutions exceeds our capacity to generate knowledge about its effects and meanings. The author argues that “scientism,” or the traditional research paradigm, is inadequate and that there is a need for a paradigmatic shift in favor of “post-positivistic” paradigms; in particular, he shares the views of our first speakers today about the relevance of Critical Social Theory.

While I’m in sympathy with the above view, I think that its development in the paper is weak, indeed I was unable to recognize a paradigmatic shift in the case made for longitudinal designs. They indeed appear to me as another tool to carry out the traditional empirico-analytical studies. I was left with the feeling that there was an important gap between the author’s espoused theoretical views and his practical methodological views.

At a conceptual level, the paper makes apparent a few conceptual weaknesses. They may have something to do with the above suggested gap. The author seems to be saying that unexpected change is equivalent to instability, hence, presumably, the only way to avoid organizational instability is to have organizations that do not deal with unexpected changes! At the core of the relationship of information technology-social change is precisely the need to design organizations that are able to cope more effectively with unexpected changes; that is, instability is an outcome of a poorly structured organization while environmental change is an input that cannot be eliminated without trivializing the social situation. The author’s difficulty with the concept of structure is made more apparent when he discusses the primacy of process over structure, simply because in his view the latter is an outcome of the former. It seems to me that it is difficult to support this view. Of course structure and process are closely intertwined. I think that my early comments about the relationship between epistemology and ontology are relevant here as well.

Overall I take the view that, if anything, we should be making efforts to speed up the creation of knowledge about information systems development and that for this purpose it is necessary to move away from empirico-analytical approaches, including longitudinal studies (in spite of the claims to the contrary by the author), towards approaches that are able to recognize social invariances and develop a priori models. There is an interesting aphorism in systems theory relevant to the point:

To a certain extent, mental power can compensate for observational weakness.

