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SOFT SYSTEMS METHODOLOGY, PHENOMENOLOGY AND INFORMATION SYSTEMS DEVELOPMENT: A CRITICAL ANALYSIS

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Abstract

Successful uses of information technologies usually require teams of developers working in concert (rather than individuals working alone); implying that methodological prescriptions for such developers should centre on issues such as communication and co-ordination. Here, it will be argued that the epistemology proffered by the SSM advocates does not provide a practical basis upon which to conduct team-based systems development; because the SSM advocates over-emphasise the need for subjective certainty and meaning, thus rendering their epistemology over-idealistic. It is concluded that the need for effective communication between team members necessarily implies abandoning the search for subjective certitude and supplanting it with the search for practical "working knowledge" of the actual situation in which IS development occurs.

Keywords: Soft systems methodology, phenomenology, systems development, epistemology, meaning

Phenomenological Ambitions

Edmund Husserl (1859-1938) developed *phenomenology*, which supposedly provides the foundation of SSM's *epistemology*, "Soft systems methodology implies ... a model of social reality such as is found in the ... (phenomenological) tradition deriving sociologically from Weber and philosophically from Husserl." (Checkland, 1981, p. 19). Consequently, the arguments put forward in this work will be based on Husserl's phenomenological works (Husserl, 1931, 1970, 1977 and 1990). Although it has been argued that many of Husserl's substantive arguments have been virtually ignored by the SSM advocates (Probert, 1998), certain traits of his key ideas do seem to map neatly to some of the key epistemological assumptions of the SSM advocates. This, it is argued, is no accident – for (at the "theoretical" level) both Husserl and the SSM advocates have similar motives for adopting the positions that they hold. Ultimately, these motives relate to the real world conditions in which they have to operate. Essentially, what is intended herein by the phrase 'theoretical level' is a body of doctrine *not* about how the world is, *but* about how statements about the world must be linguistically formulated. In the case of SSM, they must be formulated such that they do not violate the ontological assumptions made by subjective idealists.

An examination of the reasoning behind the relevant aspects of the SSM advocates' stated (epistemic) position is undertaken. This examination will be based on a critical analysis - in order to develop a critical interpretation – using arguments that have been adopted (and modified slightly) from Adorno (1982). Essentially, the argument is that, "Not least because it was reminiscent of psychology, did proud philosophy since Husserl reject psychology. Dread of psychology leads philosophy in quest of the residuum to sacrifice everything for which it exists." (Adorno, 1982, p. 16).

A practically-oriented (critical) interpretation will be provided below to indicate the SSM advocates' motivations for adopting the position that they hold; this will be characterised as the result of a perceived need to attain "epistemic altitude" (this concept will be explained). Further considerations concerning Husserl's search for certitude will inform the pragmatic recommendations, which will be discussed at this point. The practical conclusion drawn is that, whilst not attempting to sanction "sloppy" systems analysis, epistemic certitude is not attainable - therefore the demand for it can only be counter-productive – when undertaking systems development

Epistemic Altitude

Essentially, SSM advocates hold that statements about the real (i.e. objective) states of affairs in the social world are unwarranted and untenable. Consequently, discourse about mental states is *elevated* to a position of high (or higher) epistemic significance, whilst statements about the real world are denigrated as having a low - or even insignificant – epistemic status (Checkland, 1991, 1992). It is precisely this *elevation* (of discourse about mental / ideal states of affairs) which constitutes the common ground between the SSM advocates and Husserl; this (generic) approach is criticised by Adorno for what he characterises as its *imaginary altitude*. *Prima facie* the (crude) positivists' position is that sense-data puts us in immediate contact with external reality (although considerable variations on this theme can be found in the writings of the so-called positivists). At any rate, it is this (arguably a "straw man") version of positivist thought that both Husserl and the SSM advocates take umbrage at. The SSM advocates have often proffered the view that, as ideas, *human activity systems* have properties, characteristics, etc. which may be examined; whereas – on the contrary – *human activity systems* as real world occurrences are strictly-speaking unknowable and therefore they cannot be modelled. In this respect Husserl's ideas and those of the SSM advocates (subjective idealism) are strikingly similar. Adorno argues that the motivation for idealism is a ("theoretical") belief that unless a thought (or a judgement) about some aspect of experience admits the possibility of being *certain* (whether true or false) then that thought is epistemologically worthless:

> "The thesis of the perceptibility of the purely possible as a doctrine of *essential insight*, or as Husserl originally called it, *categorial intuition*, has become the motto of all philosophical approaches which evoke phenomenology. The fact that the new method should guarantee ideal states of affairs the same immediacy and infallibility as sense-data in the received ["positivist"] view, explains the influence which Husserl exercised over those who could no longer be satisfied with neo-Kantian systems and yet were unwilling to blindly hand themselves over to irrationalism." (Adorno, 1982, p. 200 [emphases added])

The "altitude" supposedly gained by taking such a view (i.e. the idealism adhered to by both the SSM advocates and Husserl) is achieved by, as it were, "rising above" the real world into an ideal world (or worlds) – in a search for greater epistemic security. Of course, the "price to be paid" is in the removal ("elevation") of oneself from the real world within which one may be attempting to act. However, and in agreement with Adorno, it is not being suggested here that an alternative position of naïve positivism should be adopted:

> "[C]ategorial intuition is the paradoxical apex of his [Husserl's] thought. It is the indifference into which the positivistic motif of intuitability and the rationalistic one of being-in-itself of ideal-states-of-affairs should be sublated. The movement of Husserlian thought could not tarry at this apex. Categorial intuition is no newly discovered principle of philosophizing. It proves to be a sheer dialectical moment of transition: imaginary altitude." (Adorno, 1982, p. 201)

Similarly, it might be argued that the SSM advocates in fact hold the position that thought is not *so* detached from the real world as the above account would apply. Indeed, the SSM texts contain many references to an unfolding flux of ideas *and* events. However, it is also made clear – in the various SSM texts (e.g. Checkland, 1981, 1991, 1992, Checkland and Scholes, 1990) that "perceived events" are – for the SSM advocates - just (precisely) *subjective perceptions* of events. Adorno cogently distinguishes between epistemological accounts of experience given in terms of *sense-data of* and (ephemeral) *encounters with* the real world:

> "In a certain way categorial intuition was devised by the doctrine of propositions in themselves … If these are truly to be more than creations of thought, then they cannot really be products of thought but must simply be encountered … by it. The paradoxical demand for a merely encountering thought arises from the claim to validity on the part of logical absolutism[1]. The doctrine of categorial intuition is the result of this on the subject side." (Adorno, 1982, pp. 201-202).

However, it should be noted that Husserl felt the compulsion to extend his idealism to cater for "object-correlates" of thought. Put bluntly, Husserl considered that if there are perceptions of objects then there must be real objects "out there" somewhere. As Adorno stresses:

> "Only if categorial moments of meaning copy some objective-ideal being and 'correspond' to it instead of just producing it, can objective-ideal be intuited in any sense at all. Thus Husserl is forced, in spite of his own

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[1]The term 'logical absolutism' is introduced by Adorno to connote Husserl's general view of logical statements as being in no way dependent on events occurring in the real world for their truth-values; this is an important aspect of Husserl's conception of *eidetic* sciences.

critical discernment, to plead positively for the 'object correlates' of categorial forms and thus for an intuition which fulfils them and is non-perceptible in principle, so that the fundamental thesis of propositions in themselves does not collapse." (Adorno, 1982, p. 204)

It is concluded that, to date, the SSM advocates have not felt similarly compelled. Indeed, SSM advocates *prima facie* would hold that the world is constituted by and through subjective perceptions. Ostensibly, the reason for this position is *epistemological rigour* (i.e. what should more properly be understood as *imaginary altitude*).

Subjective Certitude and Epistemological Rigour

The question that must now be asked is: why should so much emphasis be placed on (the need for) *subjective certitude* in the SSM advocates' formulations of the epistemological problems of systems analysis? The demand for subjective certitude – inherent in the epistemology proffered by the SSM advocates – would *prima facie* seem to generate immediate problems for the use of (soft) systems epistemology in practical endeavors. One might think that practical IS development work should, minimally, be more concerned with getting a practical working knowledge of a situation in order to take positive action – rather than getting embroiled in "epistemologically purist" issues and concerns. Of course, to take this literally would be to proceed uncritically. In order to operate in a critically aware manner, epistemological considerations will be important – but it will be argued here that "epistemological purism" is not the best way to proceed. Further discussion of an appropriate epistemological framework with which to undertake critical systems analysis lies outside the scope of this paper.

Adorno's Structural Argument

Now to return to the question raised above (why should so much emphasis be placed on the need for *subjective certitude* in the SSM advocates' formulations of the epistemological problems of systems analysis?) According to Adorno, the answer is to be found in the actual circumstances in which academics find themselves, i.e. (what he calls) *middlemen* – the social grouping that we might characterize today as the *middle class*. Interestingly, Adorno's argument would appear to hold *a fortiori* for the likes of SSM practitioners, consultants, etc.

Adorno's argument can be applied as follows. The source of the subjective idealism - inherent in the SSM advocates epistemological accounts – may be found in *practice* (i.e. *experience*) rather than in *theory*. The accounts of epistemology given in the SSM texts are supposedly based on (or supported by) the practical experiences of using systems ideas in organisations. In all such accounts (encountered by the author at any rate), the Soft Systems Practitioner does not claim to be the *owner* of the system. Indeed, the impression one gets is usually of the SSM practitioner being rather unceremoniously "dumped" into a conflict-ridden and potentially hostile social situation of which he or she has little prior knowledge – and little power to control. Might this explain the perceived need for (or the motivation for seeking) certitude? Adorno makes the following comments about subjective idealists (in general) in the introduction to his *Against Epistemology – A Metacritique*[2]:

> "The open or secret pomp and the totally unobvious need for absolute spiritual security – for why, indeed, should the playful luck of spirit be diminished by the risk of error? – are the reflex to real powerlessness and insecurity. They are the self-deafening roar through positivity of those who neither contribute to the real reproduction of life nor actually participate in its real mastery. As middlemen, they only commend and sell to the master his means of lordship, spirit objectified … into method [or methodology, for that matter]… They use their subjectivity to subtract the subject from truth and their idea of objectivity is as a residue." (Adorno, 1982, p. 15)

However, there is another aspect to the search for certitude; this is bound up with the desire to "attribute meaning" to one's experiences – another central tenet of SSM. The search for certitude begins with Descartes – in particular with his "cogito ergo sum" proposition. This is normally understood as "I think therefore I am." although there are other interpretations, and Descartes himself used a variety of formulations of what has come to be known as *the Cogito* (Williams, 1978):

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[2] The title of this book is somewhat misleading, as – in it - Adorno is conducting a critical analysis of subjective idealist epistemology as a (sort of) groundwork for an alternative epistemology, "Criticizing epistemology also means … retaining it." (Adorno, 1982, p. 27 [N.B. the three dots are included in the original text]). Some aspects of what such an alternative epistemology might look like are discussed in Guzzoni (1997).

> [I]t is plausible to suspect, on the basis of the development of European philosophy from Descartes onward, that if we start with Cogito, we can reconstruct the world only as somehow correlated with subjectivity … The converse relation is probably valid, too. If we start with the thing … the categories applicable to it do not enable us to describe the irreducible subjectivity, this "miracle of miracles" (Husserl), this being-directed-toward-oneself, this act of experiencing oneself … It is very doubtful if anybody has succeeded in producing a language jointly encompassing these two viewpoints: one directed toward Cogito and the other directed toward things.[3] (Kolakowski, 1987, pp. 82-83)

Ultimately, most modern-day systems development is a social activity, and it is *groups* who must ultimately conduct effective systems development in organisations, e.g. Griffiths and Probert (1998) point out the importance of teamwork in the development of Electronic Payment Systems. Groups imply a need for individuals to communicate, and communication implies a need for the interpretation of what is being said by others in the social settings that systems development takes place. However:

> "[A] certitude mediated in words is no longer certitude. We gain or we imagine to have gained access to certitude only as far as we gain or imagine to have gained perfect identity with the object, an identity whose model is the mystical experience. This experience however is incommunicable; any attempt to hand it over to others destroys the very immediacy that was supposed to be its value – consequently it destroys certitude. *Whatever enters the field of human communication is inevitably uncertain, always questionable, fragile, provisory, and mortal*." (Kolakowski, 1987, pp. 83-84 [emphases added])

Philosophically-speaking, other people's experiences are "outside" of our immediate subjective experience, therefore reports about them are essentially uncertain (for the recipient).

"Meaning-Attribution"

One final important point in the context of this discussion is that, ultimately, the drive for subjective certitude has strong religious or crypto-religious ("meaning-endowing") overtones. It is, precisely because science - and, arguably, most other intellectual pursuits - have abandoned the search for absolute certitude in their methods (Popper, 1979, Quine and Ullian, 1978) that the search for certitude must direct itself (or "take its cues") from elsewhere as a consequence. One "avenue open" in this respect is that of (allegedly) "pure" or "unmediated" subjective experience:

> "This search [for certitude] has little to do with the progress of science and technology. Its background is religious rather than intellectual; it is, as Husserl perfectly knew, a search for meaning. It is a desire to live in a world out of which contingency is banned, where sense (and this means purpose) is given to everything. Science is incapable of providing us with that kind of certitude, and it is unlikely that people could ever give up their attempts to go beyond scientific rationality." (Kolakowski, 1987, p. 84)

However, the actual demands made upon systems development teams require that they proceed in an epistemologically uncertain manner.

Conclusion

So, to conclude, there are two plausible explanations for the drive for epistemic altitude: firstly, one that arises from the psychological insecurity engendered by the social situations in which most soft systems projects (and no doubt many systems development projects) take place. Secondly, the more general psychological effect that - despite the remarkable progress that some essentially uncertain enterprises, e.g. the physical sciences, have had - an unsatisfied demand for meaning in many practitioners' subjective experiences persists[4]. However, it need not follow that a desire to take purposeful action implies a search for some kind of ultimate and/or certain meaning to life.

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[3]This analysis provides us with an insight into the reasoning behind the proffered arguments that soft systems thinking is fundamentally different from hard systems thinking; however, this issue lies outside the scope of this paper.

[4]Exactly why this is so is an interesting question, which lies outside the scope of this paper.

Also, it is concluded that – whatever the motivations for desiring it – epistemic certitude is not attainable, therefore the demand for it can only be counter-productive when undertaking systems development work. Our understanding of the real world in which systems development must take place may often be partial, confused and even bigoted. Essentially, critically-minded vigilance will provide some defence against the latter – as will openness to the critical comments and suggestions of others. For the former – the epistemological problems – we had best learn to make do with whatever understanding of the problem situation can be obtained, given the time and resources available. This is *not* to sanction sloppy analysis! The alternative - only to sanction (unattainable) epistemological rigour - can only force us to withdraw our attention from the real world and into our (subjective) selves. Few practical problems are amenable to solution solely by introspection - although this is not to deny the value and importance of critical reflection. Moreover, the need for effective communication between systems development team members necessarily implies abandoning the search for subjective certitude and supplanting it with the search for practical "working knowledge" of the salient aspects of the actual situation in which IS development takes place.

It is easy to imagine why IS practitioners (and particularly systems analysts) find themselves in positions of daunting epistemic insecurity.[5] Complex organisational structures, procedures, cultures, etc. - all have to be understood in a relatively short space of time if information technology is to be fruitfully exploited to provide real benefits for organisations. But the very complexity of the environment may well engender a (counter-productive) tendency to withdraw into an "inner realm" of subjective epistemic certainty. Practitioners need to resist this temptation. Of course there will always be technical aspects of the models to attend to, and here subjective rigour is both possible and desirable (notwithstanding the fact that attempting to be too rigorous can sometimes be unproductive). But the main point of this discussion is to argue that practitioners need to produce *models of the actual situation* (and understand that that is what they should be attempting to produce!) – although these will almost certainly be poor (factually incorrect) models in the early stages of analysis. Although poor models can be refined, it will probably never be the case that they can be refined until they are 100% accurate (even if a model was 100% accurate we could probably never know it!). This is not the same a suggesting a return to naïve positivism, because the need – in practical endeavours – is not for *the truth*; the need is for an *understanding* (or even an *interpretation*) of the situation which is rationally defensible. Moreover, if the IS practitioners are working (sensibly) as a team, each model produced by the different practitioners will inevitably be only a part of the picture. Therefore, as Kowlakowski (1987) argues, any certainty about the models will be destroyed once they have been communicated to other members of the team. Consequently, all models built by teams are inherently (subjectively) uncertain – and this is something which, as humans, we must simply endure. However, this need not lead to the *abandonment* of attempting to establish an understanding (or interpretation) of the actual situation. In practice, sensible project management will be needed to allow sufficient time for iterative modelling to be carried out relative to the needs of the IS development project. This, of course depends on the nature of the project, as some projects have rigid time constraints whilst others have looser time frames but a greater need for accuracy etc.

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[5] As a practitioner once myself, I can clearly recall being in such situations.

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