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# Subject and Object in IS Development

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# Subject and Object in IS Development

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## Introduction

The purported differences between "hard" and "soft" approaches to IS development are often said to depend on whether or not IS analysis (and design) is primarily concerned with clarifying "objective" notions of reality, or gaining an understanding of "subjective" perceptions of reality. The concepts of *subject* and *object* are often seen as being opposed to one another. The Frankfurt School philosopher, Theodore Adorno (1903-1969) developed the (inter-related) concepts of *mediated objectivity* and *critical subjectivity*. These are introduced here to provide a more critical (philosophical) underpinning for IS development than either *objectivity* or *subjectivity* (conceived as fundamentally opposed categories), and it will be argued that a legitimate separation can be made between the *subjects* (who carry out the analysis) and the *objects* in the study. It will be concluded that whilst reality may well be considered objective, "the subject" makes possible the idea of critique - of a critical interpretation of reality. Therefore, IS developers can be seen as being both constrained (by economic realities) and empowered to take responsibility for some of the decisions which affect the lives of members of the organisations in which information systems are developed.

## Information Systems as Subjective Constructs

A contemporary tendency exists which treats information systems as, essentially, subjective "constitutions" (constructions); this approach is often derived from the Soft Systems Methodology (SSM) advocates (e.g. Checkland, 1981; Checkland and Scholes, 1990). Such approaches to understanding IS development are purported to be based on a "phenomenological" (as opposed to a "positivistic") philosophical underpinning. Checkland explicitly states that SSM is underpinned by the work of Edmund Husserl (1869-1938):

Functionalism is part of the Durkheimian (or positivistic) tradition in sociology. Soft systems methodology implies, rather, a model of social reality such as is found in the alternative (phenomenological) tradition deriving sociologically from Weber and philosophically from Husserl. (Checkland, 1981, p. 19)

Checkland's arguments centre around the claim that information systems are not "real" in the everyday sense of the word, but are - rather - *subjective constructions*, i.e. they exist in consciousness rather than in the external world. Bernet *et. al.* (1993) provide an account of Husserl's work, but this will not be discussed further. Checkland insists that:

[C]larity demands that we be very careful about the difference between ontological statements of the form: the perceived world *is* something or other, and epistemological statements which are not about the perceived world but are about *knowing* the perceived world. Thus, in an epistemological statement we are only saying that the perceived world *may be taken to be* ... something or other. The difference between *is* and *may be taken to be* is very important. So these epistemological statements are about knowing the world not about the world itself. (Checkland, 1992, pp. 1026-1027).

Checkland is arguing that systems are subjective epistemological constructs. This view has recently been expressed forcefully by Crowe, *et. al.* (1996), who further argue:

[A]dopting a constructivist philosophy means giving up realism ... constructivism is not to be viewed as an ontological position but an epistemological one. (Crowe, *et. al.*, 1996, p. 49)

In the above quotation, the debt to Checkland's work is clearly apparent.

Now, although subjective judgements clearly have a role to play within IS development (e.g. in ethical concerns), treating information systems as subjective constructs runs the risk of falling into the trap of all subjectivist (idealist) philosophy; the trap of needing to pose real "worlds behind" the apparent world - which somehow "produce" or "cause" consciousness to experience certain things - but which are themselves strictly unknowable - "ultimately unknowable external reality" to use Lewis's (1994, p. 179) phrase. However, it is (fairly) clear that information systems are not purely subjective constructs - they have objective features such as databases, storage media, etc. It can be argued that there is a good reason why these features should not be construed as "worlds behind appearances", as to do so would give these features an almost magical unintelligibility - and this would give IS developers a feeling of powerlessness in the face of the unknown (and, from a subjectivist's perspective, the unknowable). Adorno characterised the paradox of subjective idealism thus:

He who interprets by searching behind the phenomenal world for a world-in-itself (*Welt an sich*) which forms its foundation and support, acts mistakenly like someone who wants to find in the riddle the reflection of a being which lies behind it, a being mirrored in the riddle, in which it is contained. (Adorno, 1977, p. 127)

The subjective idealist must posit the existence of things which he/she has concluded *a priori* are unknowable! To return to more practical matters, it may well be a sensible strategy to treat the computer as a "black box", if this results in an increase in our ability to design new information systems with greater freedom than would otherwise be the case. But, if the final design is to utilise a computer, then it will surely prove beneficial to understand (broadly) the capabilities of the technology that is to be utilised. The approach of treating information systems as being subjective constructs is clearly a *reaction* to the prevailing positivistic orthodoxy - but it is not necessarily a constructive reaction as it could actually limit the intelligibility of the development environment - as argued above.

## **Adorno on Subject and Object**

The distinction drawn between subject and object by the (SSM-influenced) IS academics (discussed above) is taken by them to be methodologically fundamental; hard systems thinking is associated with objectivism whilst soft systems thinking is associated with subjectivism, and it is claimed by them that such positions are incompatible (based on different philosophical paradigms etc.). What often goes unnoticed is that such a view implies an *a priori* "binary opposition" meta-view of subjectivism and objectivism, but it would seem fairly trivial to argue that the world is *neither* simply "out there" to be understood immediately; *nor* is it completely and utterly "made up" by us; in which case what is needed is a more appropriate theory of *subject* and *object*. Adorno considered that a legitimate separation can be made between the *subjects* (who carry out analysis in general) and the *objects* in the area studied, but he thought that - generally - this distinction is not made in an appropriate manner:

The separation of subject and object is both real and illusory. True, because in the cognitive realm it serves to express the real separation, the dichotomy of the human condition, a coercive development. False, because the resulting separation must not be hypostatised, not magically transformed into an invariant. (Adorno, 1978, pp. 498-499)

Adorno considers that "the subject" makes possible the idea of critique - of a critical interpretation of reality. But in his view the concept of "the subject" is an intellectual construction - an abstraction - *derived* from (and not *prior to*) actual, real, living individuals:

It is evident that the abstract concept of the transcendental subject - its thought forms, their unity, and the original productivity of consciousness - presupposes what it promises to bring about: actual, live individuals. (Adorno, 1978, p. 500)

It should be noted that this is a Nietzschean argument (e.g. Nietzsche, 1956, pp. 178-180), and this debt is acknowledged by Adorno (1982). Now although we can treat the subject as real (or "standing in for" real, live individuals), in Adorno's view the subject does not "make the world up" (this is often termed *constructivism* - Adorno uses the term "constitute" instead of *construct*):

While our images of perceived reality may very well be *Gestalten*, the world in which we live is not; it is constituted differently than out of mere images of perception (Adorno, 1977, p. 126)

However, Adorno does not argue for a return to "vulgar objectivism", because this would deny the possibility of a critical interpretation of the objective circumstances.

## **Mediated Objectivity**

The objective world is real enough, but what we see is always *mediated* by concepts (although we may not be aware of this all of the time):

What must be eliminated is the illusion that ... the totality of consciousness, is the world, and not the self-contemplation of knowledge. The last thing the critique of epistemology ... is supposed to do is proclaim unmediated objectivism. (Adorno, 1982, p. 27)

In the earlier quotation (above) concerning "perceived reality", what Adorno means by "constituted differently" is that the world is, to a large extent, determined by economic realities, which he sometimes refers to using the term *exchange*:

The living human individual, as he is forced to act in the role for which he has been marked internally as well, is the *homo oeconomicus* incarnate, closer to the transcendental subject than to the living individual for which he immediately cannot but take himself... What shows up in the doctrine of the transcendental subject is the priority of the relations - abstractly rational ones, detached from the human individuals and their relationships - that have their model in exchange. If the exchange form is the standard social structure, its rationality constitutes people; what they are for themselves, what they seem to be for themselves, is secondary. (Adorno, 1978, p. 501)

For Adorno (as for IS professionals) the world of economic activity is very real:

Somebody pays for what analysts and designers deliver. New systems have to be justified by the benefits that they deliver. It is easy to use terms like "the users" and "user management" ... and forget that they are subtitles for "the customer". (Yeates, et al, 1994, p. 2)

In fact, the systems analyst should be seen *not* purely as some sort of enquiring transcendental subject, *but* as an economically-constituted actuality.

## **Critical Subjectivity**

Adorno argued that critique is only possible if sufficient status is given to the subject who can become critically aware of these sort of circumstances; therefore Adorno preserves a critical role for the subject:

To use the strength of the subject to break through the fallacy of constitutive subjectivity ... Stringently to transcend the official separation of pure philosophy and the substantive or formally scientific realm ... (Adorno, 1973, p. xx)

At the very least, the economic activities which generate systems development projects have a key determining role on the analysts' foci of attention in the project, and systems analysts do not generate knowledge purely in the interest of advancing science. However, despite economic pressures to conform to a certain view of the organisations in which we are immersed, we are all sometimes able to see problems with the actually existing set of arrangements. Critical subjectivity (and mediated objectivity) is what allows us to both perceive what is "real" in these situations, and to conceive of how these situations may be changed - either for our benefit, or for the benefit of all (or, more realistically perhaps, the majority). Such a perspective would enable IS researchers to conceive IS developers as being both constrained (by economic realities) and empowered to take responsibility for some of the decisions which affect the lives of the non-IS members of the organisations in which information systems are developed; such a view would *not* denigrate the importance of acquiring a solid understanding of the technical aspects of the development environment.

## **Conclusion**

The "binary opposition" meta-view that IS methods should be either "subjectivist" or "objectivist" is both dangerous and fallacious; *the subject* is necessary for critical interpretations of the *actual economic-objective world* to be developed. To sum up, the subject *mediates* but does not *constitute* the object (i.e. the IS). This implies that neither a hard or soft approach to IS development will be adequate if used in isolation. However, given the difficulties that are inherent in "blending" these approaches, further research will be necessary to identify how the notions of *mediated objectivity* and *critical subjectivity* can be effectively operationalised in IS development.

References available upon request from the author.