

User's Knights in Shining Armour?

Katarina Lindblad-Gidlund

Department of Information Technology and Media
Mid Sweden University, Sweden; katarina.lindblad-gidlund@miun.se

Abstract. The aim of this article is to address the relation between a user-centred objective and social constructionism and the possibility to refine user-centred fundamentals by enhancing the awareness of the relation between humans and the constructed environment. Through social constructionism we could enter a bit deeper into questions like; (1) reality's subjective character especially concerning technology development, (2) the importance of a power analysis while creating technological artefacts, (3) the importance of analysing our own role in technology's construction and (3) we are made aware of the importance of how technology is communicated to others. The article is in a way an extension of an argument put forward by Jacob Nielsen about usability as empiricism and/or ideology.

Keywords: user-centered objectives, theoretical standing points, social constructionism, user advocacy.

1 Introduction

In June 2005, the usability profile Jakob Nielsen (2005) wrote in his alert box the following. "There's a duality to usability. On the one hand, it's a quality assurance methodology that tells you what works and what doesn't work in the field of user experience. On the other hand, usability is a belief system that aims to ensure human mastery of the constructed environment."

Nielsen then explains this further by an interesting distinction between usability as empiricism and usability as ideology. Where usability as empiricism roughly could be described as "conclusions and recommendations [that] are grounded in what is empirically observed in the real world" and that these should "determine what works and what doesn't". Usability as ideology on the other hand could be described as a belief in a certain specialized types of human rights:

- The right of people to be superior to technology. If there is a conflict between technology and people, then technology must change.

Please use the following format when citing this chapter:

Lindblad-Gidlund, K., 2006, in IFIP International Federation for Information Processing, Volume 223, Social Informatics: An Information Society for All? In Remembrance of Rob Kling, eds. Berleur, J., Numinen, M. I., Impagliazzo, J., (Boston: Springer), pp. 265–278.

- The right of empowerment. Users should understand what is happening and be capable of controlling the outcome.
- The right to simplicity. Users should get their way with computers without excessive hassle.
- The right of people to have their time respected. Awkward user interfaces waste valuable time.

And “if designers and project managers do not believe in the usability ideology, why would they implement usability’s empirical findings? After all, if you don’t want to make things easy, knowing how to make them easy is irrelevant.” (Ibid.)

This article will draw heavily on Nielsen’s declaration but the text is not to be understood as a critique of the usability field (as practitioners only with no ideological base), neither is it its aim to present a study of the field which shows how many pure empiricists or pure ideologists there are. The aim of the article is rather to go further with Nielsen’s thought about the close relationship between usability as knowledge about what works and what does not and usability as ideology i.e. a belief system to ensure human mastery of the constructed environment. It will do so by trying and confronting Nielsen’s arguments with one of the most widespread theoretical bases to analyse human mastery of the constructed environment, social constructionism. The article’s underlying hypothesis is that our basic outlook affects the information systems we create. In the same way as teachers constantly confronted their basic views on human beings and the fundamentals of pedagogy, developers, and producers of information systems should be made aware of their view on the relation between humans and the constructed reality since it influences many choices we make during the developing process.

However, the headline, *User’s knights in shining armour?*, could definitely be interpreted as provocative since the question mark implies that it might not always be the case that the first priority is to defend the user(s) when using and implementing user-centred methods and models. However, the reason for starting with such a question is rather to point out that there might exist differences in degrees of motivation and that it could be rewarding to declare openly one’s starting point and priorities at least to oneself. And again, to bounce one’s understanding against social constructionism is in this article proposed to be constructive to get in touch with these starting points and find out whether my decisions in the design process stems from the understanding that there exists a human mastery of the constructed environment or not.

2 Usability and Other User-Centred Objectives

One side of tackling user-centred objectives is to try to deal with the inequalities of the distribution of the positive and negative parts of the technological development. Who enjoys the positive sides/or suffers the negative sides of technological development? Closely connected to these questions is critical analysis since a core issue in critical analysis is to identify and question inequalities (hidden agendas) and

create tools for the emancipation of the oppressed. The critical societal analysis leans on key terms such as values, equality, care, democracy, and efficiency (that already appear in the texts by Horkheimer & Adorno (1981), Adorno (1987), and Marcuse (1941) i.e. the leading theorists of the Frankfurt school). This is however not at all an unexplored area in IS research, particularly not in Scandinavia where several attempts have been made to democratise the information technological development (see for example Bansler 1989 about the critical tradition in Scandinavian research in systems development). What they call the 'Scandinavian approach' (see for example Bødker, Knudsen, Kyng, Ehn & Madsen 1988, or Bjercknes & Bratteteig 1987) is very much concerned with methods to support democratisation (participatory/cooperative design) in the workplace. By inviting the users-to-be to different steps of the system developing process, they strive for a better quality of work i.e. working life democracy.

The Scandinavian approach or 'participatory design' (PD) has however recently been discussed (Beck 2002, Kanstrup 2003, Dittrich 2003, Bødker 2003) as possibly outdated, though not in Scandinavia. Beck argues that it still has potential in the area of analysing the political (and ethical) dimensions and identifying dominance patterns. This approach partly rests on the work of Bjercknes & Bratteteig who in 1995 addressed the topic when arguing the re-introduction of the political dimension¹. However, Kanstrup argues that the political is not missing in contemporary PD; it is rather inherent and constantly present even if it is not articulated (Kanstrup 2003: 81). According to Beck "understanding the multiple ties that link computer (in its variety of senses) with dominance (in its variety of senses) would be one of two pillars of a rejuvenated PD" (Beck 2002:85) and ends with the statement that "the project of PD is needed more than ever" (ibid. 2002:89). However, Bødker responds by stating that "in order for the questioning to have a constructive impact on people's life with technology it is important that we do not only challenge, but offer alternatives as well" (Bødker 2003:89). Furthermore, by doing so one returns to the techniques (design methods) to create real alternatives for the users to choose from and not only creating ideological standpoints.

Bødker's comment on this matter relates to what might be described/labelled as user-centred design *methodologies*. 'User-centred' is here used as a label of the more practical field of creating design methods which explicitly put the user in the centre of their activities. It includes user-centred design (UCD) (as in Vredenburg, Isensee & Righi 2001) but it is not totally defined by it. In this context, user-centred design methodologies could be found in participatory design as well as in human-computer-interaction (HCI).

At the NordiCHI -04 conference, however, Kanstrup together with Iversen and Petersen (Iversen, Petersen & Kanstrup 2004) addressed the same question from a slightly different perspective by stating that the original Utopian ideals of cooperative design are now facing new challenges since today technology is spread into domestic and non-professional practices (ibid 2004:171). Kanstrup et al. argue that today we need "to develop a better understanding of what 'use quality' means in everyday life" (ibid. 2004:174). "Quality of work is now replaced by a concern with quality in life, and democracy is replaced by concerns with consumer power..." (ibid. 2004:177). The key principles that should be highlighted according to Kanstrup et al. are *democracy*, *emancipation* and *quality*.

What is touched upon here are questions also addressed by Rob Kling (starting in 1977) in what is nowadays defined as *social informatics* i.e. “the interdisciplinary study of the design, uses and consequences of ICT’s that takes into account their interaction with institutional and cultural contexts” (Kling, Crawford, Rosenbaum, Sawyer and Weisband 1998). Social informatics comprises normative, analytical, and critical orientations combined in a specific context/study (it is as such characterised by its problems rather than by the theories or methods used in a research study). By doing so, social informatics combines critical analysis and social constructionistic ideas².

As mentioned above, there are several theories, methodologies and instruments in IS such as access theories, digital divide, diffusion, user-centred design, participatory design, and usability that aim at protecting the user’s/human’s interests. In different forms, they all emphasise the importance of bringing the user/human into the design process, making technology use-worthy and/or see the equal distribution of information technology. From different perspectives, they narrow themselves the user and her/his perceptions and experiences of information technology. Some are more theoretical, and others are more practical oriented, but all are contributors to the field of creating more user-centred information systems.

So far so good, but, according to Nielsen, the problem occurs when there develops a conflict of interest in hands on situations, when high ideals clash with prerequisites in practice. We sometimes place users’ needs against organisational requests such as financial realities and time-schedules (or maybe even against designers’ ideals of what is beautiful or attractive designs). In these situations, we start to negotiate with one’s beliefs, which could be acceptable as long as one is aware of the negotiating process and its consequences and takes responsibility for one’s choices, decisions, and actions.

It is when this negotiating process is repressed or, as sometimes, totally absent, (since other needs than the users’ are predominant) it is reasonable to put the question forward; that is, are we really the *users’ knights in shining armour*? If we are, what does it mean? In what way do we defend and protect the users? Or maybe, the answer is that we should create environments where there are no need to defend or protect the users since they are able to do that themselves? Moreover, underpinning it all, when faced with a situation with conflicts of interests, do our choices, decisions, and actions rest on a belief system of human mastery of the constructed environment that could support democratic decisions?

3 Human Mastery of the Constructed Environment

In 1966, the sociologists Peter Berger and Thomas Luckmann (1967) wrote “The Social Construction of Reality, A Treatise in the Sociology of Knowledge” where they formulated a theoretical structure to the understanding of how the reality we live in is constructed, reconstructed, and transformed by the usage of sociology of knowledge³. Since then, authors often quoted and used their text in several different

contexts. However, in this article the most interesting part is the way Berger & Luckmann managed to describe the complex relationship between the subjective and the objective. The approach touches upon our (as humans) possible mastery of the *constructed* environment (which is also the reason for going back to the original source instead of using the numerous interpretations and further developments that have been made since then (starting with Bijker, Hughes & Pinch 1987). The point in this text is to return to the more philosophical issue of reality (knowledge) construction to provide tools for an ideological standpoint.

It is necessary to point out clearly, as Berger & Luckmann do, that their contribution is not an ontological one⁴. That is, they do not state the ontological status of our perceived reality; they merely try to explain how reality, at the same time, could act as an impediment to our actions and because of our actions. Furthermore, the reality they are referring to is the reality of everyday life experienced by ordinary inhabitants of it, it is not the philosophical and theoretically burdened reality of academicians. Their interest is strictly sociological and stems from what they see as evident; reality's social relativity.

How then is Nielsen's discussion about the relation between empiricism and ideology in usability related to Berger & Luckmann's view on reality as both subjective and objective? Why is it interesting to return to the classics?

What is argued here is that the *dynamic* between subjective and objective reality, which Berger & Luckmann so successfully and logically point out, could serve as a returning point to hold on to in the critical moments mentioned above where other objectives (such as time-schedules, financial limits etc.) appear to be untouchable and impossible to alter. An awareness of every individual's possibility and responsibility in the creation of new 'realities' other individuals are forced to adjust to.

According to Berger and Luckmann the knowledge of every-day life guides our conduct and is taken for granted as reality and it is exactly this kind of knowledge that sociologists (and hopefully also other disciplines) should take as the object of analysis and attempt to clarify. The knowledge originates from thoughts and actions and we maintain it as reality. That is, it becomes "the objectifications of subjective processes (and meanings) by which the *intersubjective* common-sense world is constructed" (ibid. p. 34). Moreover, it is exactly in this 'taken for granted-ness' where lies the possibility to make a change while such objectifications are co-constructed in subjective processes.

What is suggested here is that there are methods or rather processes available (resting on social constructionism) to enhance awareness of one's basic outlook and by such challenge what might be taken for granted and open up for a continuum of Nielsen's argument, "to ensure human mastery of constructed environment":

1. The possibility to reconstruct (from acknowledgment)
2. The importance of communication in the construction of the environment
3. The danger of habitualisation
4. 'The bigger stick' aspect
5. Upgrading of the 'user' through enhanced contextuality
6. The dynamic and hopeful process of socialization
7. Understanding the dialectic through 'focus point'

3.1 The Possibility to Reconstruct (From Acknowledgment of Reality's Partly Constructive Character)

As mentioned above, according to Berger & Luckmann, the analytical object of sociology of knowledge is the reality of *everyday life* since there is no other reality that is as empirically grounded (as a contrast to the philosophically or scientifically logic reality). The reality of everyday life has a 'taken-for-granted character' and we tend to accept it quite easily. We seldom argue whether the rules for attending a football game (such as paying a fee) exist or not, they just do, and we experience them very concretely. It is in a way self-evident. Furthermore, we quite often experience it as independent of our apprehensions that is exactly the core of the argument in bringing social constructivism as a returning point for user-centred IS. Our perception of reality is more relative to the dialectic construction process than we have the strength to admit in the 'critical moments'. As such, it is already objectified, "constituted by an order of objects that have been designated as objects before my appearance on the scene" (ibid. p. 35). These objects and their inner logic and order remain unproblematic and undisputed until further notice, that is, until its continuity is interrupted by the appearance of a problem. Only then, do we *pay attention to their construction and attempt to understand and possibly reconstruct the logic of the perceived reality*. The thing is that the problem might not focus upon, might be in terms of minor importance, and sometimes someone needs to address the problem and claim its importance. If we for example view non-use of our information systems as the result of incompetent users we might address some parts of the problem while others are missed out, such as the possibility that the information systems is badly constructed to meet the users' needs.

3.2 The Importance of Communication in the Construction of the Environment

Our reality of everyday life is according to Berger & Luckmann interpreted, communicated, and made real and objective in many forms. In addition, the most common sign system, which makes this intersubjectivity obvious, is our vocal sign system, language. Language provides us with the necessary objectifications and order; it is 'the realissimum of my consciousness'.... It constantly proves itself as an intersubjective world, "I know that there is an ongoing correspondence between my meanings and their meanings in this world, that we share a common sense about its reality" (ibid. p. 37). As such, the function of language is 'translation and interpretation' since when we experience something we try to describe these experiences to others and when doing this we also try to make them fit into the existing reality. They need to make-sense in some way or another and while trying to ascribe them meaning they become more real as we communicate them with others. *This is especially important to have in mind trying to communicate information technology, due to its sometimes abstract and unintelligible character.*

As user-centred IS designers we should look after that it is communicated in an as non-power coloured way as possible.

3.3 The danger of habituation

Furthermore, sometimes we encounter these different forms of experiences of reality as more objective and static. We understand them as independent of our own wishes and actions and we sometimes even refer to them as impediments to our actions. The easiest way to explain the construction of such objective reality is to refer to *habituation*. Habituation is a way of saving ourselves much mental processing and effort. If we should, in every new encounter, totally unprejudiced, try to capture the new situation, its surroundings, and its inhabitants it would be almost impossible. There would be too many impressions to process and too many decisions to make. Instead, we save time and effort by making 'typifications' and create habits, both regarding situations and individuals. These 'typifications' and habits narrow possible choices; they remove great amounts of tension and as such provide psychological relief.

This is another area which could be rewarding for user-centred IS to keep in mind; *what might save resources in the short run might create problems in the next step since 'typifications' seldom exist other than just 'typifications' with no exact reference in reality*. They are indeed very attractive to use in design-processes since they provide generalisations and order but in the end, they have a tendency to fail. Furthermore, diverging from them are energy consuming and implies a great amount of courage since diverging also creates a feeling of loss of control and meaning.

So what's the point of doing it? If we, in some way or another, are a part of the construction of reality, for example in designing a public information system handling parent insurances it might be rewarding to test and analyse what is perceived as natural. Even though mostly women/mothers use parent insurance, we should be aware that we are passing on a perceived reality by constructing the system to mostly deal with women. We do have an opportunity to make humans masters of the constructed environment by adding men into the system.

3.4 'The bigger stick' aspect

We can further explain this aspect by the fact that no socialisation is ever completely successful; because of that, the symbolic universe (a level of legitimation of what one perceives as objective) needs constant maintenance (through mythology, theology, philosophy, and science). We could describe both the maintenance and the definition process from a power analytical point of view. That is, "he who has the bigger stick has the better chance of imposing his definition of reality" (ibid. p. 127). Hence, it is important to ask the question 'Says who?' and analyse the preferences behind the statements put forward. To "understand the state of the socially constructed universe at any given time, or its change over time, one must understand the social organization that permits the definers to do their defining" (ibid. p. 134). Therefore, for a user-centred IS *it is very important that while defining a part of a reality, for example an organisational structure or a*

pedagogical process, have the power analysis perspective in mind to not only reproduce what is most easily perceived.

3.5 Upgrading of the ‘User’ through Enhanced Contextuality

According to Berger and Luckmann the identity-forming process is a social process. Our identity is dependent on our social context: “once crystallized, it is maintained, modified, or even reshaped by social relations” (ibid. p. 194). Different social contexts form different identity *types* and these types of identities appear in individual cases and described within certain societies, such as ‘the polite Englishman’ or ‘the western intellectual middle-class woman’. In addition, these identity types are social products to court. Nevertheless, it is thus important to note, that societies do not form *identities*. Identities are always unique and we can never typify them. Berger and Luckmann do not openly discuss the difference between nature, society, and identity when it comes to uniqueness but they only stress this fact on behalf of identity. Nature is something ‘outside us’, society is something in-between (outside and inside) and finally, identity is ‘inside’ and as such partly untouchable to other subjects when it comes to understanding it.

This inability to gain full insight into another subject’s reality does have implications for our mutual reciprocity. When trying to investigate this further, it is thus necessary to have a strong methodological contextual connection to the social structure, where we shape the self within. The image of what is reality and what should be preserved as reality is mediated through communication and the use of language is the most important vehicle of reality-maintenance (and therefore also investigations about reality⁵). We communicate with each other to create a structure to use both in routine cases and in cases of crisis.

We might even misinterpret an individual for lacking a sense of reality if we do not take into consideration the reality within which he or she is formed. This is also applicable to the situation when trying to understand the possible user(s) of a system, *it is never possible to totally understand the user but since we are trying any way we should always have the contextuality in mind. Especially non-users are often seen as hard to understand but is this only an effect of lack of contextuality?*

3.6 The Dynamic and Hopeful Process of Socialisation

According to Berger & Luckmann (among others such as Mead), the contextuality is imprinted in our subjective reality through different processes such as *primary* and *secondary socialisation*. When a child is born, he or she is born *into* an already existing reality that (most usually) his or her parents and a few others present and mediate to him or her. We refer to these persons as *significant others* since they become very important for the child’s identity forming process and the situation is highly charged emotionally. Later on the child will take on the roles and attitudes of the significant other and will begin to internalise them and make them his/her own.

Finally, he/she will be capable of making abstractions from these roles and attitudes (called *generalised others*).

These abstractions serve as self-controlling and restricting. He/she knows what is right without asking or being shown it since he/she could imagine what the significant others would say.

Therefore, socialisation is a continuously ongoing process. Even though primary socialisation is more routed in our identity and, because of that, harder to displace, it is exposed to subsequent change. We are constantly facing new sectors of the objective world of society called *secondary socialisation*. It is not necessarily replacing already existing conceptions; however, it could be widening the ones we already possess. The conceptions transmitted to us in early childhood also appear as almost unconscious apprehensions but the ones presented later in life are more mentally processed and challenged. Nevertheless, the above implies the possibility that we can transform subjective reality and such transformations, called alternations, require processes of re-socialisation.

By acknowledging and keeping in mind the primary and secondary socialisation, we could understand several layers of use and non-use in terms of contextuality. *It matters how we are introduced to information technology, who the 'introducers' are and (which is a comforting thought) it is never to last to make a second impression (only so much harder)*. If our identity indicates we are computer-illiterate because early in life we were given that role in our family (maybe due to gender or age), it is likely that we are viewing ourselves in that manner fifty years later in a work situation. Moreover, not addressing the condition, this image will last. If we want to change the condition (for whatever reason), we have to start with acknowledging its existence. As user-centred IS designers this is important knowledge and we should not belittle it.

3.7 Understanding the Dialectic through 'Focus point'

And finally, "it is important to emphasize that the relationships between man [woman], the producer, and the social world, his [her] product, is and remains a *dialectical* one. That is, man [woman] (not, of course, in isolation but in his [her] collectivities) and his [her] social world interact with each other. The product acts back upon the producer." (Berger & Luckmann 1967:78-79) And when then making an analysis, the dialectical nature of this relationship makes it impossible to single out a starting point and claim something has priority over another. Instead, the only possibility is to *single out a focus point (see figure 1 below) and say that "this is where this analysis take place" and "these are the prerequisites we are facing at this moment"*. The analysis will then regard what the individual claim is his or her experiences and describes the experience as his or her reality. Later, he or she would describe what happens from that moment and then forward.

Nevertheless, we often perceive human phenomena as if they were "non-human or possibly supra-human" (ibid. page 107). *We forget our own authorship of the human world and the dialectic between ourselves as producers and our products are lost to consciousness.*

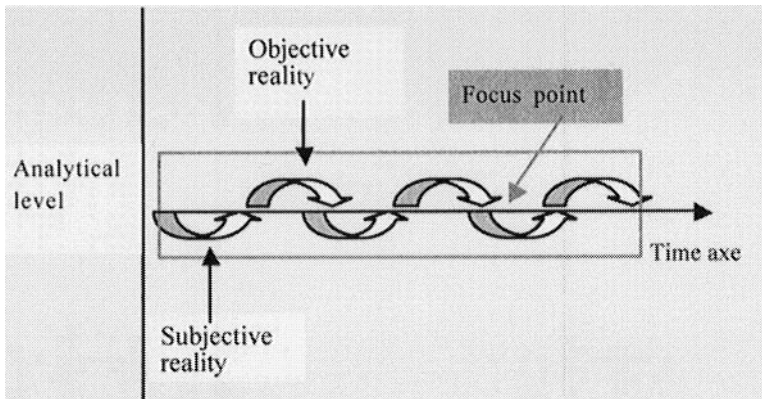


Figure 1: Social Constructionism: The Dialectical Relationship between Objective and Subjective Reality (Lindblad-Gidlund, 2005)

4 Challenged and Made Aware of One's Basic Outlook and its Consequences for One's Choices, Decisions and Actions

The *dynamic* component described is the most important reason for giving space to this theoretical area because it is possible to explain and focus always on our own status in reality. *We are neither totally free nor totally controlled, but if we want to make a change we will have to engage in understanding and questioning what is perceived as objective.* So, if the technological development is not satisfactory to us, we could, by putting some effort into it, question the relations and analyse the 'habitualisations' and alter it (even though we have to be aware of the time-variable, some changes might take such a long time as we might experience them as almost unchangeable). At this point, Berger & Luckmann would parallel the work of Jacques Ellul; he states that technological development is not objective reality (even though the products we already have produced are covered by what Berger & Luckmann would call the everyday reality, ipso facto) as it is untouchable to us. It is the product of our continuous social constructing process and the only way to change the technological development in the way we want it to be changed is to become aware and take an active part in its construction.

However, for those who, for different reasons, cannot take an active part in its construction, they need *knights in shining armours*. These knights have several tasks, but two of the most important one's are (1) to defend the non-users so that they are not only disregarded as 'bad users' and (2) to act as user advocates to strengthen the voice of the users in the construction of their information technological reality. For the first task, Wyatt, Thomas & Terranova (2002) (among others) claim that not only could people reject non-users as irrational, they might

actually have rational and logical reasons for choosing to use information technology. For the second task, Oudshoorn and Pinch (2003) openly declare that it is 'a complicated endeavour'. However, as Epstein points out, there is a complex configuration of power and knowledge 'involved in configuring user identities'. These tend to be the way (up until now) we speak on behalf of the users.

In the beginning of this article, we presented Nielsen's proposal of a belief in certain specialized types of human rights (an ideology of usability). The proposal claims that people should be superior to technology, people should understand technology, and as such, people should be able to control the outcome. In relation to that philosophy, Nielsen touched upon an interesting idea, namely, that while being usability professionals, *a more profound understanding about one's fundamentals or basic outlook is important*. In addition, this article has tried to show how social constructionism could serve as a source to help examine the relation between humans and the construction of reality; it also showed the need to create a deeper awareness that could be of assistance to one's decisions, choices, and actions as a creator and producer of information systems.

References

- Adorno, T W (1987) *Kritisk teori: En introduktion* (edited by John Burrill), Göteborg, Daidalos
- Bansler, J (1989) Systems development Research in Scandinavia: Three theoretical schools, in *Scandinavian Journal of Information Systems*, Vol. 1, pp. 3-20
- Beck, E (2002) P for Political, Participation is Not Enough, in *Scandinavian Journal of Information Systems*, Vol. 14, pp. 77-92
- Berger, P & Luckmann, T (1967) *The Social Construction of Reality*, London, Penguin Books
- Bijker, W, Hughes, T & Pinch T (1987) *The Social Construction of Technological Systems*, Cambridge, Massachusetts, The MIT Press
- Bjerknes, G & Bratteteig, T (1987) *Implementing and idea – cooperation and construction in the Florence project*, Florence report no. 3, Department of Informatics, University of Oslo
- Bjerknes, G & Bratteteig, T (1995) User Participation and Democracy: A Discussion of Scandinavian Research on System Development in *Scandinavian Journal of Information Systems*, Vol. 7 (1), pp. 73-98
- Bødker, S, Knudsen, J L, Kyng, M, Ehn, P & Madsen K H (1988) *Computer Support for Cooperative Design*, Proceedings of the 1988 ACM Conference on Computer-supported cooperative work
- Bødker, S (2003) A for Alternatives, in *Scandinavian Journal of Information Systems*, Vol. 15, pp. 87-89
- Dittrich, Y (2003) We are not yet there!, in *Scandinavian Journal of Information Systems*, Vol. 15, pp. 91-94
- Feenberg, A (2000) Constructivism and Technology Critique: Replies to Critics, *Inquiry*, Vol. 43, Issue 2, June 2000, pp. 225-238, London, Routledge

- Horkheimer M & Adorno T W (1981) *Upplysningens dialektik: filosofiska fragment*, translated by Lars Bjurman & Karl Henning Wijmark, Göteborg, Daidalos
- Iversen, O S, Kanstrup, A M, Petersen, M G (2004) *A visit to the 'new Utopia': revitalizing democracy, emancipation and quality in co-operative design*, Proceedings of the third Nordic conference on Human-computer interaction NordiCHI '04
- Nielsen, J (2005) <https://www.useit.com/alertbox/20050627.html> (2005-06-30)
- Kanstrup, A M (2003) D for Democracy, in *Scandinavian Journal of Information Systems*, Vol. 15, pp. 81-85
- Kling, R, Crawford, H, Rosenbaum, H, Sawyer, W & Weisband, S (1998) *Learning from Social Informatics: Information and Communication Technologies in Human Contexts*, Center for Social Informatics, Indiana University
- Mannheim, K (1936) *Ideology and Utopia*, London, Routledge & Paul Kegan
- Månsson, P (1991) *Moderna samhällsteorier, Traditioner, riktningar och teoretiker*, Stockholm, Prisma
- Marcuse, H (1941) *Reason and Revolution: Hegel and the Rise of Social Theory*, London, Oxford University Press
- Oudshoorn, N & Pinch T (2003), *How users matter: The co-construction of users and technology*, New Baskerville, MIT Press
- Scheler, M (1960) *Die Wissensformen und die Gesellschaft*, Francke, Bern
- Winner, L (1994) Political Artifacts in Scandinavia: An American Perspective, in *Scandinavian Journal of Information Systems*, Vol. 6 (2) , pp. 85-94
- Vredenburg, K, Isensee, S, & Righi, C 2001 *User-centred Design: An Integrated Approach with Cdrom*, Upper Saddle River, NJ, USA, Prentice Hall PTR
- Wyatt, W, Thomas, G & Terranova, T (2002) *They came, they surfed, they went back to the beach: conceptualising use and non-use of the Internet*, in *Virtual Society?* Ed. Woolgar S, Oxford University Press

Notes

-
- 1 It is thus possible to say that that would be a not insignificant change from the original idea of incorporating the user into the design process to secure better systems and a higher quality of work. Becks' proposal also contains a slight shift in level of analysis from organisational to societal in order to be political. It also suggests a shift from techniques (design methods) to ideological analysis (ethical values), furthermore it stresses the fact that the workers have become consumers and as such are difficult to incorporate.
 - 2 But since authorities such as Langdon Winner describe academics concluding that people have a choice in the social construction of technology as "extremely comforting, almost (yawn) sleep inducing" due to its too relativistic character (Winner 1994:90) it is comforting that yet another authority, Andrew Feenberg, on the other hand claims that it is definitely possible to combine constructionism and technology critique and goes even further by saying that it is equally possible to use constructionist analysis at the same time as ontological essentialism, it all depends

on how deep you use each standpoint² (Feenberg 2000). Feenberg finds social constructionism interesting due to the “tools they give us for interpreting technology and its place in the social world” (ibid. 2000:229). At the same time Feenberg talks about primary and secondary instrumentalizations where technology turns into something real and inseparable from the essence of technology (even if every technological essence from the beginning is inseparable from human activity). Feenberg concludes by stating that he “combines essentialist insights into the technical orientation toward the world with constructivist insights into the social nature of technology” (ibid. 2000:233). “I believe that both essentialism and constructivism have something to contribute to our understanding of technology... The problem is to combine their insights in a theory that bridges the theoretical gaps between traditions and the cultural gaps between their practitioners” (ibid. 2000:236).

- 3 A thorough and illuminating description of the sociology of knowledge is made by Rigné in Månsson 1991, but Berger & Luckmann themselves defined it as follows “The sociology of knowledge is concerned with the relationship between human thought and the social context within which it arises” (Berger & Luckmann 1967:16).
- 4 Berger & Luckmann start their journey by stating that: “reality is socially constructed” and define reality as “a quality appertaining to phenomena that we recognize as having a being independent of our own volition (we cannot ‘wish them away’)” (ibid. page 13). These two statements point in two directions: reality’s social relativity but also its existence *ipso facto*. The explanation behind the statement of reality’s social relativity is that reality is dependent on its social contexts. What we may perceive as reality in wealthy western societies might not be the same reality perceived in a poorly developed society and this is especially evident in the social foundations of values and worldviews⁴. Berger & Luckmann refer to Scheler’s (1960) ‘relative-natural world-view’ to emphasise that “human knowledge is given in a society as an *a priori* to individual experience, providing the latter with its order of meaning. This order, although it is relative to a particular socio-historical situation, appears to the individual as the natural way of looking at the world” (ibid. page 20). They continue by referring to Karl Mannheim’s (1936) ‘relationism’ which is not “a capitulation of thought before the socio-historical relativities, but a sober recognition that knowledge must always be knowledge from a certain position” (Berger & Luckmann 1967:22). But, as mentioned above: reality’s social relativity is not dominant over its existence. It is necessary to draw attention to that it is not a form of post-modernism or relativism where reality is nothing but the perceived, quite the opposite, Berger and Luckmann often point out that there exists an everyday reality *ipso facto*, the point here is rather the focus on the *construction* of this reality. Berger and Luckmann do not aim to describe or investigate, philosophically, reality’s ontological status, their aim is to try to explain how this reality is constructed and reconstructed. As Berger and Luckmann state : “Society does indeed possess objective facticity. And society is indeed built up by activity that expresses subjective meaning”. They continue by claiming that these two statements are not contradictory because “It is precisely the dual character of society in terms of objective facticity and subjective meaning that makes its ‘reality *sui generis*’.

- 5 This statement has methodological implications and possibilities. If language is the most important instrument of reality mediation then it might possible, through language, to unfold and uncover the reality we perceive and construct. This implies that it is thus possible to reach some knowledge about another person's subjective reality.