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Walls or Bridges? The Future of the Web

Introduction

There are walls dividing people. Some of them are as manifest as the Wall that separates Israelis from Palestinians (see Fields 2004); some of them are rather hidden, invisible, virtual. Walls ex-communicate (I take this term from the title of a video made by Gary Fields in 2009) one part of the people, that is, exclude it from the community, deny this part taking part in the whole, deny participation.

Exclusion is detrimental to coping with, if not the very cause of, the global challenges facing humanity.

There are, on the other hand, technologies expected to be capable of helping bridge the gaps rather than cement the walls. One of them is the Internet, the Web, in particular, what is called the Social Web, the Web 2.0, with its Social Networking Sites. The expectation might be that technology responds to social needs and effects community building more than ever by helping establish reciprocal relations between individuals, something that is characteristic of communities (Willson 2006). Knowledge would be shared as collectively produced commons[1]. Dialogue in the sense of Daniel Yankelovich (Yankelovich 2001) would shape the form of communication rather than debate, discussion, deliberation, negotiation, or any other form, since dialogue is the only form that brings about community. A global conversation would be enabled by social media in which conversation about possible solutions is the first step to possible solutions (as Bernard Scott pointed out in his presentation at the 9th Conference on Sociocybernetics, Urbino, 2009).

Is this expectation realistic? Or is it just a dream that will not come true in reality?

1 Forecast or design

[1] "Das Ziel besteht darin, neue Wege zu entwerfen, auf denen Informationen zwischen verschiedenen Orten und Menschen frei fließen können. Statt einer zunehmenden Fragmentierung sollten Information und Kultur als Ressourcen gelten, die kollektiv produziert und genutzt und nicht von jeweiligen Eigentümern kontrolliert werden. Die Menschen sollten die Freiheit haben, auf die Informationen zuzugreifen, die ihren biographischen und persönlichen Bedürfnissen entsprechen, statt auf die standardisierten Produkte von McWorld angewiesen zu sein." (Konrad Becker, Felix Stalder: IP and the City, gepostet am 22. 10. 2005, http://world-information.org/wio/readme/992003309/1135254214, quoted in Lovink 2006, 15)

I do not intend a forecast of Web 3.0, based upon technological facts only. I do not want to run into traps that seduce to overlook that technology is very much bound to social contexts. Existing forecasts as put forward, e.g., by the inventor of the term "Web 3.0", Nova Spivack, or the philosopher of information, Luciano Floridi (personal communication), eventually, reduce to technology as the driving factor for the further development of "Web 3.0", "Web 4.0", "Web 5.0". This is what I want to criticise by my insistence on the inclusion of the "produsers" (see Bruns 2008) in Internet and Web as technosocial systems.

With the notion of "technosocial system", first, the idea of socio-techn(olog)ical systems from the Tavistock Institute to Günter Ropohl (1979, 2001) is applied to the object in question. While appreciating every social science approach that acknowledges the social nature of technology, I find the notion of "socio-techn(olog)ical systems" misleading in that it seems to imply that there are techn(olog)ical systems which form one category and that there are socio-techn(olog)ical ones which form a subcategory of the former. It is rather the other way around. Technological systems are a subcategory of social systems. Therefore I am inclined to coin the term "technosocial systems". That is, technology is an inherently social phenomenon. Technology does not make sense unless embedded in the social context which animates it. Each technological infrastructure has to be kept at work by human support, has to be maintained, restored, repaired, reproduced, adapted, modified, improved, and so on, which only human society is capable of doing. This means that every technology belongs to the technological infrastructure of a society, or the technosphere, that cannot in a meaningful way be defined without reference to humans. The technosphere itself is a social system with actors at the microlevel and technology at the macrolevel. The actors are humans both in their social role as producers and as users of technology. Producing (devising and constructing) and using technology is the self-organisational dynamic of such a technosocial system.

Thus information and communication technologies (ICTs) are not grasped satisfactorily when defined in a technologically restricted way. An information system includes not only technological devices but the community of its producers and users. It is humans that are connected via the connection of computers and it is humans that are the driving force behind new applications. It is precisely in the case of the Internet that the important role of humans in technology became clear: there is a trend towards the convergence of producers and consumers that gave way to the notion of "prosumers"; the consumers of the Internet are the users, they have become the producers as Howard Rheingold showed in his books (e.g. Rheingold, 1993). So it has become common to talk about "produsers" of the Internet.

Furthermore, I do not intend a forecast at all. I acknowledge the contingency of technosocial developments which results not only from dependency on a multiplicity of interacting conditions but also from a certain degree of indeterminacy inherent in human affairs which makes the outcome of actions get a life of their own and, thus, makes them to a certain degree unpredictable. Given the asymmetry between this uncertainty of development, on the one hand, and the truth that every development is based upon previous development, on the other – which is called path-dependency in today's complex systems approaches –, the best that science and philosophy can do is to explore the space of possibilities based upon the real(ised) technosocial space. Thus the actual takes the role of the necessary condition for the potential but not the other way round.

This multistage model of development is a phase model and a layer model in one and as such based upon two principles. The first one is the idea of emergence; it refers to transitions in which by the interaction of elements novelty in terms of new qualitative systemic layers is produced. The second is asymmetry; it describes the suprasystem hierarchies in which older layers are encapsulated as subsystems by emergent new ones. The shift from one phase to a subsequent phase is tantamount to a shift onto a new layer. The new system includes this additional layer. It encapsulates what previously were autonomous systems as subsystems and shapes them to reflect the dominance relation. However, the newly formed system will always depend on the role of its subsystems. When they cease to support the system, it will break down. In terms of dialectical philosophy, the new sublates the old in the threefold Hegelian sense: it terminates the old, it conserves the old, and it raises the old onto another level. In terms of the stage model of evolution of systems, this means that the lower stages insofar as they build the basis of the new stage are reworked so as to fit the emerging quality of the new whole.

This model is thus not to be understood as a means of prediction. It is not a scheme of linear progression from one state to another. It attempts at giving an account of the necessary condition for a next step which, in the past, occurred as a contingency and, in the future, might or might not be taken.

Eventually, since deliberating on Web 3.0 includes technology assessment and design of technology taking a neutral, value-free stance in identifying the necessary conditions for the possible future of the Web is not appropriate. One has to take into consideration that which is not only possible but also desirable. This makes the approach a critical one. For it includes not only an account of the potential that is given with the actual but also an evaluation of the potential which sorts out the desired. Thus philosophy embraces an ascendence from the

potential given now to the actual to be established in the future as well as an ascendence from the less good now to the better-then, which altogether yields the Not-Yet in the sense of critical theorist Ernst Bloch (see e.g. Bloch 1967). By using the category of the Not-Yet hope is legitimised. The future of societal affairs is open, that is, it is both a risk and a chance, a threat and an opportunity, unless humans intervene[2].

Human intervention has to reconcile the possible and the desirable and establish a unity of both. There are three ways of intervention resp. Non-intervention that fail to establish this unity (see Table 1). Two of them are based on the idea that everything can be controlled. This, however, is an illusion. Either it comes as belief in progress or it comes as wishful thinking. The first, called practicism reduces the desirable to everything that is possible. The second, either utopianism, if directed towards the future, or romanticism, if directed towards the past, projects the desirable onto the possible. The third way is a form of non-intervention. It is based on another illusion – the illusion of impotence – and contends the assertion that the possible and the desirable cannot be made to match. It is only the acknowledgement of the limits of control as the fourth way of a so-called deliberate activism that is capable of undertaking the task of bringing the possible and the desirable together.

[2] "Der Mensch ist dasjenige, das noch vieles vor sich hat. Er wird in seiner Arbeit und durch sie immer wieder umgebildet. Er steht immer wieder vorn an Grenzen, die keine mehr sind, indem er sie wahrnimmt, er überschreitet sie. Das Eigentliche ist im Menschen wie in der Welt ausstehend, wartend, steht in der Furcht, vereitelt zu werden, steht in der Hoffnung, zu gelingen. Denn was möglich ist, kann ebenso zum Nichts werden wie zum Sein: das Mögliche ist als das nicht voll Bedingte das nicht Ausgemachte. Daher eben ist dieser realen Schwebe gegenüber von vornherein, wenn der Mensch nicht eingreift, ebenso Furcht wie Hoffnung angemessen, Furcht in der Hoffnung, Hoffnung in der Furcht." (Bloch 1967, 284-285)

	Basic assumption		Relation of the possible and the desirable
Practicism	Illusion of omnipotence	Belief in progress	Every possible is desirable
Utopianism, Romanticism		Wishful thinking	Every desirable is possible
Passivism	Illusion of impotence		Possible and desirable don't match
Deliberate activism	Acknowledgement of limited controllability		The possible and the desirable have to be reconciliated

Table 1: Ways of (non-)intervention

That is, I criticise the present against the blueprint of a better future. And I do this, after Bloch, by identifying phenomena *hic et nunc* and hidden in the present that nevertheless are able to anticipate and foreshadow a possible better future. This possible better future is cast as a vision of a Global Sustainable Information Society. By that I define a society that, on a planetary scale, is set on a path of sustainable development with the help of ICTs. That is, I suggest that the overall value be sustainability, which denotes a society's ability to perpetuate its own development. Complying with sustainability implies complying with social values like justice, equality, freedom, solidarity as well as with sustainability in the ecological and technological sense. The implementation of these values needs, above all, the working together of different partitions of humankind, a planetary discourse aimed at the working together and intelligent actors ready for the planetary discourse.
So it is possible to evaluate Web phenomena according to their contribution to this working together that addresses the cooperative dimension of human information processes, to the planetary discourse, which addresses the communicative dimension of human information processes, and to the intelligence of actors, which addresses the cognitive dimension of human information processes.

2 Ambiguous findings about ICTs

When addressing (e)utopian and dystopian views regarding the development of the Net, that is, the view of virtual communities revitalising human communal existence and the view of physical communities being supplanted rather than being supplemented, Yochai Benkler (2006) uses the distinction between strong ties and weak ties, introduced by Mark Granovetter, to summarise empirical studies on ICTs strengthening or fragmenting social relations as follows: strong ties which relate to family and local communities were not weakened but rather strengthened by the use of ICTs and new weak ties were created in addition (see chapter 10). These new weak ties have established what is known by the terms "communities of practice" and "communities of interest" and are instrumental for the individual but not in the way that they are to become the dominant mode of connecting to other people. However, Benkler seems to see an exception to this rule: the emergence of social software and peer-production such as F/OSS or Wikipedia make the group more important than the individual; they go beyond a community of mere interest in that they "allow the relationship to thicken over time" (375).

Also Cass R. Sunstein (2006) who deliberates over how many minds can produce knowledge and avoid failures arrives at a rather positive evaluation of F/OSS and Wikipedia. Contrary to F/OSS and Wikipedia, the blogosphere "offers a stunningly diverse range of claims, perspectives, rants, insights, lies, facts, falsehood, sense, and nonsense" (187). Sunstein lists some positive examples but they seem to be outbalanced by negative ones because the blogosphere "runs into the usual pitfalls that undermine deliberation, sometimes in heightened forms" (xiv).

Geert Lovink (2007) who sets out to theorise the Internet culture is critical of the blogosphere to an even greater extent. According to the data he finds, blogs are used primarily as instruments for managing oneself, for marketing oneself, for making P.R. for oneself. Therefore he doubts that blogs belong to groupware or social software. They are rather the follow-up generation of the homepage. He quotes from a blog that writers don't care about whether or not a community forms as result of the writing. Blogging, he says, is competing for a maximum of attention. And, we can add, this is true not only for the blogosphere. Here the similarity to the sphere of so-called social software platforms like Facebook are striking: what counts is being linked. Lovink criticises the superficiality of content. In many cases existing information is only reproduced, he bemoans, instead of creating a new one. At the same time he admits that blogging, annotating and building links could be a start for defeating the indifference.

In her book “Technically Together” (2006), Michele A. Willson raises, like Lovink, the concern that “the quality of much of the communication that takes place through technology is questionable” (157). “As relations are mediated or become more abstracted from concrete embodied interactive forms, […] they become thinner and potentially more instrumental, thus undermining the possibilities and spaces for mutuality” (86). That’s the reason why “postmodern communities” in which “the primary form of interaction and communication is disembodied – detached from presence and mediated through technology” (39) are prone to being objectified as means for individual ends according to Habermas’s “instrumental rationality”. “Radical”, that is mutualistic, intersubjectivity tends to become outweighed by instrumental relations that either project the Ego onto the Other or reduce the Other to an object (see 99–103). It is not technology as such that would predetermine this social outcome but “the manner in which technology is utilized, the purposes to which it is applied, and the processes that are enacted through such utilization” (225) that make the difference. Hence her criticism of the network euphoria (58).

Michael Gurstein, the father of Community Informatics, is eager to distinguish between networks and communities. While networks are “structured around the relationships of autonomous and self-directed individual actors (or nodes) where the basic structuring is of individuals (nodes) interacting with other individuals (nodes) with linkages between nodes being based on individual choice”, communities “assume collectivity or communality within a shared framework which may include common values, norms, rules of behaviour, goals and so on” (2008, 16). He refers to Barry Wellman’s notion of “networked individualism” the meaning of which he puts on a level with the meaning of the “Facebook society”. He interprets Wellman’s networks as externally driven ones that combine fragmented individuals and contrasts them with “self-initiated (self-organized) and participatory networks which inter-link individuals not on the basis of fragments of identity but on the basis of self-initiated and self-realized identities. These networks function as “communities” (whether based on physical or virtual connections) through which action may be undertaken, projects realized, reality confronted and modified” (20). He goes on stating, “These communities provide a basis or a foundation element for the construction of an alternative reality” (20). Community Informatics then is the way to “provide the means for communities to be enabled and empowered and to effect action in the world” (21).

Barry Wellman (2002) foresees the rise of “networked individualism” with computer-mediated communication. A survey he carried out found that the more people are online, the less is their sense of belonging to an online community (Wellman et al. 2001). Thus

networked individualism means free choice of social circles, possibilities for the development of strategies or tactics for self-advancement, weak loyalties, a sense of being an autonomous individual, and the preponderance of the individual status rather than the social structure.

3 A fundamental antagonism

That empirical investigation yields ambiguous results does not come as a surprise. ICTs bear the potential of fostering participation, democracy, community, but this potential is realised only marginally and turned into the opposite, given the preponderance of partial interests. Manuel Castells describes this situation as follows (2006, 20):

"In this early 21st century we are at the crossroads of the development of the network society. We are witnessing an increasing contradiction between current social relationships of production and the potential expansion of formidable productive forces. This may be the only lasting contribution from the classical Marxist theory. The human potential embedded in new communication and genetic technologies, in networking, in the new forms of social organization and cultural invention, is truly extraordinary. Yet, existing social systems stall the dynamics of creativity […] Accepting democracy of communication is accepting direct democracy, something no state has accepted in history. Accepting a debate to redefine property rights goes to the heart of the legitimacy of capitalism. Accepting that the users are the producers of technology challenges the power of the expert."

In the implementation of technologies inhere the disparities prevailing in society. It amplifies existing contradictions and provides them with a new disguise.

Thus, by and large, "networked" individuals, in particular, the young, who are, in fact, excluded from fully participating in the economic disposal over resources, in the political decision-making process and in the cultural definition of what is (a) good are engaged with the struggle for recognition in a diversity of networks. This struggle is the compensation for, and the alienated form of, the struggle for full participation in the network society from which they are precluded. They liken – as the Japanese painter Korehiko Hino portrays the "child-zombies" of the information society (Sennhauser 2009) – personas, masks, faces devoid of facing the other because devoid of radical relations between the individuals[3].

I want to draw the following conclusions regarding the three levels of information management, identity management, and relationship management:

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[3] I owe thanks for getting this idea and the knowledge of the work of Korehiko Hino to Eric Mührel.

- In the category of information management it is up to the individual in her role as receiver to navigate through the sea of sense and nonsense and find out information relevant to her. In that context, the wisdom of the crowds gives weight to that information that is already weighty (Schmidt 2008, 33).
- In the role of an emitter of information, the individual is keen on using the Web as appropriate tool for its identity management with the preponderance of self-presentation instead of entering in true dialogues.
- And as to relationship management, it can be stated that "individual freedom" tends to "involve a feeling of decreased responsibility, obligation, or commitment to the Other or to the society/community" (Willson 2006, 156-157) which makes the usage of the term "community" questionable for the depiction of virtual or postmodern communities.

On the one hand, the usage of terms like "social software", "social media", "social networking" aimed at characterising the so-called "Web 2.0" as "Social Web" seems to typify euphemistic ideology because the meaning of "social" is blurring the distinction between the interaction of actors and the relationships that emerge from these interactions and exert a kind of dominance over these interactions, in turn. In most cases, applications reduce to the lower level of interaction only. "Web 2.0" shares with "Web 1.0" the characteristic of being instrumental for competition in the attention economy. Thus it lays emphasis on individuals or individual organisations being cognised and recognised by other individuals or individual organisations. What makes it distinct from "Web 1.0" is an increase in interaction facilitated by new technological applications. However, interaction between them is functional for gaining attention, thus communication serves cognition instead of the other way around, let alone communication serving cooperation. Bearing in mind that "communities" are entities belonging to the supraindividual level, so-called "communities of practice" or "communities of interest" in which individual actors gather to pursue some practice – without a need to share some interest – or to pursue some personal interest is instrumental to the individual actors only and do not qualify for the label of "community". They represent weak ties that need not thicken among individual actors networked this way. Social networks reside on the interactive level but not on the integrative level. Barry Wellman's networked individualism seems the predominant characteristic of "Web 2.0".

On the other hand, there are, in the virtual space, examples of "communities of action" as I propose to term true communities existing in today's reality – Wikipedia which is cooperation for producing a world repository of knowledge, F/OSS which is cooperation for producing software for the world, and there is a minor faction of blogs devoted to cooperation in that

they want to help bring about a new way of thinking as an underpinning for political action in the global society. From a sociological, technosocial-systems point of view, these undertakings in peer production – though some of them as to the technologies used even date back to the time before "Web 2.0" – prove the possibility of transcending networked individualism and realise "networked communities" or "community networks", as Gurstein puts it. But they are yet islands of an alternative reality, pointing to the level of cooperation, albeit under the prevalence of the communicative and cognitive restraints of networked individualism. They might become spearheads of a transition to a "Web 3.0" enabling and empowering communities such that a reorganisation of today's societies into a Global Sustainable Information Society can be envisaged. They might turn out as anticipations of a future development after this development happened to come true. So far they manifest what is possible today and desirable for tomorrow as well.

Conclusion

Empirical findings prove the ambiguity of ICTs. While there are realisations that express the longing for community in alienated forms, there are at the same time realisations that demonstrate, in principle, their appropriateness for serving as bridges between humans and undermining walls. These are the foreshadowings of the Not-Yet of a Global Sustainable Information Society.

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