Towards a New Societal Environment?

Cultural Impact of the Internet Technology

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Abstract: The hypothesis of this paper is that considering even only the most internetized parts of the world, the information societies, we are still passing the critical phase of the diffusion of the Internet – between the old and new uses of it. By the “new uses” I mean the emergence of a new social space, new societal environment in which more and more human energy is vented. The paper answers the question in what way the real and virtual environments are connected to each other, what is the difference between them clear or blurring, how we ought to relate ourselves to the societal *e*-environment, what rules govern it and - last but not least – are our language and methods of social research sufficient to face this problem.

Key words: culture, ICT, Internet, digital social environment

1. TOWARDS A NEW SOCIETAL SPACE

The paper is meant at elaborating on the claim that we are in the early stage of the Internet technologies and, therefore, its impact on culture is not critical yet. The rising tendency is clear, however, and seems irreversible. Culture is understood here in a broad anthropological sense as the way societies live and express themselves. Thus conceived, culture embraces all four orientations of human lives: expressive (arts, literature), normative (polity, norms), cognitive (education, knowledge) and instrumental (tools, modes of production) (Rosengren 1984). Internet technologies exert impact on all of these orientations in varied degree, though. This will be referred to in the final part of the paper.

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The Internet impact on society seems enormous at the present-day stage of its development, yet it is relatively modest as compared to its social meaning in the forthcoming decades. Here, analogy to the automobile comes to mind: there were strong fears that the automobile would revolutionize the human life long before it became the mean of mass transportation when only a small percentage of people possessed motor cars.

Considering the world expansion of Internet nowadays it is still hard to talk about the global information society, but the tendency seems clear and irreversible. According to the hypothesis of the cultural time lag claimed by William Ogburn (1974) the shift in social culture following introducing an innovation in the instrumental part of culture (tools) is delayed but unavoidable. In addition, the social practice shows that the first impact of a technological change divides society on both domestic and the international scale and it is only the second impact which leads to the diffusion of innovation to its completion embracing the whole of society. At present, we have to do with such a case known as “digital divide” (Compaine 2001, Desai 2001). Ca. 2 billion people do not have access to electricity and about half of the global population has never used the telephone; almost 90% of hosts in located in developed countries. In 1995 North America, Western Europe and Japan had the highest density of the telecommunication network: one telephone line per two persons, while in South Asia 13 per 100 and in Sub-Saharan Africa – 11/100. In the same year more lines were connected in Manhattan than in the whole Black Africa (“The Economist”, 24 of May, 1997: 114).

Yet, some other figures show that this sad situation is turning for the better. Several countries deprived of their own telecommunication operators now are profiting from the “premium of the late comer”: they are provided with the newest ICTs: digital telephone exchanges, mobile telecommunication systems, optic fiber etc. It is hard to believe that in such countries as Ruanda, Djibuti, Salomon Islands the telecommunication is in 100% digital.

In the social diffusion of new technologies there are three phases: initial, critical and final ones. Using once more the automobile example: at the initial stage the automobile was supposed to be – in the perception of most the then people – the “horseless carriage”. It was only after the closing of the car body by the Citroen Works (critical point) that the producers and consumers started to conceive the car as the rapid means of mass transportation. The same can be said about many other inventions. Guglielmo Marconi meant radio the wireless telephone; no one at that epoch could imagine it as the means of mass communication. The final phase of diffusion is when the new use is prevailing in all layers of the society.

The simple model of this evolution can be described in following way (see: model of technology and cultural change, McQuail 1994: 108).

Society and context > idea of an invention > new technology > applied old uses > (critical phase) > old uses change > new uses develop > continuing process of technical and cultural change > new cultural forms emerge > new institution (in case of radio - broadcast stations) > new forms of culture (mass culture) > new idea > new invention etc (spirale of innnovation – a cumulative process).

The hypothesis of this paper is that considering even only the most internetized parts of the world, the information societies, we are still passing the critical phase of the diffusion of the Internet – between the old and new uses of it. By the “old uses” I mean the emergence of a new social space, new societal environment in which more and more human energy is vented. This environment is not built of the stone and concrete and is extended on the whole planet (Mayor 2001: 323) One can metaphorically say that we are witnessing the colonization of a new non-physical world. It substantially differs from the colonization of the former “new lands” since the “new colonizers” do not physically move into this new space. It is only their mind which migrates. Some students (Levy 1996, De Kerckhove 1998) claim that this creates a new quality: collective (Levy) or connected (de Kerckhove) intelligence. Here, one can easily find reference to the Theillardian idea of *noosphere*, or the spiritual “skin” of the planet co-existing and intertwining with matter and energy.

The architecture of this environment can be characterized by following features: self-organizing, not centrally planned system, non-hierarchic, horizontal structure, interactivity, openness (Brunner 1996: 35).

The emergence of the new societal environment created by Internet is a historical necessity: digitization becomes a correlate of most human activities nowadays (e-economy, e-culture, e-medicine, e-government etc.). This is likely to be the biggest social change since Neolithic, printing and industrial revolution.

There already exist social entities which exist only in the new environment (virtual communities, Rheingold 2000). For the elderly and medium age generations Internet will remain basically a medium of interpersonal communication. For the generation born after 1985-1990 (“Generation Y”) it is of course also such a medium – as there is no interpersonal action in a communication vacuum – but it is also an environment the Internet users “settle down” in. This is for them a parallel world the *infoscape* co-existing with the *landscape*, or physical reality, to use terms coined by Arjun Appadurai (1990: 7). The boundaries between the two *scapes* keep blurring. It is worth examining how the inhabitants of this space share their lives between these “scapes”. Answer to this question will be

valuable for those who want to make money on managing this new environment. For the time being the *e*-world is not fully competitive: people still live in the real one and entering the *e*-world demands money and efforts interface technology is not yet friendly enough.

As a medium of communication Internet reached a relative maturity, whilst as a new societal environment it is still in the making. This process will be accelerated and the said critical point be crossed when Internet technologies now being applied and those to be soon brought into life will make the access to Internet almost free and demanding no time. Then no on-line culture will be distant.

Firstly, it is a matter of a few years when the problem of the "last mile" will be resolved and households be connected to the broad-band infrastructure. The digital window on the virtual world will compete with the window overlooking the real world. Such a *e*-wall will be integrated into the home infotainment center now available only to professional culture industries. It will produce the effect of permanent telepresence of people, events, realities. Within the coming decade the 80-90% of consumer electronics will be replaced by the digital one owing to the digital convergence of computers, media and telecommunication which means the biggest market in the history ever. There emerges a new concept of the said home digital entertainment center allowing "cultural prosumption" (production and consumption of culture industries: home *e*-music, *e*-photography and even *e*-cinematography). This culture industrial revolution is likely to be a little bit delayed in a country like Poland not because of our peripheral status (as in terms of diffusion of ICTs Poland is not a periphery any longer) but rather due to the poor purchasing power of the most Poles' incomes.

Emergence of the *e*-environment will be accelerated by the setting up of the terrestrial digital *i*(nteractive)-TV and broadcasting which in most countries of EU is to be carried out within the current decade. It is expected that WebTV and broadcasting will be a more effective way to popularize Internet in Europe than the traditional way via Internet computers. Digital content providers claim, the ATM broad band will transform the TV so radically that it will become a new medium. (Baldock 2001). Of course, millions of people will be still attached to the old formula of TV reception seeking after the mass offer (old uses of the new medium) but they will have a choice the younger viewers willingly benefit from.

Secondly, the next "push" towards the *e*-environment will be the wireless access to Internet producing the "generation always on" owing to the genuinely personal (wearable) computers enabling the voice recognition, micro-monitors and the virtual world projected directly on the retina. Those who need being immersed into this world will be freed from big, heavy data

chairs, data suites, gloves, helmets etc. Switch onto the virtual world won't be feasible only on the nudists' beach (unless there will be wearable chips implanted into the human body). With a grain of exaggeration one can say that the main difference between the real and virtual will be in the switching off: from the real world one can switch off definitely and for good only once and from the virtual world – on demand.

According to some visionary authors this will initiate the transhuman age – bioelectronic hybridization of human being (symbiotic man). This new brave world is depicted by the “gurus” of the cyberspace: Bill Gates, George Gilder, Ray Kurzweil, Arun Netravali, Nicholas Negroponte, Michael L. Dertouzos, Marvin Minsky, Hans Moravec, Eric. K. Drexler and others who are (or were) deeply engaged in designing and constructing the new *e*-environment as owners and managers of laboratories and incubators of new technologies and, naturally, interested in the success and embodiment of their visions. This well explains reasons why they are enthusiastic about the new ITCs. According to the chief manager of the Bell Laboratories, Arun Netravali's forecasting, the generation now being born will begin their life in a reality in which the intelligent networks will embrace our planet like a intelligent skin. Its sensors located everywhere will transmit all kind of information directly to the net like human senses transmitting information to the brain. The world will become a self-monitoring organism. In the wired world we can in no time get information from the data banks which produces an abundance of interdisciplinary inspirations. The varied fields of knowledge will fertilize each other with new ideas and concepts. Creativity will increase dramatically, the impetus of innovation will undergo unprecedented acceleration. The key category of economy – the price of product as the base of competitiveness will be replaced by innovation as the decisive value criterion.

This forecast seems serious. Of course, the techno-enthusiasm is counterbalanced by “techno-phobia”. The latter points out that we are facing a transhuman future (the said bioelectronic hybridization of humans). It is heralded by some authors (Maer-Kress, Barczys 1995, Stock 1995). These warnings are not the matter of the last decade. They have been present at least since the story about Frankenstein. As early as in 1950, Theodor Adorno in “*Minima Moralia*” (1953) presaged that technologies were becoming part of the human spiritual environment, became embedded in human soul.

The discourse between both sides is difficult. The philosophers of ethics try to reconcile opposite views being convinced that any use of new technologies depends - at the end of the day - on users. The technology itself is blind – does not see aims it serves. The weak side of this human activism approach is that far from everything does depend on people as uses of new technologies are partly determined by the very nature of these. The “hard”

determinists incline to some doubts, though: there is no mono-causal relationship between technology of culture. The relationship does exist, of course, but is rather multi-causal. That is why the “soft” determinism seems more grounded.

2. HOW TO EXAMINE THE INTERNET ENVIRONMENT. METHODOLOGICAL PROBLEMS OF RESEARCH

What kind of “antibodies” the civilization and cultures will find to cope with these risks, what education strategies and policies are necessary – this remains to be seen. First and foremost we critically need more knowledge and expertise. Here a bunch of questions arises: in what way the real and virtual environments are connected to each other, is the difference between them clear or blurring, how we ought to relate ourselves to the societal *e*-environment, what rules govern it and - last but not least – are our language and methods of social research sufficient to face this problem.

The last question is well grounded: the methodology of social research (sociology, anthropology, political science, psychology linguistics, theory of communication and other) has been over the last couple of centuries worked out and tested in the real societal world. It could be seen in inadequacy of the analytical language. E.g. to name some processes brought about by globalization and informatization which are contradictorily vectored and are entangled in constant interaction some scholars (Roseanau 1999) create neologisms and oxymorons like *glocalisation* (globalisation plus localization), *fragtegration* (fragmentation and integration), *chaorder* (chaos and order), *co-opetition* (cooperation and competition). One can compose quite a big vocabulary of new terms. The edifice of our knowledge about the society was built on linear analysis whilst nowadays there develop non-linear processes as well. We must use these terms however hard they are to be accepted by scholars who seek after a positivist adequacy and exactitude of analytical language. And even if the science is being reproached of turning into the New Age philosophy.

The author of the trilogy about the network society, Manuel Castells (1996-1998) faced the same problem. For him the central *locus* of the information society is the *space o flows* . The virtual reality is transforming into the real virtuality, as he put it. In this space a human being can become his/her own world, i.e. the virtuality assumes a shape of reality. Some people (“*couch potatoes*”) spend nowadays most of their life in this space: not moving from their physical place they work, study, relax. *E*-world is a legitimate reality for them.

This leads us back to the question: to what extent the classical social research methodology can be applied to in *e*-social research. Let us use an analogy: to examine a planet where there is no life on, whatsoever, all we need is (astro)physics and chemistry. To succeed in examining the planet where there exist life on (only the earth to our knowledge) these disciplines do not suffice, the new ones are needed: biology, microbiology, biochemistry to get to know the mysteries of gender, reproduction, ageing of organisms etc. When the evolution brought into life *homo sapiens* we could not go without anthropology, sociology, psychology or political science (Goldhaber 1998). Thus, a question arises what kind of new science we are in want of to explore the network environment. "We will not advance in the intellectual grasp of the network phenomenon unless we accept a radical assumption: due to the computer network a new type of interpersonal communication was brought into life which puts into question all we have had experienced hitherto" (Godzic 2001).

As rightly Neal Postman (1995) points out America after popularization of TV became a different America, Europe after Gutenberg was not the same, either. We do not know what would have happened *if*, but there are reasons to claim that Copernicus, Brahe, Kepler, Descartes, Bacon and other father founders of the European thought and modern science could reveal their genius owing to democratization of knowledge diffused by printing.

Methodological problems in investigating the digital environment are faced by all disciplines: theory of economy, culture, sociology, psychology, anthropology, philosophy, ethics, theory of human development, political science and others.

As to sociology, which I am the most scholarly involved in, one can ask a question what is the legitimacy of empirical methods of exploring the central sociological problems, e.g. the social roles played in a group when these roles can be simulated – and they indeed are - on the net, specially the biological characteristics of a netter (gender, age). In real society such simulations are not possible or rather difficult. Sociology had built over the last century an edifice of knowledge about the social status, interpersonal links, groups, leadership, meaningful others etc. These institutions help us in understanding mechanisms of socialization, affiliation and the control of a group over individuals. Another question relates to the interpersonal attractiveness which differ in the face-t-face communication from that on the net where partners of communication do not see each other. All this concerns particularly the young generations the socialization of which is increasingly taking place in the digital societal environment.

Richer output has worked out the social psychology. Empirical methods used by this discipline have been systematized by Patricia Wallace in her monumental study "Psychology of the Internet" (2001) but still some crucial

research issues remain unanswered, e.g. what psychological mechanisms are responsible for the fact that using limited means of emotional expression, written text only with occasional *smilies* (without the body language which according to anthropologists communicates 50-70% of intended and unintended meaning). The empirical research done in varied cultural circles (see Wallace) indicates that people engaged extensively in the net communication reduce their contacts with people in their close real social environment.

The clinical psychology has elaborated methods of curing dependency from media. Nowadays, however,, a new problem emerges: dependency from the new media. Someone dependent on computer games is prone to treat the reality as a game. Social psychology discerns two kinds of dependency: the primary and secondary. The former means being fascinated with omnipotent technology, which creates digital miracles, with the human power over machine and computer programs. The latter is much more complex: illusion of escape from loneliness. What causes that people active in "face to face" contacts on the net, experience shyness in the live interpersonal contacts, lose competencies in social communication occurring in the real world?

Political science must cope with the problem of "cyberpolitics" and "wired democracy". It is beyond question that IT with all procedures and habits accompanying them will keep invading the political landscape. It is the logic of the diffusion of technologies and cultures. In view of the above the important question can be asked: what are chances for political modernization and what might be the impact of information technologies?

One can ask, too, whether expansion of the information technologies not accompanied by experience and willingness to political participation makes it still possible to pass the cycle of the normal "classical" democratization and active participation in politics or the societies are doomed to get accustomed to the yes/no political game imposed by the instant communication. I.e. the communication which neither allows the citizens to participate in politics nor create political personalities who would be more than only mediocre actors on the stage. The present-day situation is as follows: the new technical infrastructure superimposes on the classical democratic societal structure. Now we should find answer whether this will bring a new political quality or petrify the old patterns. Will this be a renewed, participatory democracy or merely a "push-button game"?

3. DIRECTIONS OF CULTURAL CHANGE

Study of the culture industries expansion in the most technologically advanced countries shows that the big economic and cultural complexes (production, consumption, life-styles and the like) are in a decisive degree geared not so much by inventions stimulating production of material goods as ones enabling production of symbols (Internet, mobile telecommunication).

As it has already been said the Internet is not yet mature and developed societal environment. Yet, in its early stage of development it brought about huge cultural change which cannot be fully described in a brief paper. Following trends of the Internet technology are worth emphasizing:

- **Lowering the barrier of publication.** For centuries this barrier has existed and was of both economic and political nature. Expansion of print facilitated, to be sure, democratization of ideas, inventions, meanings. However, setting up a printing house or newspaper was costly. Even more expense-consuming was the establishing of a broadcast or TV station. Publishing on the Internet demands only a computer connected to the net and a user can potentially reach millions of people. I said: potentially, as it is far from easy to attract attention of people in this “cultural jam”. But such a possibility exists and it depends on whether one succeeds in finding an attractive idea to reach millions.
- **Globalization of transfers** due to the destruction of time and space. As the Internet produces and distributes symbols it is the most powerful tool of culture globalization; symbols are much more easy to be transferred on the global scale than the material goods. Interestingly enough the Internet makes possible organizing the action against globalization. Richard Rorty (1995: 55-58) says that in the near future the big social movements the arena of which is the real societies will be more and more replaced by the Internet campaigns.
- **Individualization (customization) of culture.** By this I mean individualization of the culture consumer address. The Internet destroys mass culture and creates the post-mass one, a niche culture. This creates a new pattern of participation in culture.
- **Unprecedented rise of creativity.** Invention and innovation-driven people can establish contacts all over the world with partners driven by the same need and exchange views, ideas, etc.
- **Emergence of new cultures,** communities and virtual transnational Diasporas. Here worth mentioning is the case of the American Indian tribe Oneida believed extinct. A group of Americans who preserved the consciousness of originating from this tribe but dispersed all over the country used the Internet to create the Oneida virtual community. They

resuscitate the tongue, address the state authority to have access to historical documents about the tribe, etc. In this way a new culture assumes a real shape. As a result of this process cultures remain pluralistic. At the early 1990s, at the outset of the WWW 90% of pages were in English; while in 1997 20% less. This declining tendency seems long-lasting. Nations, and other communities are more and more active in appropriating themselves as much virtual space as they can. Therefore, it gives room to speculate that the Internet might share the fate of Christianity. Several centuries following its foundation it was universal until the modern nation-states nationalized the Christian civilization.

- **Dehierarchization of cultures.** In cultures the difference between what is central and peripheral is blurring.
- **Empowerment of human being.** Internet gives men and women a sense of power, decentralizes societies and undermines the very notion of “crowd” and “mass”. Such a sense of power is for sure shared by hackers.
- **Technologization of culture.** The world is within the reach of the computer mouse. It is the allegory of the space vehicle. The Right to culture and knowledge is in fact the right to communicate via the Internet. Owing to the computer mouse culture is in the territorial dimension available everywhere and in the social one it can reach potentially every one.
- **New language.** Internet is in part continuation of the old symbolic sphere (alphabetic language), but it is elaborating its own “grammar”. This new grammar consists in creating a new abbreviated code preferred notably the “SMS generation”.
- **Visualization of culture.** As the Internet is acquiring a multimedia character owing to the broad band and ATM technology it will become a more visualized space. Some scholars worry that this will deteriorate cultures but one can rightly say that this will harmonize with multi-sensuality of humans nature. Images allow the receivers to establish the spatial contact with an information. As people live in three dimensional realities, images enable a better perception of the mediatized reality. This is a good chance to attract the attention of new media generations whose competence of understanding written or oral text has markedly diminished. It is important not only for the old analogous and new digital media now converging but also for educators. Curricula of schools and universities, programs of vocational training as well as advertising, marketing etc. are in a rising degree translated into images. It is hoped that this new language better fits into the “multimedia” nature of human being who is given a new means of expression. That is why there are opinions that also culture heritage ought to be translated into images to

make it understandable for young people. We have to do with a new cultural ecology. E. Saarinen and M.C. Taylor (1994) argue that the millennium breakthrough is characterized by the end of the “dictatorship of ideologues” who influenced receivers by the oral and written messages and beginning of the “dictatorship of imagologists” who “play with people” via images.

4. CONCLUSION

The Internet as the said new environment produces an enormous societal space. We do not know – and will probably never know exactly - what percentage of information (written texts, images, sounds) is registered on analogous carriers. According to rough estimates not more than 4-6%. And yet, we have problems in managing this space. What will happen when this ratio will increase up to, say, 50%?. Some problems will be resolved by intelligent software but far from all. Thus, such a huge e-environment need guides, intermediaries who search, integrate, authenticate and integrate the information and knowledge. This creates a big challenge for the Internet technology creators, policy-makers, legislators, educators, artists etc. we will be facing throughout the whole XXI century.

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