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## MOBILE NETWORK SOCIETY AND CULTURE

### ABSTRACT

The world we live in gets networked and mobile. More and more people carry out their activities on the move; it might be business, entertainment, education or just socialising. Communications become wireless and invisible, and cheaper and cheaper, the distance and location factors get increasingly irrelevant. People and organisations get connected. We are quickly approaching the point beyond which we shall have good reasons to think in terms of *mobile network society*. The purpose of this paper is to investigate certain relationships between new technologies, especially the Internet and mobile technologies, and culture. It seems that within a network society technology and culture work in opposite directions. Even a more dramatic diagnosis seems to be legitimate, *viz.* technology moves out culture. The major message of this discourse is that: One has to vividly oppose to the displacement of culture. The rationale is simple, namely: a decline and atrophy of culture is in many ways an extremely negative phenomenon for democratic society at large; in addition, at the end of the day the “success” of technology will also hinder the technology itself. Enhanced education, especially regarding prospective engineers is considered as one of the major means to help us stop the technology to conquer the culture. The paper calls for augmenting educational models and patterns, so that they include not only the acquisition of skills and knowledge, but also that they help students establish a moral autonomy. The latter is a condition *sine qua non* for the mission of reversing the march of technology against culture. In addition to systematic educational efforts, professional and grass-roots movement have to be initiated. Towards this end, an example of the MOST Programme (Mobile Open Society through wireless Telecommunications) is given in the paper.

**Key words:** culture; education; ICT; mobile network society; technology.

### 1. INTRODUCTION

It seems that the most used, and quite often overused, term in the context of technology and technological research throughout the previous century was *system*. We designed, built and operated systems. We were surrounded by sys-

tems, we lived with and in the systems. Our energy was invested in systems establishments, optimisations, and improvements. We perceived the world through the notion of system. System was one of the major paradigms of the last century. The end of the 20th century, however, promoted a new conceptual paradigm, which is *network*. Now, at the beginning of the 21st century, it seems that *network* is driving out *system*. We have a new king (*le roi est mort, vive le roi!*). We have a new point of reference and intellectual tool at our disposal for describing and analysing the world. One may claim that network has been around for quite a long time and that considering it as a novelty is by no means justified. To some extent this opinion is valid; yet, the network that we see today is significantly different from the one of the past. Now, the network moves thanks to a mobile technology. One may still argue that mobile networks existed already in the 19th century, and that the most spectacular example is a railway system with moving trains. This is a true statement, indeed. However, the trains could not communicate each other, whereas the components of present mobile networks can dialog without limits. So, the major difference between the present and the past lays in the fact that information can be exchanged and processed on the move. Consequences of this difference are enormous and hardly predictable and will certainly affect not only technology itself but also other spheres of human activities.

Further on, the term *mobile* will be used to characterise: (i) individuals and groups of individuals on the move; (ii) portable electronic end-user devices allowing one for information processing and/or communications, e.g. mobile phones, laptops, palmtops, etc.; (iii) technological facilities for providing connectivity and information transmission between portable (mobile) end-user devices, e.g. a cellular telephony country-wide network; (iv) services that are available by means of mobile technology facilities and devices, e.g. payments done via a handset.

More and more countries are quickly approaching the point beyond which we shall have good reasons to think of the people living there in terms of *mobile network society*. This type of society is a result of deep transformations mainly caused by a triumphal march of information and communications technology (ICT), a dramatic effort to overcome the constraints of industrial capitalism, the cultural social movements of the 1960s and their 1970s aftermath such as ecologism, feminism, anitglobalism, and last but not least, an incredible development of transportation systems, in particular airlines. The ICT and technology as a whole have radically influenced almost all the facets of our life, including economy, where we are witnessing the process of establishing a new global economic order. They have also had a tremendous impact on *culture* and our personal living standards and habits. There are very little doubts that technology has positively shaped economy; however, one may have a number of reservation as far as the influence of technology on culture is concerned.

Two remarks are necessary before entering upon any further discussion. First, for the sake of this paper we isolate the term *technology* from the semantic field of the notion of *culture*. It is a temporary act aimed at facilitating the examination of the relationship linking up both terms. Having completed our analysis both terms should return to their nests. Secondly, an attentive reader will notice that the term *information society* is avoided throughout this paper, which is a purposeful decision that has a similar rationale to the one expressed by Manuel Castells: *We should abandon the notion of "Information Society", which I have myself used some times, as unspecific and misleading.* [Castells, M., 2000. *Materials for an Exploratory Theory of the Information Society*. British Journal of Sociology, vol. 51:1, January/March.]

## 2. MOBILE NETWORK SOCIETY

The first symptoms of the mobile networking technology impacts on a daily life are seen almost everywhere, especially in the countries where the mobile solutions have been integrated into economy, business, governance, and last but not least in a lifestyle. Every day we can see how the online world is being transformed into a universal digital marketplace and social communications agora, full of shopping malls, commercial content, chat forums, learning platforms, subject oriented empowerment facilities, communities of practices, etc. For that reason not only the role of telecommunications providers but above all the role played by content creators such as artists, journalists and researchers as well as the involvement of content providers like publishers and editors will get stronger and stronger. It's only a matter of time when the contribution of the content community to the digital business, culture, education and other areas will reach a critical mass in terms of quantity and quality, and as a result, will in one way or another take over the control of the digital world development. However, the content creators and providers have to understand that a shift from a linear and textual paradigm of acquiring information and knowledge towards pictographic languages, and convergence of media on a digital platform and a possibility of accessing multimedia information on the move will dramatically affect not only the form of content they produce and provide, but also the content itself. Marshall McLuhan has undoubtedly been right: the medium is the message.

The human habitat gets increasingly mobile. Very many people perform their activities on the move. It might be business, learning, entertaining, or just socializing. Communications has become wireless and invisible, and cheaper and cheaper. The distance, and location factors, and to some extent even the time are increasingly irrelevant. As an anecdote we can quote a new definition of the term *nowhere*, which nowadays refers to a location that is beyond a mobile phone reach. Today, we witness the end of the first phase of the new civilisation process that could be summarised as a procurement of a ubiquitous

communications facility to connect people. A club of countries where the cellular phones penetration level exceeded 50% is no more a narrow niche on the global map. With a prospective wide availability of the broadband access, connectivity and bandwidth will cease to be the limiting factors. Accessing, sending and receiving data, speaking and watching via mobile handsets will be soon a prose of the daily life. It is already observed that people tend to consider applications and content as utilities (water, electricity, etc.), and they do not want them standing alone. They want one place to go to access them. And for those on the move a handset is this place.

Mobile technology, based on wireless solutions, offers us a possibility to be “always on”, to hear and to be heard regardless of the place where we are. On the other hand, it seems that beyond such an obvious practical reason there exist in our human nature more fundamental needs, which are the desire of being actual part of the community that we belong to, and a very deep need of freedom. Owing to the “always on” factor the mobile phones ensure a permanent linkage with the members of the community—one can be on the move, one’s friends or collaborators might be on the move as well, yet, contacts have not been broken, and thereby our basic need for participation and affiliation is fulfilled. Thanks to this we do not feel alone, or at least we are less alone. Regarding the feeling of freedom we should remember that there are two types of freedom, namely *freedom from* and *freedom to*. Undoubtedly, a handset enhances our *freedom to* as it offers us a possibility to communicate with people on business or on private matters anytime and anywhere. This linkage provides us with a comfortable feeling that if we only want we can always be in and do not lose the connection with our professional and social environments. Commenting on the *freedom from* in terms of cellular phones, let us recall a bright saying by a great Polish poet Julian Tuwim, who defined radio as follows: It is a clever invention, you can switch it off just by pressing a button. Needless to say that handsets also include similar functionality. Now, getting back to a serious tone we may emphasise the fact that wireless telecommunications is highly instrumental in terms of maintaining social relationships and enhancing individual freedom. In addition, it should be noted that its ubiquity and a deep impact on our life cause that it cannot be considered simply as a commercial enterprise. It is not either a typical commodity that can be bought and sold like any other merchandise; it is also to a large extent a public service and responsibility. It is, therefore, important that people have the rights to make use of communications facilities and to get information, wherever and whenever they wish so. To sum up, we claim that the vividness of networks encourages societies to persistently escape from their own constraints and controls, to a repeatable suppression and reconstruction of their values, and to a permanent rearrangement of human institutions and organisations.

### 3. ICT AND A NEW ECONOMIC ORDER

The major components of information and communications technology (ICT) are: computer hardware, software, telecommunications means and, what is considered equally important, the interrelationship of these components. There is no doubt that they are subject to deep, rapid and long lasting revolution. We see how a new unified information universe is being created, which is a dense space where living habits and conditions are getting more and more different from what we know from the past. It is worth mentioning that in addition to traditional social and economic divides the so-called *digital divide* is emerging. Schematically, this means that there are two types of communities, namely those who use the new media and communications facilities and those who do not. This divide, alas, corresponds to the division between rich, powerful and influential people and communities, and those who are poor and deprived of hope and chance. Unfortunately, this division has also a less visible aspect, i.e. the advantages and pitfalls are not equally divided between the rich and the poor (mobile phones are a good illustration of this note). A lion's share of good things goes to the richer, whereas the bad and hazardous things go to the unprivileged.

Putting aside the controversy surrounding the overused term *new economy* and its relationship with the ICT, there is no doubt that deep, quite often unstructured and unrecognised, social and economic processes are taking place throughout various facets of our life these days. Their features are, *inter alia*, globalisation, deregulation, distribution, high competitiveness, mobility, risk taking, speed, change, lifelong learning, orientation towards information and knowledge with a crucial role of intellectual property, and extensive use of the ICT. It is an approach where information and knowledge, and the mechanisms of networking and sharing knowledge are at the core of all activities. It seems that the world that is now being created is paradigmatically different from the world that is going away. The difference can be formulated as follows:

*Owing to networking and Information and Communications Technology, in particular the Internet and mobile technology, while reaching one's objectives, cooperation becomes a cheaper strategy than competing.*

There exist already a number of indications and convincing examples sustaining this assertion. One may be sure that this new economic and social trend is not a temporary result of a peculiar inclination of human beings to novelties and technology itself, but it is a durable result of a precise calculation and cool reasoning, which is the best guarantee that this trend and its products will succeed and survive in the future. Noteworthy, one can identify a positive feedback effect between the new economic and social phenomena and the ICT, i.e. the ICT drives new trends and *vice versa* new facts boost the ICT and technology as a whole.

#### 4. TECHNOLOGY AND CULTURE

With a little risk we can predict that an average interlocutor's reaction to the word *technology* will be positive. Technology, along with modern science, which is legitimately considered to be its mother, is perceived as a major factor of economic and societal transformations we are witnessing these days. Technology is regarded as a mighty and somewhat mysterious force that can help resolve human problems. This generally positive attitude is commonplace though people are usually aware of and remember well all dramatic threats and negative consequences the technology can cause. Examples of Hiroshima and Chernobyl, of *thalomid* and BSE, acid rains, greenhouse effect—to mention just a few cases only, are still remembered traumas. In a sense, from today's perspective technology has become the Stendhalian mirror carried down the middle of a road and reflecting the major problems, dilemmas and tendencies of our time. So why is our overall attitude vis-à-vis the technology in general positive? Marshal McLuhan explains that technology extends and strengthens human attributes and qualities, e.g. an excavator adds forces to our muscles, a microscope reinforces eyes, a bike makes locomotion easier and faster, and networked computers increase our intellectual capabilities. The latter has done it in such a broad, deep and efficient way that these days we are in the transformation process from an industrial or postindustrial society to the so-called network society where conventional growth factors (capital, labor, natural resources, energy, etc.) become less critical giving way to information, knowledge and innovation. To McLuhan's theory justifying the attractiveness of technology we add the following: *Technology strengthens our individual and collective ego.*

Shortly speaking, we perceive technology as a source of power, which by allowing us to govern or even rule the world provides us with a peculiar contentment and pleasure. Technology encourages us to conquer the world, to domination, to a constant transformation of the environment according to our will and *ad-hoc* needs, quite often based on sheer hedonism and selfishness. Of course, it is not to say that technology automatically encourages or imposes a totalitarian order and stratifies people so that those who have it mastered exploit or subordinate those who have no access to the technology or do not know how to use it. There is no fatalistic reason that this has to be the case; yet, it may happen and actually happens at a smaller or larger scale.

*Culture* is noticeably different from technology. In this paper we understand culture in its rather broader sense, though, in an arbitrary way, which is not necessarily consistent and compatible with what professionals and researchers have usually in mind. For us, it is an invisible universe of symbols, beliefs, sophisticated relations, values, laws, responsibilities, and duties that have been constructed and established over long history of the mankind. This amalgam is incredibly stable and remains almost unchanged in the course of time. Culture tends to avoid changes. By its very nature it is conservative. Culture is an ab-

stract entity that is deeply rooted in a human's psyche. If a vivid dynamo was a relevant metaphor for technology, obviously, the right metaphor for culture is a homeostatic device whose principal objective is to maintain the *status quo*. Culture is a controlling mechanism, which imposes values and behavioural patterns. Culture's charisma is soft, it does not provoke immediate results; however, its efficiency is admirable. Culture transforms individuals and non-coherent groups into communities and societies. Having realised the features of culture and using again the Freudian language we may say: *Culture tempers and moderates our individual and collective ego*.

Generally, yet with a little precision, one may say that culture discourages from expansion and exploration, and rewards conservatism and conformism. Shortly speaking: in principle, culture harnesses ego. This is not to say that culture promotes laziness and keeps people in lethargy, that there is no movement and progress within its kingdom; it is rather to say that culture strictly determines, or better to say—constrains the fields of activities, contenting itself with the known, and avoiding the unknown.

Our so far discussion leads us to the point where we can summarise the situation as follows. Technology and culture work in the opposite directions, i.e. technology strengthens ego, whereas culture moderates it. Already at the first glance one can see that technology wins the confrontation with culture, mainly because the technology is at a short term stronger than the culture. While looking around one can readily identify facts sustaining this observation, which is especially visible in the context of a pop/mass culture that in fact is a tribute to smart applications of technology in the fields of entertainment, marketing, leisure, lifestyle, etc. Having written the above we dare to formulate the following rule: *Technology tends to move out culture*.

In other words, culture steps down under the pressure of technology. The emptied room is immediately sized by the technology itself or a mass/popular culture, which comes more or less to the same thing. As a result, culture gradually abandons a general public and is forced onto procrustean bed of elitarian audience. Neil Postman has noticed "Culture always pays a price for technology", and adds "the greater the technology, the greater the price". We can append: the greater the technology, the greater risk to damage culture, and the greater the harm. Indeed, the mass culture is usually a vicious mixture of stereotypes and socio-manipulations. The fascination for technology, gadgets, a quest for constant change for the sake of change only, the elaboration of new irrational applications whose only motivation is a profit regardless of sense and negative educational impact are the phenomena that can be hardly supported and justified, especially that they hit directly or indirectly the "cultural tissue" of the society. Even worse is a naive attitude of devoted technocrats who believe that the most serious problems we have in the world are the result of inadequate technology and insufficient information. All this sounds dramatic, indeed, especially that we should remember that culture defines our identity and

the sense of life, it provides us with a social anchor, and last but not least, culture is the major protection facility that defends us from external and internal evil, contempt, barbarism, hate, etc. Unfortunately, this protection has not always turned out reliable enough; yet, one may ask: do we have a better armor at our disposal ?

Unluckily, it seems that rapid technological changes and surprising inventions not only put the culture in a state of disarray but also increase the level of incertitude as far as individuals and communities are concerned. People lose the sense of continuity, perceive the surrounding world as an unstable stage attacked by unidentified temptations and threats. Perhaps, the following allegation holds: *The level of incertitude and existential anxiety are proportional to the scale of technological achievements.*

Let us supplement the above with two additional observation, *viz.*: (i) the more admired is a technology at the point of its introduction, the more disappointing it is when it fails and its originally invisible pitfalls and threats emerge at surface and become widely known; (ii) the more powerful and effective is a technology, the lower becomes the level of human's attention and eagerness, e.g. it has been noticed on many occasions that the availability of effective medications may decrease diagnostic abilities of medical doctors.

It is time to recapitulate our so far reasoning. The winning technologies flatter, add force and fortify our ego, but at the same time they raise its incertitude that expresses itself in the form of misunderstood anxiety. Unfortunately, religion is not a panacea for getting rid of this incertitude since the incertitude of this kind has no spiritual origins and dimension; it is just the inquietude and the problem of our ego, which is far away from divine matters. We know that culture is a panacea, but as we have just demonstrated, the trouble is that the culture is being displaced by technology. Under these circumstance, as nature abhors vacuum, the pop/mass culture starts playing the role of a tranquilizer and stopper of the incertitude with all the consequences of this fact, one of which is paradoxically the increase of anxiety (a classic vicious circle effect).

The major message of this paper is that: *We have to oppose to the displacement of culture.* The rationale is simple: a decline and atrophy of culture is in many ways an extremely negative phenomenon which at the end of the day will affect not only ourselves, but it will also destruct the technology itself. Technology is a materialisation and manifestation of our desires which, as we perfectly know it, are fed by an insatiable hunger of our imagination and instincts. This is why the self-control and self-limiting regulators of technology are so weak, and thereby the technology is inherently weak, too. The conclusion is straightforward: *one has to help technology to free itself from its in-born thoughtless and aggressive inclinations.*

Now, the real question is the following. Is the principle reading that "technology moves out culture" the law of nature like Newton's law of gravity, or it is simply a tendency that could be opposed and, hopefully, reversed ? We do not

have an ultimate answer to this question; however, our moral and civic obligation is to make known of and actively resist against all the negative and dangerous effects of technology applications and the ways we can become addicted to them. Needless to argue that it is not our intention to stop or slow down the technology progress as such; it is neither our purpose to impose a special control on technological developments. What we want to say is that we need to proceed with our eyes wide open so that we use technology rather than be used by it, or be used by those who attempt to employ the technology for manipulating people and organisations.

For the above call not to be an idealistic appeal one has to formulate a positive program whose implementation is within our reach. The chief component of such a program should be a modification of educational models, especially for prospective engineers. Education is considered as one of the major means to help us stop the march of technology against culture and to reverse the process of its self-destruction.

## 5. EDUCATION

The most fundamental element of an educational process is the acquisition of facts and skills. Students learn principles, rules, algorithms, procedures, and tools for implementing the procedures. They learn practical things to be applied in the real life situations. Eventually, they know *what and how* to do; yet, they still cannot answer the question why they apply these but not other procedures and tools, why the procedures and tools are valid and relevant to the problem at hand. They still cannot answer the question *Why*. The answer to this question is provided only by knowledge, which is the second pillar of one's education. Knowledge is basically a set of theories and systems that explain, resolve and justify the solutions of problems. Undoubtedly, the best universities provide their students with useful and efficient skills, and a sound corpus of knowledge. In this area, dramatic changes are not necessary. However, what is now definitely missing in educational practices and curricula is the search for wisdom with the same persistence and intensity as one seeks for facts, skills, and theories. What is then *wisdom*? There is no universal answer, since it depends on many factors such as social context, professional area, cultural tradition, etc. For the sake of the present discourse we assume that in order to get closer to wisdom it is necessary to endow students with the ability to assess and predict the implications of their future professional activities and decisions in the context of individual and collective interests; to help students learn that their particular needs have to be sometimes subordinated to the needs of a group, and that the coherence of the group highly depends on their sense of social responsibility. The students have to learn how to identify and distinguish positive results of their interventions from negative ones. They have to set up in themselves a re-

flex that will allow them to oppose to negative consequences of false technology applications. They are supposed to immunise themselves against the temptations of instant utilitarianism. Students need to learn how to think critically, historically, and humanely. They must establish a feeling of internal freedom and independence of thoughts, and they have to learn how to distinguish goals from means, and eventually they have to understand the ways in which technology shapes their consciousness. All this implies that the students have to get acquainted and to absorb a system of values that is consistent with the notions of universalism, humanism and democracy, including a peaceful and synergetic coexistence of technology, culture and economy. In other words, the objective is that each student will be given incentives and models for setting up her/his own *moral autonomy*. Obviously, it is not an easy and rapid task to perform. The solution is not to enhance the curricula by adding one or two subjects to the university program; the point is rather to introduce relevant elements to all the subjects so that the students and teachers will become a subject to constant transformations and development.

While talking with many students of technical faculties, it seems sometimes that in the age of computers insight and thinking are considered obsolete and useless methodologies to tackle problems, and therefore are eagerly replaced by the attitude “don’t think, process it”. Interestingly enough, probably by the same token, a *to-have* attitude widely gains advantage over a *to-be* attitude amongst prospective managers and engineers, which surprisingly well corresponds with the intrinsic aggressiveness and possessiveness of technology. These are other crucial reasons why we have to promote the development of moral autonomy, hoping that this will help harmonise technology with culture and will give rise to their reconciliation.

In addition to educational efforts various grass-roots initiatives are also necessary to promote and support the concept that ICT and its mobile incarnation can boost democratic society building without hampering culture. An example of such a venture initiated by Warsaw University of Technology, together with Polska Telefonía Cyfrowa, and the German mobile operator, T-Mobile, is a Program dubbed MOST (Mobile Open Society Through Wireless Telecommunications), [www.most-program.org](http://www.most-program.org). The Programme was set up to address the need for generating universal interdisciplinary thinking and acting synergy between research scholars, practicing industry executives, content providers, and decision makers who share a strong interest in the topics of network society, mobile economy, and higher education models based on interactions within and between humans and information systems. The objectives of MOST include the construction of an efficient mechanism for the flow of thought and know-how, exchange of experiences and personnel between universities and suppliers of telecommunication services, as well as the widely understood media (publishers, magazines, television, radio, etc.). The MOST community works on setting up a sound and workable regional mechanism that will organize broad coopera-

tion between universities, research centres and laboratories, wireless telecommunications providers and content providers operating in Europe.

## 6. FINAL REMARK

There is no doubt that the implementation of the outlined program aimed at balancing technology and culture within a mobile network society is more than difficult a task. The costs to pay will be high and the implementation time considerably long. However, one should remember that the price to pay will be even higher (and not only in terms of money) unless we face this challenge and undertake action without any delay. Towards this end, the Dialogue & Universalism Programme undoubtedly offers a sound and inspiring platform.

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