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Simulacra and Simulation: The Impact of ICT Upon “Radical Transformation” of Culture

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ABSTRACT

The article focus on the phenomena of the ‘radical change’ (transformation) within culture brought by new ICT technologies, associated with the information and communication revolution, that have impacted not only the culture itself but also economic, social and political sphere, thus evoking the effect of synergy and convergence difficult to predict. Of course each era has its own revolutions and more or less radical changes, but the core of postmodern world we live is characterised mainly by the process of communication and culture directly mediated through digital technology, leading to the creation of new symbolic environment : virtual reality or real virtuality (often referred in terms of a third place ‘in between’ : real and virtual, human (homo sapiens) and technology (AI), individual and collective). Critical analysis of the defined phenomena implies the need of interdisciplinary approach based on the comparative methodology, both from the point view of theoretical discourses as well as more empirical approach, as the outlined theme moves ‘in between’ new technologies (informational or new media sciences), economy, culture and social relations (economics, humanities and sociology), not to mentioned the growing interdependence and complexity within so called third wave of globalization (ICT revolution, demography and contemporary crisis). Taking into account that this phenomena is based on more and more interrelated and interdependent processes of ‘unintended consequences’ as a result of inherent complexity of contemporary world, the first part of the article focus on the broader context of the assumed ‘radical change’ (transformation) described by many scientific disciplines, bringing the interdisciplinary context necessary to understand this phenomena. Second part focus mainly of the impact of new technologies upon ‘radical transformation’ of culture, trying to fully described and understand both the direct and indirect results, from the perspective of epistemological, axiological and institutional approach, necessary for more comprehensive analysis of the phenomena of ‘radical transformation’ of culture. Third part is the endeavour of further reflection upon more or less direct result of this ‘radical transformation’ of culture (culture of virtual reality or/and real virtuality), referring to

Baudrillard's term of simulacra and simulation -the 'precession of simulacra'- enhanced multiplication of signs and images reaching such an intensity, that only further exacerbated process of simulacra-sation, thus blurring of the boundaries between the real, semiotic and symbolic, with no real verification possible. The core element (novelty) is the attempt to fully grasp this phenomena of 'new culture emerging': by defining and understanding this process 'in between' real and virtual (culture), not only as usual from the technological, but also from the cultural, sociological, economical, not to mention the philosophical (ontological) perspective.

Keywords: simulacra and simulation, radical transformation of culture, paradigm shift, "culture of excess" culture of "real virtuality"

1. NEW (ICT) TECHNOLOGIES : PARADIGM CHANGE (DISRUPTIVE CHANGE)

Happening before our very eyes the information and communication revolution, associated with the third wave of globalization, which Marshal McLuhan described in terms of 'global episteme'¹, fundamentally changes (transforms) simultaneously: economic, social and cultural sphere, thus evoking the effect of synergy and convergence difficult to predict. As such the dynamics of the post-modern changes lost not only its linear (cause and effect) but also incidental character long ago, thus becoming the permanent phenomenon (an on-going process) as well as a non-linear one, happening in all areas simultaneously, that we are the part of, therefore it's extremely difficult to refer to them objectively, not to mention keeping up with its pace (undergoes not only the scale and scope of changes, but also their speed). This applies in particular to the concept of radical technological breakthrough, in which the dynamics of changes progressing so fast, that "the only known experience becomes a discontinuity, uncertainty and (constant) change". Most stimulate the breakthrough or disruptive innovations, which J. Schumpeter (1942) wrote about, that they have the power of creative destruction,² destabilizing both economical and social operational models/strategies, and institutions -causing crises, after defeating which (integrating) the system gets even stronger. These changes can generally be related to three main megatrends³ of the informational revolution, discussed by Wierzbicki (2000), the technical megatrend of digital integration (also called convergence), the socio-economical megatrend of digital integration (interconnect conditions based on the complex requirements of network connections) and last

¹ Diverse approach to understand the contemporary changes within so called post-modern world in refers to impact of ICT technologies embraces different perspectives related with different fields (disciplines) underlying different aspects :the transition from industrial to post-industrial society (Bell 1973), as a result of third wave of globalisation : civilisation development (Toffler 1980), emergence of media society (McLuhan 1962, 1964), informational or knowledge society (Stehr 1994) or/and network society (Castells 2000) not to mention more sociological approach (Bard & Soderqvist 2002)

² The theme of disruptive innovation and/or 'creative destruction' as well as their impact on economy described by J.A. Schumpeter (1939, 1942, 1960) - ["a perennial gale of creative destruction" as an immanent trait of capitalism]- presents itself differently within contemporary post-modern world in refers to the original conception, underlying mainly the disruptive results (on-going innovations in technology) and discontinuous yet systemic character of the process (innovation systems) based on networks and open innovations (cooperation & exchange), more :E.G.Carayannis, J.E. Spillan, Ch. Ziemnowicz (2007)

³ The introduced concept of megatrends is defined slightly different than the original definition of J. Naisbit (1982) referring to the megatrends as new directions, while the perspective presented within this article is referring rather to the social & cultural phenomena of long duration lasting at least several decades- according to Wierzbicki (2015) this third (intellectual and/or cultural) megatrend brings the greatest challenge of conceptual revolution (with the main concept of episteme) - the process of destruction of old episteme resulted in a divergent development of differing epistemai of three cultural spheres (technical sciences : more pragmatic then paradigmatic, more paradigmatic natural 'hard' sciences (Khun 1962) and 'soft' social sciences & humanities)

but not least the cultural and cognitive megatrend (based on digital culture and communication, as well as the change of the way we perceive the world).

In fact, we could simply talk about the new development of paradigm shift, referred by Manuel Castells (2010) in terms of information society, associated primarily with, moving for the first time, beyond the physical limitations of 'time and space' - transition from "space of places" (territorial contiguity) to "space of flows", in which the physical space is partly replaced, partly extended by space of communication: symbolic and virtual. As a result, access to goods and services, as well as to knowledge and information is almost immediate (instant, interactive and synchronic) and open access, available for all "here and now" in the virtual & symbolic space "through streams and flows nodes". According to Castells all major social changes are ultimately characterized by a transformation of space and time in the human experience. Assuming that, the space is not a tangible reality, but rather the concept, constructed on the basis of human experience, he underlines that "if we look at space as a social form and a social practice, throughout history space has been the material support of simultaneity in social practice" (ibidem 2010, s. 30).

That simply means, that development of digital communication networks radically transformed the spatiality of social interaction by introducing the phenomena of simultaneity or any chosen time frame in social practices, regardless of the location of the actors engaged in the communication process. Thus moving the whole civilisation from the previous 'space of places', where physical space became significant barrier limiting development, mainly because the access to goods and services or information and knowledge was limited in time and space (in large part distributed in local communities, and accumulated in the urban space) to the current 'space of flows', where within a global network of communication, the access to goods and services as well as knowledge and information is almost immediate and open access, takes place in 'timeless time' in virtual (symbolic)' space through streams and flows'.

This new form of spatiality, defined by M. Castells as the space of flows: material support of simultaneous social practices communicated at a distance, embrace both the transmission and processing of flows of information or culture (symbolic goods), as well as the connectivity of activities located in the local nodes of global communication networks. As such the key feature of the networked connection is the relation, or rather increasing tension, between the local and the global (glocal): micro-network of the high-level decision-making process, based on the face-to-face relations linked to a macro-network of decision implementation, based on digital communication networks.⁴

Alvin Toffler in his book *Future shock* (2007) talks about "breaking with the past" in which spatial and temporal restrictions have been aborted (disrupted),⁵ underlying the impermanence syndrome of thus existing models or strategies (modes of operations) as well

⁴ According to Castells (2010, s. 37-8) there is an increasing contradiction between 'space of flows' - global architecture of networks (mega-nodes of wealth, power, innovation, global culture based on the multidimensional infrastructure of connectivity : interacting globally, instantly at any chosen time) is mainly connected to decision implementation, while 'space of places' - local architecture of networks (still connected through the space of flows but rooted in local : face to face relations/contacts/ culture, required for generation of initiatives/business deals, ideas/talents and innovations) is still fundamental for key innovation and decision making process. As such there is growing contradictory relationship between meaning (cultural and social meaning is generally defined in terms of places (space of places) while functionality: power and wealth generally defined in terms of flows (space of flows)

⁵ According to Toffler (1970) the acceleration of change in our times is, itself, an elemental force, that has personal and psychological (individual) as well as sociological, economical and cultural (collective) consequences, thus leading to the 'future shock' shattering stress and disorientation induce upon individuals by subjecting them to too much (too rapid) change in too short a time, or massive adaptational breakdown on the collective side. As such, concept of future shock -and the theory of adaptation that derives from it -strongly suggests balance, not merely between rates of change within different spheres or/and sectors, but rather between the pace of environmental change and the limited pace of human response (potential).

as form descriptions (modes of knowledge) .We could simply say about dissipation of the current cognitive paradigm, as the intellectual categories used to describe and/or understand the reality around us have been coined in different circumstances, and therefore hardly can grasp what's new by referring to the past. As such there is the urgency for a new approach to understand the economy, culture, and society in which we live in, characterized by the almost instantaneous flow and exchange of information, capital, and cultural communication. Trying to meet the challenges in the research field, while describing new shapes of social, economical or cultural changes, we encounter many problems, one of which the most severe being the inadequacy of the language discourse.

As Ray Hammond (2008) said "the biggest barrier in thinking about the future is the language. The imagination use (language) available at a given time and is not able to exceed it" ⁶ well describes our contemporary problems of cognitive paradigm. As a result (searching way out of the problem) we can observe the oxymoron-isation and metaphor-isation of the language discourse, using oxymorons (complex terms based on inner contradiction) to describe contemporary complex processes of contradictory vectors, constantly interacting with each other - using such terms (super-positions) as: glocal (global & local), fragtegration (fragmentation & integration), co-opetition (cooperation & competition). Another way to solve the difficulty in the language discourse is usage of metaphors (created by analogy): multiplying the meanings (based on different context), especially with the urgency to define new (arising): forms, processes, relations (of digital culture or society network), colliding with the limitations of the existing language (most disruptive technologies have often been described using metaphors, which in time become self-referential). Both the oxymoron-isation and metaphor-isation of the language discourse well describe the character of the post-modern processes, generated by complex factors changes overlapping on those of the opposite character and nature: bifurcations of polycentric structure, diverse expressions of a processes of multidimensional, structural changes (outside traditional modes and regulations), powered by new digital networked technologies into almost 'endless expansion and reconfiguration' (radical change/ transformation).

2. THE IMPACT OF ICT UPON „RADICAL TRANSFORMATION” OF CULTURE

This new paradigm shift, described above in terms of information society, applies not only to modern economy (the transition from the industrial economy to a post-industrial one: from the production of physical goods to the economy of services, mainly intangible, towards symbolic goods) ⁷ but also, and above all to culture- with the fundamental change of the role and importance of culture, mainly because the symbolic goods occupy a central place within information civilization, not the peripheral thus far. This fundamental change does not rely

⁶ Ray Hammond, well -renowned British futurologist, the author of many publications about the future (trends, forecasting) i.e. *Digital Business* (1996), *Emergence* (2001), *Cloud* (2006), *the World in 2030* (2008) - specified "the speed of technological development is accelerating exponentially and, for this reason, by the year 2030 it will seem as if a whole century's worth of progress has taken place in the first three decades of the 21st century. By 2030 it will appear as if a mass of dizzying scientific breakthroughs have suddenly been made simultaneously .." (Hammond 2008)

⁷ Within the diverse literature on that subject there are different concepts defining the next developmental stage of the economy, including experience economy, knowledge based economy, or/and creative economy (cultural/creative industries) - all of the above underlying significant shift towards symbolic goods (culture, information, knowledge) both on the supply and the demand side within economy, as well as predominantly intangible format of symbolic goods (not physical but digital/virtual based on the value of content (content industry) making it a high risk production [Kultura a rozwój 2013]

only on the increasing production and consumption of symbolic goods -a significant shift in the direction of symbolic goods, both on the supply (production and ways of production) and the demand side (consumption and the ways of consumption), but rather on the fact, that the symbolic sphere takes over the role within the mechanisms of socio-economic development, so far performed by the material sphere.⁸ As such the basis for symbolic production becomes mainly a value or capital : intellectual, creative, cultural or social - exchange in the process into economic value or capital along with the new modes of production and consumption of (symbolic) goods. Within this almost unlimited information and communication space, and the possibility of a digital circulation of culture, the culture itself becomes not the dialogue, as often described, but rather the polilog: endless process: a plurality of narratives, interpretations, meanings, values, cognitive, cultural or social codes, thus becoming a point of reference in the world of 'liquid modernity', where discontinuity, uncertainty and constant change become a collective experience.

The result is a radical transformation of culture as such: a transition from the "culture of scarcity", limited by the physical (technical) realm of production and distribution, to the "culture of excess" almost unlimited information and communication space, where the problem becomes an excess of co-existing information, knowledge and symbols (the ubiquity of cultural transfer). In this situation, the digital circulation of culture becomes not only self-renewable, but also self-multiplied (intensified multiplication based on interaction, activity and exchange: the more we use, the more we multiply). As a result the post-modern circuit of culture is characterized by immediate availability and the ubiquity of cultural transfer and diversity, along with the richness of content and availability of choice (convergence of culture along with divergence of technology). In this context, the phenomenon of digital culture seems to be a perfect 'experimental range' of accumulation, or anticipation of changes and developments of the post-modern world -space in which collide, overlap and interfere changes: technological, cultural, economic, social and political, both at the level of the global network, as well as on the level of individual participation (with virtual space under constant change: in 'beta phase')

The main impact of ICT technologies upon culture implies the cultural significance of the shift from analogue to digital, but not from a point view of dominance of the process of digitization in any homogenous sense, rather about the uneasy relations 'in between' analogue and digital referring to objects, practices and processes, and our approach or/and understanding this, both from the point view of theory as well as the grounded practices. Of course there is no definitive model of 'digital culture' and as such – its rather the proliferation of emerging tendencies appearing at different moments in different places, taken both from different theoretical and practical perspectives - within the dynamics of seemingly inevitable "convergence culture" (Jenkins 2006) in the XXI century. Stating the obvious- the plurality of possible understandings of 'digital culture'- according to M. Hand (2008) discourses around digital culture have the tendency to cohere rather firmly around three central and interrelated issues: access, interactivity and authenticity, thus forming the main narrative structure

⁸ According to Hausner (2010) within this new paradigm we encounter a fundamental change (shift) within the key development parameters: in place of balance rather the dynamic growth (based on the intellectual, social and creative capital), in place of the market pendulum a spiral movement with the main focus on the institutions at the centre of socio-economic development with the key factor of adaptive efficiency rather than the allocative one. We could say with some simplification, that "the one that's material provides a framework and limitations, while the one that's symbolic becomes a factor stimulus of social and economic change, however, that what's contemporary 'material' and 'symbolic' creates rather inseparable amalgam, there is no one without the other"

First it's about the access - it has become clear that the shift from analogue to digital differentiate the significance of social, political and economic resources, which are differentially located, managed and accessed within so called information society. No wonder, that the theme of (possible) access has become one the main 'key motifs' or/and the decisive points (battles over points of entry), enabling open/closed modes of participation in digital culture (inclusion/exclusion with focus on some specific skills and competence required alongside the implications that they could have for access modes, not to mentioned the identity). With new forms of (digital) circulation emerging, replacing or overriding the old modern (institutional) structures, there is a question of new types of relations between both the institutions (primacy of networks becoming the dominant form of organisation) as well as the individuals (new kind of identity 'in between' real and virtual) as well as the environment in terms of data (information).⁹ In a broader perspective the theme of access is firmly tied to ongoing debates about the relations between technology and democracy, both in the realm of political empowerment and cultural production (public policies voting for/against the public access to digital culture), thus embedded within the larger structure of power and domination in the context of "panoptic globalised post-fordist capitalism" Taylor, Harris 2005).

Secondly it's about the interactivity – it's commonly argued that, what is being accessed and how it is being accessed is qualitatively different from pre-digital resources, mainly because it involves a high degree of interactivity. According to Hand (2008) "such digitally enabled interactivity is thought to produce different relations between producer and consumer, state and citizen, culture and technology, [...] thus transforming the roles of institutions, and enabling a very different kind of culture to emerge". The theme of interactivity as a 'key motif' within information society re-appears within different context, one of which is the notion between human and machine as a part of the ongoing debate between computer and information science and humanities criticism along with digital humanities, the other refers to the interaction between (authentic) culture and digital culture (objects, practices, processes), mediated via new technologies (stratified at general level by the 'interacted' and the 'interacting').¹⁰ This subject is often o interpreted in terms of commodification and/or simulation of culture, in others words 'flattening' forms of cultural production and consumption, thus blurring the differences not only between existing cultural values and meanings (liquidating the hierarchical definitions or values within culture for horizontal ones) or between 'authentic' and 'digital' culture, but also between the cultural production and consumption (emphasis upon speed, circulation and movement over value and meaning, in refers to Castell's opposition between 'Net and the Self' or between function and meaning).

⁹ The subject of access become key motif (dominant) perspective, determining open/closed modes of digital circulation (information/knowledge/culture), accompanied by the 'digital divide' concept (inclusion/exclusion from digital circulation of information/culture) one can find within many publications : Rifkin (2001) The age of the access, Thrift (2005), Poster (2006), Lash (2002), Dyson (1998), Sclove (2005), Servon (2002), Chadwick (2006) Mansell (1999) as well as many international policies/strategies (in broader context : relation between technology and democracy) i.e.: Green paper (1999): eEurope; An Informational Society for all , EU (2000) E-Living : life in a Digital Europe or DCMS (2003) Framework for the Future.

¹⁰ Interactivity, often described in terms of almost instant (here and now), synchronic and interactive (two-way communication flow) is another of the dominant perspectives, visible both within cultural and economical discourses, seen as an 'imperative to (direct) connection and/or interactivity' with the exclusion of the intermediaries 'in between'(flattening, commodification and liquefaction of circulation/relations/culture) more : Lash (2002), Bauman (2000, 2006, 2011), Urry (2000), Beck (1992), Poster (2006), Castells (1996), Beer, Burrows (2007), Lash, Lurry (2007), Robertson (1992)

Thirdly it's about authenticity - rather a big question mark over the authenticity of digital culture in comparison to pre-digital or non-digital culture. This brings the complex questions about recognition, originality, truth, history and knowledge in relation to the character of digital information culture, when positioned against a model of non-digital culture, with often repeated argument of 'trivialization' of culture, mainly because of the increasing quantity of information/culture having a detrimental effect on the quality of cultural content.¹¹ The broader perspective for the authenticity, and general concern about the fate of meaning under technology, has been an ongoing theme, particularly within critical theories of modernity, technology & culture. Of course so, there's nothing new about these concerns when considered in a general sense, but they do take new forms - there are the specific ways in which these are assembled, disassembled, and re-assembled or 'reshuffled' to borrow from Latour (2005).

In other words, 'the key question or the motif' refers to the core of this radical (disruptive) change of the culture (with new culture emerging): how 'the significant shifts from analogue to digital culture' is being made and what are its consequences (not only to culture itself, but also to economy, social relations, political structures of power, as well as the individual identity) remains the primary question. As Castells stated, the price for inclusion/exclusion to the mode of digital 'network society' is the adoption to its (new) digital logic, its language, its points of entry and encoding and decoding (in other words cybernetic order)¹² on which the whole system operates (binary mode of the presence/absence), both the entry point as well as the decoding and encoding modes become the critical cultural battles the outcome which predetermines the direction of symbolically mediated conflicts in this new system.

Referring to Castells we are witnessing the new culture emerging: 'culture of real virtuality', in which the digitized networks of multimodal communication have become so inclusive of most of cultural expressions and personal experiences, that have made virtuality a fundamental dimension of our reality. The direct result of emergence or rather technological convergence (impact) ICT upon culture is so called 'grand fusion' of integrated multimedia system into a symbolic environment: digital interactive, multi-sensoral & multimodal communication, as Castells said is "not the inducement of virtual reality, but (rather) the construction of real virtuality" (ibidem 2010). Of course the medium even as revolutionary as this one, does not determine the content and effect of its messages, so we could ask then, what is the specific of this new system, that generates this kind of phenomena of 'real virtuality', in contrast to previous historical experience. According to Castells it's a "system in which reality itself (material/symbolic existence) is entirely captured, fully immersed in a virtual image setting, in the world of make believe, in which appearances are not just on the screen, but they become the experience" (2010, s. 402). What distinguishes this communication system based on new technologies is the integration of previously distinct

¹¹ The authenticity brings other significant perspective to re-think digital culture (in refers to the relation between authentic non-digital and digital culture) especially within critical cultural (humanities) theories - more : Appadurai (1990, 2003), Featherstone (1990, 1995), Lash (2002, 2007), Postman (1992) Kamińska (2011), Jameson (1991), Heim (1999), Baudrillard (1995, 2005, 2007), Marcuse (1991), Horkheim, Adorno (2010)

¹² According to A. Rothert (2005) 'CyberNetic order' (digital logic) is a contemporary mechanism of control of hybrid units (cyborgs) within the network flow of information and accumulated 'knowledge/power' - referring to the dynamics of complex systems, balancing on the border 'in between' order and chaos, further developing (evolving) on the base of 'the sudden leap' from one state to another (with the emergence of the new order/level)

modes of communication (from typographic to multi-sensoral) ¹³ into a single interactive system, in a form of giant, non -historical hypertext and/or meta language. Castells underlines that “all messages of all kinds become enclosed in the medium, because the medium has become so comprehensive, so diversified, that it absorbs in the same multimedia text the whole of human experience, past, present, and future- as in that unique point of the Universe that Jorge Luis Borges called ‘Aleph’” (2010, s.404).

As a result, the potential integration of all communication modes (text, image, audio) in the system, interacting and available at multiple given points in any chosen time (real or delayed) within the global network, in condition of open access available to all, fundamentally changes the nature of the communication. Stating that, it’s the communication that fundamentally shapes (determines) the culture, mainly because culture itself is mediated and enacted through communication, it appears that the impact of new technologies fundamentally transforms (changes) the culture itself (defined as a historically produced systems of shared values, beliefs and codes or meanings). As Postman writes “we do not see [...] reality [...] as it’s, but as our language are. And our languages are our media. Our media are our metaphors. Our metaphors creates the content of our culture’ (1985, s. 15 or 2002, s. 34). This inclusion of most cultural expressions within the integrated digital communication system has major consequences for both social and cultural forms and processes, weakening considerably the symbolic power of traditional authorities, transmitting through historically encoded: religion, morality, traditional values, culture or political ideology, external to the system. As a result, the localities (identities: individual and collective) become disembodied from their cultural, historical, geographical meaning, and reintegrated into functional networks, thus inducing a space of flows that substitutes for the space of places. Not that they disappear, but they are weakened unless they recode themselves in this new system, where their power become multiplied within digitally transmitted habits of the new culture, thus constituting the binary opposition between function and meaning, or the Net and the Self.

3. SIMULACRA AND SIMULATION : CULTURE ‘IN BETWEEN’ THE REAL AND VIRTUAL

This gives the postmodern culture specific nature, blurring the boundaries between reality and its multiplied reflection, between the original and a copy, the map and the territory in a constant excess of symbolic content - ‘precession or flood of simulacra’ (term used by Baudrillard to determine the culture of moving pictures, ideas and images resulting in constantly changing preferences, values or life styles). ¹⁴ Enhanced multiplication of signs and

¹³ Analyzing the historical impact of technology upon culture (or cultural dimension of media evolution) as the first appeared the oral culture (the original communication based on the spoken word as the only medium of expression, and thus the transfer of knowledge and experience), after a while dominated by writing and written culture (based on the alphabet, thus replacing (separating) oral culture/domination of sound by written culture/ domination of sign) and typographic culture (based on Gutenberg’ printing), replaced then with audiovisual culture emerged along with mass media (radio, film, television). Next radical shift is appearance of new multimedia digital culture, that integrates separated modes of communication within one system [Sitkowska 2012]

¹⁴ Baudrillard’s most recognized book *Simulacra and Simulation* (1981, 1995, 2005) starts from recalling one of Borges’ stories, in which cartographers of the Empire have prepared the map so detailed, that it covered precisely (tightly) the whole territory, and then just falls apart with the Empire.. According to Baudrillard “abstraction today is no longer that of the map, the double, the mirror or the concept.. Simulation is no longer that of a territory, a referential being or a substance. It is the generation by models of a real without origin or reality: a hyper-real. The territory no longer precedes the map, nor survives it. Henceforth, it is the map that precedes the territory - precession of simulacra - it is the map that engenders the territory and if we were to revive the fable today, it would be the territory whose shreds are

images has reached such an intensity, that has created a new quality: hyper-reality, which only further exacerbated this process: simulacra-sation: decay of any semiotic or metamorphic bond between the physical, psychic, and pictorial (blurring of the boundaries between the real, semiotic and symbolic with no real verification possible). Baudrillard suggests, that the cultural reality of simulacrum is accompanied by a process of implosion that what is social into the mass- intensive production of information (signs) deprived of its meaning, accompanied by the 'information ecstasy' caused by the excessive speed and volatility (cascade) of images, signs and symbols, leading to further disorientation, alienation and "radical uncertainty as to what do we want, as to our choice, our own opinion, and our own will." As a result, the post-modern culture has been mostly assimilated by the mass culture, in which the fundamental differences between art and culture, defined by Bourdieu 'difference in symbolic or cultural value or/and capital', are blurred in the context of pervasive visibility of multi-modal and multi-sensoral 'excess culture' as well as the pragmatism of everyday 'media spectacle' (Debord's society of spectacle). This of course equates or flatters the potentials and values within culture (liquidating the hierarchical definitions or values within culture for the benefit of the horizontal ones), that demands even more redefinition and/or further denotation (designation), especially in the context of radical pluralism (polyphony), relativism (ambiguity and contextuality) and fragmentation or chaos: both axiological and epistemological.

This diversity and the complexity of cultural patterns through which we interpret the world, and we are being interpreted by, radically changes our way of thinking/perception of the reality: by defining it in terms of plurality (Leibnitz, Hartman, James), ambiguity (Bauman), polimetic systems (Marquard) space of flows (Castells) and/or moving mediascapes (Appardurai). As a result, post-modern culture is mainly defined by a sense of fragmentation, ambiguity and uncertainty of the world as well as the identity (subjectivity) as a consequence or repercussion of diversification of language (discourse) , characterized by some cracks: i.e. possibility of adaptation of multiple position to be taken by the individual as a result of the discourse. In this 'excess culture' the key reference point becomes the search for identity: individual or collective, ascribed or constructed, thus becoming a fundamental source of social meaning (pre-eminence of the identity as an organizing principle). Of course this is not a new phenomenon, the identity becomes usually the only (key) source of meaning in 'transition times', characterized by arising deconstruction of existing patterns, standards, values or institutions (so called 'structural schizophrenia' with the tension/disruption between the function/use and the meaning/sense, between global (networks and space of flows in timeless time) and local (culture and identities, deeply rooted in history and geography). Raymond Barglow points out to the paradox of the of new technologies (impact), augmenting human powers of organisation and integration on one side, while subverting the western concept of sovereign and independent subject (identity) on the other, with the end result of different perception of the existing reality (as well as virtuality).¹⁵

In this situation, the definition and understanding of the process 'in between' real and virtual, not only as usual from the technological perspective, but also from the cultural,

slowly rotting across the map. It is the real, and not the map, whose vestiges subsist here and there, in the deserts which are no longer those of the Empire, but our own. The desert of the Real itself" (Poster 1988, s.166-184)

¹⁵ According to Barglow "The historical shift from mechanical to information technologies helps to subvert the notions of sovereignty and self-sufficiency that have provided an ideological anchoring for individual identity since Greek philosophers elaborated the concept more than two millennia ago. In short, technology is helping to dismantle the very vision of the world that in the past it fostered." (Castells 2010, s. 22-23)

sociological and philosophical (ontological) perspective, becomes the key element, mainly because both postmodern culture as well as postmodern subject (identity) is heavily immersed within this new forms of virtuality (described in terms of ‘virtual reality’ or ‘real virtuality’). This brings us even to more philosophical and technical question at the same time: what is the meaning (difference between) of real(ity) and virtual(ity) - taking into account that philosophical dissertations are not really the main subject of this article (although having fundamental implications within this subject), we need to stick rather to etymological meaning of the above mentioned concepts. Looking at SPJ (Polish language Dictionary) we can find virtual defined as ‘created in human mind, theoretically possible (to exist)’ while real defined as ‘actually existing’, which then brings the need to further differentiate between virtual and digital - the second meaning of virtual refers to ‘created on the screen in so realistic way, that it seems as real’ while digital usually referred to ‘usage of digital technologies and/or cyber (programming) language (binary code)’, thus opposing the real (physical/material) existence and virtual (digital/immaterial) process of realisation/fulfilment (virtual representation as real simulation).

According to R. Barthes and J. Baudrillard, there is no separation between ‘reality’ and its symbolic representation - cultures are made up of communication processes, based on the production and consumption of signs and symbols- as such all societies humans has existed in and acted through a symbolic environment. Thus reality as experienced, has always been virtual because it has always been perceived through symbols, framing practice with some meaning, that escapes their strict semantic definition. It’s precisely this ability of all forms of language to encode ambiguity and/or paradox, opening up to the diversity of interpretations, that makes cultural expressions distinct from formal/ logical/mathematical reasoning. According to Castells, “it’s through polisemic character of our discourses, that the complexity and even contradictory quality of messages of the human mind manifest themselves- this range of cultural variation of the meaning of messages is what enables us to interact with each other in a multiplicity of dimensions, some explicit, some implicit” (2007, s. 403). As such all realities are communicated through symbols, regardless of the medium, all (symbols) are displaced in relation to their assigned semantic meaning - taking that into consideration, in a sense, all reality is virtually perceived. As a result, when critics of digital media (technology) argue, that this new symbolic environment does not represent ‘reality’, they implicitly refer to the first definition of virtuality: notion of potential (uncoded) real experience, that have not existed. But this primal (historic continuity and/or replication of meaning/culture does not represent contemporary, disrupted, as said before, meaning/culture, which refers to the emergence of (new) forms and/or meanings).

Coming then to the digital (representation of culture/information), we usually refer to technical point view of binary code or bytes (sequences of binary digits of either 0s or 1s). Digitization, then, refers to the process of converting different forms of information/culture, including sounds, images, texts (culture) into this code, in which it can then be stored, delivered, and received in digital form, underlying the digital character of representation of the (chosen) object and/or process, usually connected with its presence in cyberspace (digital network), appearing in ‘real form’ of simulacra(s). Staying with this ‘technical’ definition there are some immediate implications - first is that the information/culture has no particular relationship to the digital system (medium) within which it’s stored or through which it’s circulated- the same sound recording/text/film can be stored via in different formats within different devices (divergence of technology & convergence of information/ culture). Second

implication is that, in theory, all information/culture become 'the same', produced and distributed on a scale and speed unprecedented until now (sent or/and access immediately: here and now), thus fundamentally changing the economic, social & cultural landscape existing so far. Taking into account pervasiveness of digitalisation throughout the whole realm of human activity- the diversification , multimodality and versatility of the new digital system, able to embrace and integrate all forms of expression, as well as the diversity of interests, values, and imaginations, including the expression of social conflicts - becomes the entry point in analyzing the complexity of the new economy, society, and culture in the making. This does not simply imply the technological determinism , meaning that new social forms and culture or processes emerge as a consequence of technological change, nor does not imply that the society script the course of technological change, since many factors intervene within the process of scientific discovery, technological innovation, and social or cultural applications (as such the final outcome depends usually on a complex pattern of interactions). According to Martin Hand (2008), it's precisely because of broader cultural, economical and social perspective, fully immersed within promises and threats (utopian & dystopian discourses), related to the imaginary futures of digital culture, that the digitalisation has become a cultural problematic in the broadest sense. It concerns the technicality of contemporary politics, society and culture (commonly associated with a variety of dramatic: social, economical and cultural changes) - as such "digitality can be thought of as a marker of culture because it encompasses both the artefacts and systems of signification and communication that most clearly demarcate our contemporary way of life from others" (Gere w: Hand 2008, s. 4).

The discourse about the threats and promises of the new culture emerging: culture of real virtuality- depends on our approach to the relation between culture and technology: either as opposing dialectics or inseparable part of (when defining culture as a contingent arrangement of artefacts, knowledge, discourses, and practices within a given site, with "techne representing a complex history of reflexive self-definition" according to Sandywell (1996, s. 33). In post-Foucauldian interpretation, there are only 'cultural technologies' as technologies are inseparable from institutional and organizational cultures, so when we isolate one aspect of technology such as digital code, we then ignore whole other aspects or elements, constituting 'the new culture emerging' (humans part: relation to it or practices of the self orientated around it).¹⁶ Taking into account, that culture and technology can't be conceptualized independently of each other, mainly because according to N. Luhmann, they constitute itself through difference, one need to underline, that they are not symmetric, mainly because culture is reflexive and capable of self-description (self-reflection :reconstruction of its past and anticipation of its future).¹⁷ Looking in historical terms, new technologies

¹⁶ Within this post-Foucauldian interpretation where there are only 'cultural technologies' (as such technology is inextricably cultural and governmental) with similar approach being expressed by Dean (1999) and Barry (2001) - to further analyse the relations between culture and technology one need to try to avoid both pitfalls of the structural approach (of technological and/or economical determinism) as well as the constructive approach (of technological indeterminism of social agency), thus creating distance from this reductive dichotomy, and taking the point view of configurative approach, which don't negate the role of structure or social agencies, but rather underline the asymmetry relations (dynamic tension) 'in between' Morawski (2010)

¹⁷ According to Lhuman's theory, the process of reconciliation of the system's openness and closure is equivalent to the process of constituting its identity through difference (self- creating by continually distinguishing itself from its environment) called autopoiesis and consist of two different, coupled processes : self -observation (process in which the system makes distinction s between itself and its environment) and self -organisation (each new system/ environment distinction is re-entering into the system via self-organisation) . Such is the relation between the culture and technology : constituting itself through difference, but not symmetrical - culture is reflexive and capable of second order observation - observing the difference between the culture and technology (self -description), while technology has no ability to refer to itself since each consecutive observation is simply built into the system through self-organisation. The asymmetry between the

(especially those considered to be technologies of mediation), have generally been articulated within a wholly positive (utopian) framework initially, followed then by more negative (dystopian) discourses, as initial promises fail to materialize.¹⁸ The same trend we can observe with the emergence of digital technologies, initially (internet and the web) being perceived as a technology of ‘world transformation’ and democratization (if regulated or governed in the appropriate manner),¹⁹ in time replaced with more dystopian discourse of total technologization (panoptical systems of control), articulated in completely negative terms.²⁰

The whole on-going debate on relation ‘in between’ the culture and the technology (imaginary of digital culture) tends to organize around three interrelated themes. The first refers to the new forms of circulation or movement of digital information within global network, thus constituting radical shift within social, economical & cultural structure (primacy of flows & networks overriding the modern structures with new modes of times & space, new relations between the individual & environment in terms of data: glocal, and emergence of new identity as well as global (digital) environment with new modes of inclusion/exclusion). Second theme is the position of digitization process within intellectual discourse in humanities, referring to the disruptive changes within the culture itself - one theoretical, referring to the positioning the digital culture in contrast to analogue culture (in terms of the dominant metaphors used to signify such differences as well as the subject of authenticity), another historical, referring to academic thinking about the shift of digital culture in relation to the pace and proliferation of digital technologies (metaphors used to describe relations between humans and the machines). The third refers to the character of digital experimentation (disruptive change) occurring within relatively bounded institutional cultures, from the point view/position of practitioners, taking into account that digital cultures have to be ‘made’ (interactive). In this case institutional cultures are being usually reorganized around (subjectively) contested notions of the digital, thus taking the new forms (of cultural production) : specific way in which they are being assembled, disassembled and re-assembled or ‘reshuffled’, to borrow from Latour (2005),²¹ in another words ‘becoming interactive’.

So we can see that all of the above discourses refers to different perspectives/ approaches of perceiving the radical change (transformation) vs. continuity of existing cultural, economical and social modes, structures or/and institutions - underlying ontological commitments of technology in relation to culture (from essentialism, abstraction, relational materialism to performativity), broader cultural theory orientation along with new media

culture and technology means that only through culture, which is second-order observation, the technology can be conceptualised, the same goes with culture which conceptualised itself only through distinguishing itself from technology [Lhuman 1990, 2002]

¹⁸ This digital dialectics has been thorough described by Heim (1999) and Winston (1998), Hand and Sandywell (2002)

¹⁹ For some digital technologies is conceived as an instrument of ‘broader restructuring’ of modern society, replacing structure with the flow, hierarchical (knowledge) with horizontal (information) : break away from socio-economic structures and cultural practices (into soft capitalism: more constructive approach) tool for social inclusion and empowerment, participatory democracy and interactive citizenship/access to culture : more Dyson (1998), Leadbeater (1999), Rheingold (2000), Rifkin (2001), Sclove (1995) and mobility or/and liquid modernity : Bauman (2000, 2006) Castells (1996)

²⁰ For others digital technologies is more or less instrument of technological determinism or/and hardening (augmenting of dominant structures) of global capitalism, characterised by growing inequality, economic stagnation and increased monopolies of power and domination of culture by technology (panoptical systems of control) ; more Jameson (1990), Postman (1992), Mansell (1999), Dawson and Foster (1998), Taylor and Harris (2005)

²¹ As Latour said “culture does not act surreptitiously behind the actor’s back. The most sublime production is manufactured at specific places and institutions.” (2005, s, 175) - therefore :culture and technologies have to be configured to make them durable, and that this takes work of an agency in relation to culture & technology (as such discourses/ narratives about digitalization being ‘rhetorical vehicles for institutional actors seeking to embrace & implement digitalization for locally specific ends) in other words agents act as an intermediary in between digital technologies (their form, content and effects) and culture (their symbols, signs, images, meaning) and current ideals of institutional reorganization (becoming interactive, on/off)

theory (from modern, postmodern, non-modern “post-human”), sociological theory orientation (from structuralism or technological determinism, constructivism or indeterminism to configurative approach), and last but not least economical theory orientation (from modern industrial economy, post-modern and/or post-industrial economy (capitalism), to digital economy informational society (capitalism), network society, knowledge based economy or cognitive capitalism)

To conclude, to fully understand the impact of new technologies one needs to fully comprehend the complexity of the notion of digital circulation of culture (information) within (digitally) integrated multimodal network of glocal communication system, characterized by almost immediate (instant, interactive and synchronic) access and exchange (flow) not only information, culture, knowledge, but also capital, goods or services within the virtual space ‘through streams and flows nodes’ (space of flows and timeless time). Both the flows and the traffic they carry are largely outside the traditional modes & regulation are merely the diverse expressions of the process of multidimensional: structural (functional), cultural (value/meaning) and institutional ‘radical change’ (transformation) - almost endless expansion of reconfiguration (specific way in which they are being assembled, disassembled and re-assembled) within so called ‘liquid modernity’ of ‘constant change, uncertainty and ambiguity’. This phenomena creates the radically new symbolic environment: culture of ‘virtual reality’ or rather ‘real virtuality’, that not only dominates our experience and our perception of the existing reality, cancelling the notion of (limiting) time and space (for almost infinite space of flows and timeless time: infinite potential towards singularity), but bringing also the increased tension/opposition between ‘space of flows’ global architecture of networks (mega-nodes of wealth, power, innovation, based on the infrastructure of connectivity : interacting globally, instantly at any chosen time) and ‘space of places’ local architecture of networks (still connected through space of flows but deeply rooted in local cultural, historical, geographical meaning), between the function (Net) and the meaning (Self).

As a result, we are made to face the “total or/and radical change’ – thus constant change becoming the new norm with the continuity constantly pulled apart. Thinking in terms of ‘totality of change’ or rather ‘end-ism’ is more characteristic for the late XXth century, to call F. Fukuyama ‘The end of the history’ or I. Wallerstein ‘The end of the world as we know it’. As such XXIst century discourses refer rather to the concept of ‘radical (disruptive) change’ or Schumpeter’s ‘creative destruction’ by defining almost exponential acceleration - acceleration of the acceleration, evoking Toffler Future Shock or M. Castells opus magnum of the network society ‘The information Age’. Describing the change in terms of ‘pure dynamic’- digital space as a complex system: chaotic, non-logarithmic flows, streams, links, instability, discontinuity, turbulence, fragmentation, bifurcations, emergences, fractals, attractors disjunction or deconstructions (‘magnetic storm’: billions of interactions carried out every second must create/evoke chaos or ‘increased complexity’ of the systems, referring to Lhuman). From the point view of complexity theory, impact of digital technologies in its convergent forms is implicated for all the contemporary (disruptive) changes within economic, political or cultural sphere at every level of social formation, with the end result of the emergence of new glocal economy, social relations, information culture or/and political activism system, inseparably entangled within flattened and convergent “technological culture”. The most important from the point view of this article is radical transformation of

culture, directly mediated through (taken over by) digital technologies, or in other words 'technologized' on a scale and with speed, that's wholly unprecedented.

The result is increasing diversity and complexity of cultural patterns, through which we interpret the world and we are being interpreted by, which radically change our way of perceiving the reality, by defining it in terms of plurality, ambiguity, uncertainty and (constant) change in so called space 'in between' different rationalities, modalities of being/perception, communication or experience. Both experience and narratives are testing the paradox, multi-logical and poli-semitic order or constellation, when human meets with a multiplicity of forms and the ambiguity of cultural contexts, often providing conflicting meanings (thus constellating growing need for mediation in order to move 'in between' complex narratives and experiences). This internal architecture of space 'in between' is just another expression of the radical transformation brought by new technologies, giving a whole different psycho-cultural dynamics than binary opposition (moving from one polarity to another by disintegration process or crisis), acting as the psycho-cultural interface or dialogue: mediation and communication between psyche and culture (intra and extra processes of psyche and psycho-cultural translation). The result is the urgent need to integrate the meaning, specifying the context is not enough, cause the dynamics of the post-modern world, constant 'precession or flood of simulacra' blurs the boundaries between reality and its multiplied reflection, the original and a copy (blurring not only the boundaries between the symbolic, semiotic and real but also between cultural production and consumption) with the emphasis on speed, circulation and movement, rather than reflexive distance, meaning or value, thus leaving us with the need to 'feel or sense' rather than 'think' moving contexts and various codes, language games or symbols in order to make the translation or mediation in space 'in between'.

BIOGRAPHY

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References

- [1] Aboujaoude E. (2012) *Wirtualna osobowość naszych czasów*, Wydawnictwo UJ, Kraków
- [2] Appadurai A. (1990) Disjuncture and Difference in the Global Cultural Economy. *Theory, Culture & Society*, 7, 295-310

- [3] Appardurai A. (2003) *Archive and Aspiration* w: Brouwer J. (ed.) *Information is alive*, Rotterdam, V2
- [4] Bard A., Soderqvist J. (2002) *Netocracy -The New Power Elite and life after Capitalism*, Reuters/ Pearsall
- [5] Bard A., Soderqvist J. (2006) *Netokracja. Nowa elita władzy i życie po kapitalizmie*, WAiP, Warszawa
- [6] Barglow R. (1994) *The crisis of the Self in the Age of information: Computers, Dolphis and Dreams*, Routledge, London
- [7] Barry A. (2001) *Political machines*, Athlone, London
- [8] Baudrillard J. (2001) *Porządek symulaków w: Widzieć, myśleć, być. Technologie mediów*, Universitas, Kraków
- [9] Baudrillard J. (2005), *Symulakry i Symulacja*, Wydawnictwo Sic, Warszawa
- [10] Baudrillard J. (1995), *Simulacra and Simulation*, Michigan Publishing, University of Michigan Press
- [11] Baudrillard J. (2006), *Przemoc wirtualnej i zintegrowanej rzeczywistości*, *Sztuka i filozofia* nr. 26
- [12] Baudrillard J. (2007), *Wymiana symboliczna i śmierć*, Sic! , Warszawa
- [13] Bauman Z. (2000) *Liquid Modernity*, Polity Press, Cambridge
- [14] Bauman Z. (2006) *Płynna nowoczesność*, Wydawnictwo Literackie, Kraków
- [15] Bauman Z. (2011) *Kultura płynnej nowoczesności*, Agora, Warszawa
- [16] Bauman Z. (2013) *Kultura jako Praxis*, Wydawnictwo Naukowe PWN, Warszawa.
- [17] Beck U. (1992) *Risk Society. Towards Another Modernity*, Sage, London
- [18] Beer D, Borrows R (2007) *Sociology and, of, and in Web 2.0*, *Sociological Research Online*, Vol. 12(5)
- [19] Bell D. (1973) *The Coming of Post-Industrial Society: A Venture in Social Forecasting*, Basic Books, NY
- [20] Bell D. (1975) *Nadejście społeczeństwa postindustrialnego*; Inst. Bad. Współczesnych Problemów Kapitalizmu
- [21] Burszta W. (1999) *Wirtualizacja kultury i co z tego wynika w: Religia i kultura w globalizującym świecie*, Nomos, Kraków
- [22] Burszta W. (2004) *Różnorodność i tożsamość. Antropologia jako kultura refleksyjności*, Wyd. Poznańskie, Poznań
- [23] Castells M. (2010, 2000) *The information Age: Economy, society and culture*, Blackwell Publishing, Oxford
- [24] Castells M. (2007) *Spółczesność sieci*; PWN, Warszawa
- [25] Castells M. (2008) *Siła tożsamości*; PWN, Warszawa

- [26] Carayannis E.G., Spillan J.E., Ziemnowicz Ch. (2007), *Introduction : why Joseph Schumpeter's creative destruction? Because everything has changed* w: Rediscovering Schumpeter, Creative Destruction Evolving into "mode3", Palgrave MacMillan, Houndmills-Basingstoke
- [27] Chadwick N. (2006) *Internet Politics*, OPU, Oxford
- [28] Dawson M, Foster J.B. (1998) Virtual capitalism. Monopoly Capital. Marketing and the informational Highway, in: McChesney R, Meikesens Wood, Foster J.B. *Capitalism and the Information Age: The Political Economy of Global Communication Revolution*, Monthly Review Press, New York
- [29] Dean M. (1999) *Governmentality. Power and Rule in modern Society*, Sage, London
- [30] Dudek Z. (2005) *Narracje mitologiczne a doświadczenie graniczne*, Albo Albo 1-2 / 2005
- [31] Dyson E. (1998) *Release 2.1. A Design for Living in the Digital Age*, Penguin, London
- [32] Featherstone M. (ed.) 1990) *Global Culture: Nationalism, Globalism and Modernity*, Sage, London
- [33] Featherstone M. (1995). *Undoing Culture*, Sage, London
- [34] Fukuyama F. (1992) *The end of History and the Last Man*, Free Press, New York London Toronto Sydney
- [35] Hammond R (2008) *The World in 2030* <http://www.rayhammond.com/wp-content/uploads/The-World-In-2030.pdf>
- [36] Hand M. (2008) *Making Digital cultures. Access, Interactivity and Authenticity*, Ashgate Publishing, Hampshire
- [37] Hausner J. (2010), *Kultura w cywilizacji informacyjnej*, w: Gwóźdź A., (red.), *Od przemysłów kreatywnych do kreatywnej gospodarki*, NCK, Warszawa
- [38] Heim M. (1999) The Digital Dialectic in : *The Digital Dialectics: new essays on new media*, MIT Press, Cambridge
- [39] Horkheim M. Adorno T. (2010) *Dialektyka oświecenia*, Wydawnictwo KP, Warszawa
- [40] Jameson F. (1991) *Postmodernism, or the Cultural Logic of late Capitalism*, Verso, London
- [41] Jung C. G. (2015) *Życie symboliczne*, Wydawnictwo KR, Warszawa
- [42] Kerckhove D. (2001) *Inteligencja otwarta. Narodziny społeczeństwa sieciowego*, Warszawa
- [43] Koeppe M. J. (1998) *Evidence for Striatum dopamine Release during video game*, Nature 393 (1998) w: Aboujaoude E. (2012)
- [44] Krzysztofek K., *Spółeczeństwo wiedzy w epoce sieci. Dialog. Pismo Przeglądu Społecznego* 1 / 2011
- [45] Kuhn T. S. (1962) *The Structure of Scientific Revolutions*, The Chicago of University Press

- [46] Kultura a rozwój (2013) (red). Hausner J., Karwińska A., Purchla J., NCK, Warszawa
dostęp na: http://nck.pl/media/2014-01-21/podrecznik_copy1.pdf
- [47] Jenkins H., *Kultura konwergencji. Zderzenie starych i nowych mediów*, Warszawa 2006.
- [48] Lacoff G., Johnson M (1980). *Metaphors We Live By*, University of Chicago, Chicago
- [49] Lash S. (2002) *Critique of Information*, Sage, London
- [50] Lash S., Larry C. (2007) *Global Cultural Industry*, Polity, Cambridge
- [51] Latour B. (2005) *Re-assembling the Social. An introduction to Actor-Network Theory*, Oxford University Press
- [52] Leadbeater C. (1999) *Living on Thin Air. The New Economy*, Viking, London
- [53] Lessig Laurence (2009) *Remiks. Aby sztuka I biznes rozkwitały w hybrydowej gospodarce*; WAIP, Warszawa
- [54] Lhuman N. (1990) *Essays on Self-Reference*, Columbia university, New York
- [55] Lhuman N. (2002) *Theories of Distinction. Re-describing the description of Modernity*, Stanford University,
- [56] Lombard D. (2009) *Globalna wioska cyfrowa. Drugie życie sieci*; MT Biznes, Warszawa
- [57] Loska K. (2001) *Dziedzictwo McLuhana-między nowoczesnością a ponowoczesnością*. RABID, Kraków
- [58] Mansell R. (1999) New media competition and Access : The Scarcity- Abundance Dialectics. *New Media and Society*, 1 (2), 155-82
- [59] Marcuse H. (1991), *Człowiek jednowymiarowy: badania nad ideologią rozwiniętego społeczeństwa przemysłowego*, Wydawnictwo Muza, Warszawa
- [60] McLuhan M. (1962), *The Gutenberg Galaxy. The Making of typographic Man*, Univ. of Toronto Press
- [61] McLuhan M. (1964), *Understanding Media. The Extensions of Man*, McGraw Hill, NY (MIT Press 1994)
- [62] McLuhan M. (2004), *Zrozumieć media: przedłużenia człowieka*, WNT, Warszawa.
- [63] McLuhan M., Fiore Q., *The Medium is the Massage*. New York 1967. W: Loska (2001)
- [64] Naisbitt J. (1982) *Megatrends. The New Direction Transforming our Lives*, Warner Books, NY
- [65] Poster M. (1998) *Jean Baudrillard, Selected Writings* ed. Stanford University Press, Stanford;
- [66] Poster M. (2006) *Information please*, Duke University Press
- [67] Postman N. (2002) *Zabawić się na śmierć: dyskurs publiczny w epoce show biznesu*, Muza, Warszawa
- [68] Postman N. (2004) *Technopol: triumf techniki nad kulturą*, Muza, Warszawa

- [69] Postman N. (1985) *Amusing Ourselves to Death: Public Discourse in the Age of Show Business*, Penguin Books, NY
- [70] Postman N. (1992) *Technopoly. The surrender of culture to technology*, Pantheon, New York:
- [71] Rheingold H. (2000) *The Virtual Community*, MIT Press, Cambridge, Massachusetts, London
- [72] Rifkin J. (2001) *The Age of the Access*, Penguin Books, London
- [73] Rifkin J. (2003) *Wiek dostępu. Nowa kultura hiperkapitalizmu, w której płaci się za każdą chwilę życia* Wyd. Dolnośląskie, Wrocław
- [74] Robertson R. (1992) *Globalisation: The Social Theory and Global Culture*, Sage, London
- [75] Rothert A. (2005) *Cybernetyczny porządek polityczny*, Oficyna Wydawnicza ASPRA-JR, Warszawa
- [76] [Sandywell B. (1996) *Reflexivity and the Crisis of Western Reason*, Routledge, London
- [77] Schumpeter J. A. (1939) *Business Cycles*, McGraw-Hill, New York
- [78] Schumpeter, J. A. (2006) [1939]. *Business cycles: a theoretical, historical, and statistical analysis of the capitalist process*. Mansfield Centre, Connecticut: Martino Pub
- [79] Schumpeter J. A. (1942) *Capitalism, Socialism and Democracy*, Harper and Bros, New York
- [80] Schumpeter, J.A. (1997) *The theory of economic development: an inquiry into profits, capital, credit, interest, and the business cycle* [1911, 1934], New Brunswick & London
- [81] Sclove R.E. (1995) *Democracy and Technology*, Guilford Press, New York
- [82] Servon L. (2002) *Bridging the Digital Divide: technology, Community and Public Policy*, Blackwell, Oxford
- [83] Sitkowska K. (2012) *Kulturowy wymiar ewolucji mediów w ujęciu przedstawicieli 'Szkoły Toronto'* w: *Kultura - Media - Teologia* 2012 nr 11
- [84] Stehr N. (1994) *Knowlegde Societies*, Sage Publications, London
- [85] Stein M. (2005) *Transformation. Emergence of the Self*, Texas A&M university Press, College Station
- [86] Tapscott D., Williams A. (2010) *Cyfrowa dorosłość. Jak pokolenie sieci zmienia nasz świat*; WAIP
- [87] Tapscott D. (1998) *Growing up digital. The Rise of the Net Generation*, McGraw- Hill, London
- [88] Taylor P., Harris J. (2005) *Digital Matters*, Routledge, London
- [89] Thirft N. (2005) *Knowing Capitalism*, Sage, London

- [90] Toffler, A. (1970, 1984) *Future Shock*, Bantam Books, New York Toronto London Sydney Auckland
- [91] Toffler, A., Toffler, H. (1980) *The Third Wave*. William Morrow, New York
- [92] Toffler, A., H. Toffler (1996) *Budowa nowej cywilizacji. Polityka trzeciej fali*, Zysk i S-ka, Warszawa
- [93] Toffler A. (2007), *Szok przyszłości*, Wydawnictwo Kurpisz, Przechmirowo
- [94] Urry J. (2000) *Sociology Beyond Societies*, Routledge, London
- [95] Urry J. (2009) *Socjologia mobilności*, Wydawnictwo Naukowe PWN, Warszawa
- [96] Wallerstein E. (1999) *The end of the world as we know it*, University of Minnesota Press, Minneapolis
- [97] Wierzbicki A. P. (2000) *Megatrends of Information Society and the Emergence of Knowledge Science* in: Proceedings of the Int. Conference on Virtual Environments for Advanced Modelling, JAIST, Tatsumokuchi
- [98] Wierzbicki A.P. (2015) *Techne: Element of Recent History of Information Technologies with epistemological conclusions*, Springer Int. Publishing, Switzerland
- [99] Winston B. (1998) *Media Technology and Society*, Routledge, London
- [100] Zacher L (2013) *Wirtualizacja – problemy, wyzwania, skutki*, Poltext, Warszawa
- [101] Žižek S. (2011) *Lacrimae Rerum*, Wydawnictwo KP, Warszawa

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