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Media convergence concepts

ABSTRACT
Media researchers have been interested in the problem of media convergence since the 1980s. But the huge wave of publications, conferences and discussions about media convergence began just after the publication of Henry Jenkins' book *Convergence Culture. Where old and new media collide.* It brought questions about the realm of the concept, typologies and previous research. The aim of this text is to answer the questions: What is media convergence and what types of convergence could we specify in media studies? Before the presentation of the various contexts and dimensions of media convergence, some sources and the history of the concept will be presented as well as outcomes of recent media convergence research.

„An important aspect of digitization is that the boundaries between different media have been brought into question and a presupposition has developer that we are in an era of media convergence"[1]. The term convergence derives from Latin word convergere[2] (to gather) and means coming together[3]. The term was primarily used in 1713 by William Derham in his work *Physico-Theology: Or, a Demonstration of the Being and Attributes of God, From His Works of Creation*[4]. Derham, a researcher of, among others, the speed of sound, used then the term "convergence and divergence of the rays"[5]. As Tanja Storsul and Dagny Stuedahl note, the beginnings of the vision of convergence should be also recognized in popular science

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[1] T. Storsul, A. Fagerjord, *Digitization and Media Convergence*, [in:] *The International Encyclopedia of Communication*, ed. W. Donsbach, www.communicationencyclopedia.com/subscriber/tocnode?id= g9781405131995_chunk_g97814051319959_ss39-1 [accessed: 25.06.2008].
[2] Latin vergere means to move or incline in a certain direction; W. Kopaliński, *Konwergencja, konwergencyjne myślenie*, [in:] *Słownik wyrazów obcych i zwrotów obcojęzycznych*, Warszawa 1971, p. 406. The prefix co- means: with, together, mutual, etc., ibidem, *KO-*, p. 382.
[3] Idem, *Konwergencja…*
[4] W. Derham, *Physico-Theology: Or, a Demonstration of the Being and Attributes of God, From His Works of Creation*, London 1713.
[5] *Convergence*, [in:] *Oxford English Dictionary*, ed. J.A. Simpson, E.S.C. Weiner, Oxford 1989.

literature[6]: in a novel of Edward Bellamy *Looking backward* (Polish title *W roku 2000*)[7] from 1888, where the city of the year 2000 is described, a vision of music telephone appears, and in the novella of Herbert G. Wells *The Time Machine* (Polish title *Wehikuł czasu*)[8] from 1895 in which the author describes a vehicle that allows for time convergence: past, present, and future.

However, it was the fields of exact and natural sciences where scientific conception of convergence has been developed. The term is used in biology where it stands for "the development of similar structures in unrelated organisms as a result of lining in similar ecological conditions; […] distinct groups of animals have independently adapted in a similar way to life"[9]. In meteorology, convergence means „lines of air currents approaching towards each other in a certain field or along a certain line"[10]. In geology it means assimilation of stones of different origin[11]. In mathematics, convergence occurs when "function or a sequence approach certain limit value"; it is also "geometrical entity that defines mutual location of two straight lines or planes that intersect each other"[12]. The humanities and the social sciences have also converted the term for its needs. In sociology has been developed symbolic convergence theory that concerns the occurrence of group awareness thanks to common interpretation of events that allow meeting psychological or rhetorical group need[13].

Anthropologists take notice to the similarity of cultures that have not been in direct contact with each other[14]. In psychology is noticed a phenomenon determined as 'the coming together on judgments individuals make, particularly when there is a doubt about what is the correct judgment"[15]. In political science on the other hand, in the '50s especially, convergence theories were developed: assimilation of capitalistic and socialist societies, mainly thanks to the bureaucracy, planning, and administrative control[16]. In the economists' opinion, convergence is the approach of countries in terms of productivity (income per capita)[17]. In

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[6] T. Storsul, D. Stuedahl, *Introduction. Ambivalence Towards Convergence*, [in:] *Ambivalence Towards Convergence. Digitalization and Media Change*, ed. T. Storsul, D. Stuedahl, Göteborg 2007, p. 10.

[7] E. Bellamy, *W roku 2000*, Warszawa 1890.

[8] H.G. Wells, *Wehikuł czasu*, Wrocław 1985.

[9] *Convergence Evolution (Convergence)*, [in:] R. Hine, *The Facts on File. Dictionary of Biology*, 4th ed., New York 2005, p. 89.

[10] *Słownik encyklopedyczny. Geografia*, Wrocław 1997, p. 261.

[11] M. Chhatwal, *Dictionary of Geology*, New Delhi 2004, p. 63.

[12] *Leksykon naukowo-techniczny z suplementem*, Warszawa 1998, p. 1145.

[13] E.G. Bormann, *Making Communication and Group Decision Making*, [in:] *Communication and Group Decision*, R.Y. Hirokawa, M. Scott Pool, Thousand Oaks 1996, p. 81, 88.

[14] *Convergence*, [in:] *Advenced Learners' Dictionary of Sociology*, New Delhi 2001, p. 58.

[15] M. Basavanna, *Dictionary of Psychology*, New Delhi 2007, p. 84.

[16] K. Satyendra, *Encyclopaedic Dictionary of Political Sciences*, New Delhi 2003, p. 176.

[17] G. Bannock, R.E. Baxter, E. Davis, *Dictionary of Economics*, Princeton 2003, p. 75.

management sciences there is said about strategic convergence in case when companies become similar to each other by imitating leader's practice[18]. The term is easily detected in many other sciences – social, natural, or exact ones.

Media studies use of the term convergence

The roots of media scholar use of the term should be sought in the development of computers and the web in the '60s and '70s. In the mid '70s there was a possibility to store information in a digital way and to communicate it throughout the web; technology of information and entertainment access used by the consumers could have been transformed[19].

There were two media scholars that contributed to propagation of the term and the problems connected with the issue of convergence. It was Ithiel de Sola Pool[20] and Nicholas Negroponte[21]. I. de Sola Pool defined convergence of modes as "blurring the lines between media, even between point-to-point communications, such as the post, telephone, and telegraph, and mass communications, such as the press, radio and television. A single physical means – be it wires, cables or airwaves – may carry services that in the past were provided in separate ways. Conversely, a service that was provided in the past by any one medium – be it broadcasting, the press or telephony – can now be provided in several different physical ways. So the one-to-one relationship that used to exist between a medium and its use is eroding"[22].

In the '80s and '90s of the 20th century convergence became a subject of interest of many scientists who noted "the integration of older media technologies into new informational/communicational forms and contents (through re-mediation or absorption) andpredicted the emergence of new (converged) media technologies and contents as part of the same process"[23]. A definition of remediation comes from work of Jay David Bolter and Richard Grusin and its relation with convergence was strong. The authors wrote:

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[18] *Leksykon zarządzania*, Warszawa 2004, p. 225.

[19] R. Gordon, *Convergence definied*, [in:] *Digital Journalism: Emerging Media and the Changing Horizons of Journalism*, ed. K. Kawamoto, R. Gordon, Lanham 2003, www.ojr.org/ojr/business/1068686368.php, [accessed: 18.07.2008].

[20] Alexander Halavais indicates that media convergence was primarily described by Ithiel de Sola Pool in *Technologies of Freedom*, Cambridge, MA 1983, A. Halavais, *Convergence*, [in:] *Encyclopedia of New Media: An Essential Reference to Communication and Technology*, ed. S. Jones, http://sageereference.com/newmedia/Article_n50.html [accessed: 6.04.2008].

[21] Stuart Brand indicates that N. Negroponte used that term for the first time in 1973. S. Brand, *The Media Lab: Inventing the Future at MIT*, New York 1988.

[22] I. de Sola Pool, *Technologies…*, s. 23, [after:] E. Appelgren, *Media Convergence and Digital News Services* (doctoral dissertation), www.csc.kth.se/utbildning/forskar/avhandlingar/doktor/2007/AppelgrenEster.pdf, p. 7 [accessed: 10.11.2009].

[23] C. Bassett, *New Maps for Old?: The Cultural Stakes of '2.0'*, „Fibreculture Journal" 2008, iss. 13, http://journal.fibreculture.org/issue13/issue13_bassett.html [accessed: 14.04.2009].

„Convergence is the mutual remediation of at least three important technologies – telephone, television, and computer – each of which is a hybrid of technical, social, and economic practice and each of which offers its own path to immediacy"[24].

Discussion over convergence and the research of its phenomenon helps to realize its complexity that is defined as a stage of media development[25], a phenomenon that makes up the process of mediamorphosis[26], a complex of phenomena ("multi-faceted assimilation of media and communicative devices that start to perform similar functions although primarily not related")[27], ability ("to permeate the media along with the development of communicative techniques")[28], linking ("traditional features of such devices as computer, telephone, fax and the Internet with its information-entertainment character")[29], permeating and linking ("particular features and characteristic elements for traditional mass media and its mutual interaction")[30], process ("The culture of convergence is a phenomenon or a process in which we can observe changing and reciprocally permeating relations between media, cultural and commercial contents, as well as their creators and receivers")[31], and idea ("Digital convergence is phenomenon, an idea of a design thanks to which devices that have existed for years are provided with new functions that take on a new light for human")[32]. Ultimately, it should be assumed that convergence is a principle of media environment functioning based on assimilation or approach of such media units as devices, networks, markets and content[33], and

[24] J.D. Bolter, R. Grusin, *Remediation. Understanding New Media*, Cambridge, MA 2000, p. 224.

[25] It is the penultimate stage after birth, penetration, growth, maturity, self-defence and adaptation; and before obsolescence. S. Lehman-Wilzig, N. Cohen-Avigdor, *The Natural Life Cycle of New Media Evolution: Inter-Media Struggle for Survival in the Internet Age*, „New Media & Society" Vol. 6 (2004), p. 707. In opinion of Tomasz Goban-Klas radio is currently in the phase of convergence, T. Goban-Klas, *Radiomorfoza w kontekście ewolucji, adaptacji I konwergencji mediów*, "Studia Medioznawcze" 2006, No. 3, p. 18.

[26] Next to „co-evolution and co-existence" and „complexity"; „convergence – new forms of communication are the result of permeating of currently available technologies on certain common platform, which in the context of the end of the 20th century means "digital technology", T. Kowalski, *Mediamorfoza – rzecz o przyszłości mediów i mediach przyszłości w aspekcie konwergencji*, "Studia Medioznawcze" 2001, No. 1, p. 25–26.

[27] M. Drożdż, *Różne wymiary konwergencji technologicznej*, "Tarnowskie Studia Teologiczne" T. 36 (2007), p. 59; idem, *Konwergencja mediów – tendencje, modele i konsekwencje*, "Studia Medioznawcze" 2008, No. 3, p. 85.

[28] S. Miszczak, A. Miszczak, *Książka konwergencyjna*, "Biuletyn EBIB" 2008, No. 1, www.ebib.info/2007/92/a.php?miszczak_miszczak [accessed:1.03.2009].

[29] G. Gmiterek, *Prasa w dobie konwergencji i nowych mediów*, "Biuletyn EBIB" 2008, No. 1, www.ebib.info/2008/92/a.php?gmiterek [accessed:1.03.2009].

[30] Ibidem.

[31] B. Jaskowska, *O kulturze konwergencji słów kilka*, "Biuletyn EBIB" 2008, No. 1, www.ebib.info/2008/92/a.php?jaskowska [accessed:1.03.2009].

[32] T. Sztyński, *Konwergencja mediów trafia „pod strzechy"*, "E-Fakty", www.efakty.pl/index.php?option =com_content&task=view&id=4807&Itemid=73 [accessed: 1.05.2009].

[33] E. Appelgren defines media convergence as a process of assimilation and approaching of media elements to each other. E. Applegren, *Media Convergence...*, p. 7.

that its exemplification is determined by communication strategies designed by the senders and receivers. Convergence has its economic, organizational, technological, and socio-cultural dimensions, including strictly media one (in the scope of content). The analysis of specific cases shows other aspects of convergence that form resultant of merging of many elements belonging to different sequences that are impossible to separate in every artificial way. Convergence study is the study of media environment where new rules are in force. In media literature the term convergence is used to present and explain many different phenomena. Also a number of convergence typologies appear. „Convergence is an ambiguous concept. It is used differently, both with regard to what is converging (networks, terminals, social practices etc), and with what happens when something converges (merging, new complexities etc)"[34].

Ester Applegren suggested three models of convergence:

- The approach of two separate elements towards common objective,

- The approach of three areas towards common intersection and

− The approach of one element towards the area which thanks to that approach does not change[35].

As an examples of indicated realizations we can distinguish i.e. providing mobile phones and television sets with the Internet, common entertainment projects on the border of media market, telecommunication and IT market, and the entering of mobile network into the process of TV receipt (i.e. TV series).

Along with the research' intensification over this phenomena, methodological aspects or research perspectives have been distinguished, based on Alec Charles Ambivalence towards convergence…, are determined as technological, institutional and narratological attitude[36]. Typology presented below is a result of the synthesis of concepts and typologies formed until now.

The basics of convergence. From multi- to hypermedia

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[34] T. Storsul, D. Stuedahl, *Introduction...,* p. 13.

[35] E. Appelgren, *Media Convergence...,* p. 42.

[36] A. Charles, *Book Review. Tanja Storsul, Dagny Stuedhal (eds.), Ambivalence Towards Convergence. Digitalization and Media Change, Göteborg: Nordicom 2007, ISBN 978-91-89471-50-4*, "Convergence: The International Journal of Research into New Media Technologies" Vol. 15 (2009), No. 1, p. 124, http://con.sagepub.com/cgi/reprint/15/1/123 [accessed: 16.04.2009].

Multimedia development underlies convergence. „Multimedia refers to the integration of multiple media forms, including text, music, spoken words, video, illustrated graphics, and still photographs, to communicate unified messages that, ideally at least, are also interactive […]. When presented using hypertext links, becomes 'hypermedia'"[37].

Along with the development of computers the term multimedia became a synonym of its digital counterpart. Ted Nelson (hypertext inventor), Douglas Engelbart (the author of NLS – oNLine System), Alan Key (inventor of the prototype of personal computer and GUI – Graphical User Interface), and Tim Burners-Lee (WWW originator, the author of the first search engine, HTTP and HTML languages)[38] are said to be multimedia pioneers. On the other hand, while searching foundations of hypermedia development, Vennevar Bush (the author of Memex system – memory extender)[39] and Ted Nelson (the inventor of Xanadu, a hypertextual prototype of WWW)[40], are the ones to be indicated. Internet-based multimedia are available through WWW sites thanks to such devices as Mosaic search engine, Flash and RealAudio software which are the basis of so-called streaming media. Along with the global network, multimedia underwent further changes.

There is dynamic development of multimedia applications and software that entails unusual diversity of means of expressions. „We can't possible predict the variety of its various manifestations. Perhaps multimedia's most consistent quality will be its relentlessly changing nature"[41]. „In the future hypermedia will not be confined to the computer screen; application embedded in our ordinary environment, in clothes as well as furniture, are already being developer"[42].

Types of convergence

Technological convergence

Widely understood technological convergence results from transformation from 'atoms' to bits[43], digitalization of the whole media content[44]. It occurs on the plane of infrastructure and transporting that corresponds to convergence of devices and network convergence.

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[37] K. Featherly, *Multimedia* [entry], [in:] *Encyclopedia of New Media…*
[38] Ibidem.
[39] Y. Waern, *Hypermedia*, [in:] *Encyclopedia of New Media…*
[40] K. Featherly, *Hypertext*, [in:] ibidem.
[41] *Multimedia: from Wagner to Virtual Reality*, ed. R. Packer, K. Jordan, New York 2001, [from:] K. Featherly, *Multimedia…*
[42] Y. Waern, *Hypermedia.*
[43] The term evoked [from:] N. Negroponte, *Being Digital*, New York 1995.

■ Convergence of devices

Convergence of devices consists on "bringing together multiple media functions within the same device"[45] that makes them become similar. Most of all, it follows the development of the Internet, e-business, multimedia and IT applications, the growth of the computing power and its prices decrease[46]. It is also specified as terminal convergence[47] considering the role of the terminal: radio set, television set, telephone, computer. According to the devices integration, new definitions that characterizes its nature came up, i.e. mixed-media ("any medium in which two or more forms of communication are integrated")[48]. A mobile phone with radio and MP3 player is an example of a terminal that converges.

Around the convergence of devices phenomenon there is a myth called "black box" myth. It is based on the assumption that sooner or later one "box" will be created, where all the media will be integrated; it is also determined as übebox[49], telecomputer or teleputer[50]: "[…] computer becomes a kind of universal medium or meta-medium, which can simulate other media, technologies and systems of expression"[51]. Computer is most often accepted as universal medium or meta medium. The conceptions on what can serve as a "black box" were changing. At first, a TV set was considered to be the one, especially with set-top box[52], then personal computer, Internet accessories[53], smaller and smaller computers resembling "smart terminals", with game consoles[54] at the end. According to the development of mobile network

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[44] H. Jenkins, *Convergence? I Diverge*, "Technology Review" June 2001, www.technologyreview.com/advertisement.aspx?ad=biztech&id=40&redirect=%2FBiztech%2F12434%2F%3Fa%3Df [accessed: 18.07.2008].

[45] Idem, *Convergence Culture: Where Old and New Media Collide*, New York–London 2006, p. 3.

[46] F. Kamiński, *Konwergencja w obszarze komunikacji elektronicznej*, "Przegląd Telekomunikacyjny" 2000, No. 1, p. 23.

[47] T. Białobłocki, J. Moroz, *Nowoczesne techniki informacji i komunikacji – ich rozwój i zastosowanie*, [in:] *Społeczeństwo informacyjne. Istota, rozwój, wyzwania*, auth. T. Białobłocki and oth., Warszawa 2006, p. 132.

[48] R. Fidler, *Mediamorphosis: Understanding New Media*, Thousand Oaks 1997, p. 25.

[49] T. Storsul, A. Fagerjord, *Digitization…*

[50] G. Gilder, *Life After Television: The Coming Transformation of Media and American Life*, New York 1994, p. 45, [from:] ibidem.

[51] N.O. Finnemann, *Computeren: Et mediefor en ny skriftteknologisk revolution*, [in:] *Multimedier, Hypermedier, Interaktive Medier*, ed. J. Jensen, Aalborg 1998, [from:] J.F. Jensen, *Communication Research after the Mediasaurus? Digital Convergence, Digital Divergence*, "Nordicom Review" 19 (1998), No. 1, p. 41, www.nordicom.gu.se/common/publ_pdf/38_plenum2%20jensen.pdf [accessed: 14.04.2009].

[52] Device enabling tv programme reception, playing and recording sound and image, searching the www sites, computer games etc.

[53] There is a belief about this conception that users would have the access to „everything" through the Internet, and „everything" can be stored there.

[54] A. Halavais, *Convergence...*

a term polymedia has been created for what mobile communication devices are nowadays[55]. Jo Groebel says multimedia is the idea of the '90s of one screen combining many contents. "Now we have an emerging inteligent mobile centre"[56].

Next to Gilder and Groebel, Manuel Castells was also close to approving the forming of multimedia system growing of the aim to create a "box" that would materialize a possibility to connect house with a new system of communication[57]. At first he considered the process to be slower than predicted and internally contradictory[58], however, it was ultimately indicated that existing technical and legal causes and the specificity of different contexts of communicational practices lead to the divergence of the platform supplying converged contents[59]. As Michael Noll notices, similarity of technologies does not have to mean creating one medium mainly because of the fact that they fulfill different objectives[60]. Latter research on convergence point to inability of "black box" realization – „Rather, thanks to the proliferation of channels and the increasingly ubiquitous nature of computing and communications, we are entering an era where media will be everywhere, and we will use all kinds of media in relation to one another"[61]. Undoubtedly, such solutions as PAN (Personal Area Networks)[62], Bluetooth[63], or "transmitting information through the human body"[64] will contribute to this situation. Simultaneously, Henry Jenkins emphasizes: "History teaches us that old media never die. [...] Genres and delivery technologies come and go, but media persist as layers within an ever more complicated information and entertainment system"[65].

■ Convergence of solutions

Convergence of solutions consists in standardization of the network access procedures, processes, services, and applications[66]. Along with the process of digitalization and the convergence of devices and networks there appears service convergence and so-called multimedia services[67]. Service convergence includes both transmission convergence "which

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[55] J. Groebel, *Mobile Mass Media: a New Age for Consumers, Business and Society*, [in:] J. Groebel, E.M. Noam, V. Feldmann, *Mobile Media: Content and Services for Wireless Communications*, Mahwah 2006, p. 242.
[56] Ibidem.
[57] M. Castells, *The Rise of the Network Society*, Malden 2010, p. 396.
[58] Ibidem.
[59] Idem, *Media Convergence*, [in:] *Manuel Castells World of Communication* [blog], www.mediacoolhunting.com/archives/media-convergence#more-306 [accessed: 18.07.2008].
[60] A.M. Noll, *The Myth of Convergence*, "The International Journal of Media Management" Vol. 5 (2002), No. 1, [from:] A. Fagerjord, T. Storsul, *Questioning Convergence*, [in:] *Ambivalence…*, p. 22.
[61] H. Jenkins, *Convergence? I Diverge…*
[62] Wireless networks used i.e. to data transferring between mobile and stationary devices.
[63] Technology of wireless communication between electronic devices with the use of radio waves.
[64] A. Halavais, *Convergence...*
[65] H. Jenkins, *Convergence? I Diverge…*
[66] T. Białobłocki, J. Moroz, *Nowoczesne...*, p. 132.
[67] T. Storsul, A. Fagerjord, *Digitization…*

means, in other words, providing similar services with the use of different implementation tools belonging to various communication sections"[68] and diverse solutions resulting from i.e. convergence of devices. In opinion of Agnieszka Budziewicz-Gruźlecka it is displayed in the migration of services, common services offering and the appearance of services that support network substitution i.e. making it similar[69]. Convergence of services has economic and cultural dimension. On the one hand, it is linked with extension of the offer by the provider of a service (television station, online service, telecom). On the other hand, it changes communication patterns and determines communication roles. Examples of converged services are:

− TriPlay services (television, telephone, Internet),

− Multipackage access services (telephone, Internet, interactive television, VOD) via

stationary telephony with the use of modem,

− Internet and television access services with the use of mobile phone (mobile

television, music downloading, online entertainment etc.),

− Interactive services on the Internet (interactive television IPTV, VOD) offered via

telecomputer connection by traditional providers[70].

Broadly speaking: telecommunication, data communications and mass communications „are following together in a process called convergence"[71]. It also contains integration of stationary telephony and mobile network. Of course, the Internet is medium that plays most important role nowadays in the processes of technological convergence. The Web converges various forms of media and network communication[72]. Networking constitutes one of the most essential features of convergent strategies.

■ Network convergence

„There is no difference between sound, text, and images in Digital networks, as they are all transmitted as bits and bytes, in contrast to analog signals"[73]. There takes place integration of network and communication between networks that were previously destined for other

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[68] I. Fiut, M. Matuzik, *Hipertekst, konwergencja i interaktywność. Refleksja filozoficzno-metodologiczna nad skutkami konwergencji mediów tradycyjnych do sieci i vice versa*, [in:] *Środki masowego komunikowania a społeczeństwo*, ed. M. Gierula, Katowice 2006, p. 85.
[69] Budziewicz-Guźlecka, *Konwergencja jako podstawowy warunek pełnej koncepcji społeczeństwa informacyjnego*, [in:] *Współczesne aspekty informacji*, ed. J. Goliński, K. Krauze, Warszawa 2008, p. 13.
[70] Specification based on: B. Jaskowska, *O kulturze...*
[71] J. van Dijk, *The Network Society: Social Aspects of New Media*, London 1999, p. 42.
[72] R. Burnett, P. D. Marshall, *Web Theory. An Introduction*, London– New York 2003, p. 45.
[73] T. Storsul, A. Fagerjord, *Digitization....*

goals[74]. Jan van Dijk distinguishes broadcasting and networking convergence that he refers to as „second communications revolution"[75]. The old media are redetermined by interactivity and digitalization. The second one, according to Terry Flew, makes the platform and its media inter-operable, networkable and enables to separate channel from the content. As an effect, there are new digital technologies and remediated digitalized analogue technologies[76].

Network convergence is also the integration of cable network, the Internet, intranet, telephone and mobile network[77]. As Andrzej Małachowski says: "Spectacular symptom of convergence of telecommunication and telecomputer networks are so-called intelligent networks"[78]. As Tanja Storsul and Andres Fagerjord note, despite of network digitalization it still performs specialized functions[79]. It is then possible to claim that, as in case of devices, a vision of one network to perform all the functions remains as a variant of the "black box" myth. However, there are opinions that network convergence will lead to the foundation of uniform infrastructure that is based on IP (Internet Protocol)[80].

Economic convergence

■ Market convergence and regulatory convergence

The term market convergence means merging of telecommunication, information technology and media markets. It is a two-step process. In the first phase, telecommunication and IT market merge with each other, and both permeate with media market in the second phase[81]. Some people add also the fourth market – entertainment market – that integrates with the

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[74] Ibidem. Ross Dawson describes this type of convergence as convergence of communication, R. Dawson, *Living Networks*, Upper Saddle River 2003, p. 126, chapters available at: www.livingnetworksbook.com/ downloads.php [accessed: 1.03.2009].

[75] J. van Dijk, *The Network…*, p. 3 and foll.

[76] T. Flew, *New Media: An Introduction*, Melbourne 2002, [from:] D. Holmes, *Communication Theory: Media, Technology and Society*, London 2005, p. 65. Mutual relations between old and new media are described by Sebastian Kotuła: "New media emerges thanks to the old one, then the old media changes under the influence of the new one (the new medium emits impulses that require changes), then the feedback takes place and the old medium uses the new one's acquisitions, and in this new media a place for the old one appears (media start to assimilate), resulting in developing common denominator and concreating medium hybrid", S.D. Kotuła, *Konwergencja mediów, książki i Internetu*, [in:] *Nowe media a media tradycyjne; prasa, reklama, Internet*, ed. M. Jeziński, Toruń 2009, p. 254.

[77] T. Białobłocki, J. Moroz, *Nowoczesne...*, p. 132.

[78] More on inteligent networks as technical infrastructure and platform processing see: A. Małachowski, *Konwergencja i hybrydyzacja mediów komunikacji*, [in:] *Współczesne aspekty…*, p. 223.

[79] T. Storsul, A. Fagerjord, *Digitization…*

[80] T. Białobłocki, J. Moroz, *Nowoczesne...*, s. 133.

[81] A. Zerdick, A. Pickot, K. Schrape, *E-conomics. The Economy of E-commerce and the Internet*, Berlin 2000, [from:] A. Picot, *Telecommunications and Convergence. The situation in Germany*, [in:] *Convergence of Telecommunications and Broadcasting in Japan, United Kingdom and Germany: Technological Change, Public Policy and Market Structure*, ed. K. Nakamura, K. Agata, Richmond 2001, p. 18.

three mentioned above[82]. This type is sometimes defined as industry convergence[83]. „Business now exists within a single convergent space, and the very concept of an 'industry' is losing meaning"[84]: borders between sectors based on information and other sectors are blurring because of emerging one „convergent space"[85]. The economists differentiate horizontal market convergence (merging of enterprises within one area of value chain i.e. infrastructure supplier) and vertical (merging of enterprises of different areas i.e. infrastructure supplier and operator)[86].

Progressive convergence requires the appeal of legal regulations. We can perceive "legal convergence"[87] or its initiation[88]. Regulations concerning communication and audiovisuality are subjected to integration in many countries[89]. Still in some regions, there are separate legal documents that govern services and media content[90] (i.e. telecommunications law, press law or intellectual property rights). It mainly results from the diversity of the social use of particular media, different cultural interactions or performed functions[91]. In the field of Internet communication we observe the trend of "mediatisation" of the regulations concerning content[92]. Combination of particular sectors requires also simultaneous compliance of cartel law, protection of competition, and consumer protection. Regulatory convergence is also merging of regulatory authorities whose number, as Karol Jakubowicz notes, rises, not declines[93]. In Europe, one of the fundamental documents indicating regulatory problems of media convergence, telecommunication and information technologies is The Green Book[94] that initiates striving for electronic communication settlement ensuring competition, use of the

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[82] J. Eberspächer, *The Evolution of Broadcasting in Germany. Digitalisation, Convergence, Competition*, [in:] *Convergence of Telecommunications…*, p. 31.
[83] R. Dawson, *Living…*, p. 126.
[84] Ibidem, p. 127.
[85] Ibidem, p. 128.
[86] A. Budziewicz-Guźlecka, *Konwergencja…*, p. 13.
[87] J. Beliczyński, *Strategie działania organizacji radia i telewizji w warunkach konwergencji medialnej*, „Zeszyty Naukowe Uniwersytetu Ekonomicznego w Krakowie" No. 782 (2008), p. 69.
[88] About numerous problems, including regulative dilemmas and regulative models, including the transformation from „vertical" to „horizontal" (independent from the mean of content transfer) regulative order see: K. Jakubowicz, *Mediatyzacja Internetu i internetyzacja mediów: wybrane aspekty regulacyjne*, „Transformacje" 2007 No. 1/4/2008, No. 1/2.
[89] Ibidem, p. 332.
[90] T. Storsul, A. Fagerjord, *Digitization…*
[91] Ibidem.
[92] K. Jakubowicz, *Mediatyzacja…*, p. 333.
[93] Ibidem, p. 332.
[94] *Green Paper on convergence of the Telecommunications, Media and Information Technology sectors, and the Implications for Regulation – Towards an Information Society Approach*, European Commission, COM (97)623, 3.12.1997.

competitors' products in order to enrich product and services offer and to protect the fundamentals of information society[95].

■ Corporate convergence

Corporate convergence consists on convergence of interests and the integration of companies in media, computer, telecommunication and entertainment market. Within corporate convergence we can distinguish: proprietary convergence and organizational convergence. The first type results from joint ventures, consortia creation and strategic alliances[96]. Sometimes we say "industrial convergence"[97] when companies of different trades merge with each other. Thanks to achieved effect of synergy[98], an enterprise benefits in economic and marketing way. It can use cross-promotion and the content's exchange. Companies can increase its competitiveness and intensify cooperation thanks to the licenses that become common at the moment of takeover. For the last few years dynamics of corporations' cooperation has risen, what is illustrated by media industry networks[99]. Proprietary convergence is a result of transactions that become more and more frequent and amount to higher sums[100].

Proprietary convergence can involve organizational competition, although it is based on collaboration and takes place also without big fusion. In this case, merging of originally independent companies, as well as practices take place. It concerns the process of creating (of productive customs) and the process' managing (i.e. tasks' delegation)[101]. Gordon introduces the term of tactical convergence that is based on mentioned cross-promotion, content's exchange and the increase of profitability. Tactical convergence may be used regardless of proprietary structure[102]. It can be based on i.e. so-called franchise (the crossing of contents on different media platforms)[103], as well as on franchise of employees or media character, in case of media editorial stuff: on common creation of materials, its distribution and promotion. It

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[95] See: F. Kamiński, *Implikacje regulacyjne konwergencji w obszarze komunikacji elektronicznej*, "Telekomunikacja i Techniki Informacyjne" 2001, No. 3/4.
[96] L. Lock-Lee, *Media Industry Network*, [in:] *Future of Media: Report, July 2006*, Future Exploration Network, p. 7, www.futureexploration.net/images/Future_of_Media_Report2006.pdf [accessed: 26.07.2008].
[97] J. Beliczyński, *Strategie działania...*, p. 69.
[98] „Synergy: the economic opportunities that emerge in the context of horizontal integration when one media conglomerate holds interests in multiple channels of distribution", H. Jenkins, *Convergence Culture…*, p. 292-293.
[99] L. Lock-Lee, *Media Industry…*
[100] *Future of Media: Report, July 2007*, Future Exploration Network, p. 13, www.futureexploration.net/images/Future_of_Media_Report2007.pdf [accessed: 26.07.2008].
[101] I.J. Erdal, *Negotiating Convergence in News Production*, [in:] *Ambivalence…*, p. 76.
[102] R. Gordon, *Convergence…*
[103] Ibidem.

can also cover collaborative actions in the field of Public Relations (sponsorship, events) including Corporate Social Responsibility and the growth of profitability thanks to common creation of advertising offers.

The efficiency of cooperation depends, among others, of organizational structure of the companies and the tasks that organizational units and employees are supposed to perform. "But the more aggressive the goals for convergence, the more likely it is that job descriptions and organizational structures will change"[104]. Then, we call it organizational convergence, defined by Gordon as structural convergence[105]. It takes on a new light in media enterprises that provide content to i.e. editorial offices. Tactical convergence creates opportunity for delegating tasks on the enterprises' intersections and creating new, sometimes crossed work-stands, as i.e. works coordinator of two newsrooms, Internet multimedia reporter, director of news partnership, and work-stands re-organization as a consequence (i.e. locating the seats in TV studio organized inside the newsroom)[106]. This is the way the terminology becomes enriched in such terms as converged journalism[107] or cross-media journalism[108]. Corporate convergence is accompanied by dynamic and bilateral relation. Corporate convergence is an impulse for media convergence, technological innovation and content supply. However, innovations are one of the reasons of new corporate convergences[109]. That process does not take place in isolation: it is top-down powered by corporations, and at the grass roots by the consumers. Corporate convergence co-exists with amateur one[110].

Convergence and divergence – two sides of the same coin

Researchers analyzing changes occurring nowadays in media environment have different opinions on relations that take place between convergence and divergence. Jenkins highlights the meaning of the divergence of devices in content convergence. Göran Bolin takes notice on reverse process: technological convergence and textual divergence that accompanies it[111]. In the meantime, some scientists, including Ithiel de Sola Pool, think that convergence and divergence are the two sides of one coin. Gunnar Liestøl explains it in the following way:

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[104] Ibidem.
[105] Ibidem.
[106] Ibidem.
[107] *Converged Journalism and Quality: A Case Study of the Tampa Tribune News Stories*, auth. E. Huang and oth.., „Convergence: The International Journal of Research into New Media Technologies" Vol. 10 (2004), No. 4, p. 73, http://con.sagepub.com/cgi/reprint/10/4/73 [accessed: 1.03.2009].
[108] I. J. Erdal, *Negotiating Convergence…*, p. 73.
[109] J. van Dijk, *The Network...*
[110] H. Jenkins, *Convergence Culture…*, p. 137.
[111] G. Bolin, *Media Technologies, Transmedia Storytelling and Commodification*, [in:] *Ambivalence…*, p. 244.

„Those, the two movements can be seen as a symmetric shape where entities of some kind or rather on the one side are forced towards or attracted to each other, while on the other side the disperse. This process of convergence and divergence could then be viewed as a narrowing passage constituted by solid bodies constraining an area of flux, movement and blending: that is, it could be in analogy be seen as a strait"[112]. On the one side of the contraction there are individual devices as telephone, TV set and a camera, on the other i.e. multimedia mobile phone; on the one side – software for single file editing: text, graphic, sound, on the other – software with all the facilities; and as a result, one end of the passage is filled with single types or its elements, the other one – specific hybrids[113]. Liestøl also notices the two-step process of convergence-divergence. The first step is from "mono to multi" transition, the second one is about the domination of one element that converged above others[114]. However, on the example of a mobile phone, we can say that despite many functions integrated inside the phone, it still serves mainly as a communicational device.

Strosul and Fagerjord believe that blurring the border between media does not have to mean convergence. „There are also development toward stronger differentiation of media in which elements from earlier separate media and sectors are combined in new ways."[115] „What, seen from one point of view, appears to be convergence, seen from another angle looks more like divergence. Like a kind of puzzle picture, the situation changes according to one's perspective. Convergence and divergence in the same digital trend."[116]

Sometimes convergence and divergence dimensions are not distinguished while claiming that devices, communications and media converge[117], or devices, communications and industries converge[118] – by integrating it initiates what Ross Dawson calls "the convergence of convergence" – the basis of the flow economy[119]. Convergence of "everything with everything" in technological, economic and media sense is accompanied by the process of wider social and cultural spectrum. First years of the 21st century is a breakthrough in reflection on convergence: it is a participatory turn that not only means the transfer of accents from sender to the receiver in the research of convergence itself, but also means new aspect of

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[112] G. Liestøl, *The Dynamics of Convergence & Divergence in Digital Domains*, [in:] *Ambivalence...,* p. 166.
[113] Ibidem, p. 167–175.
[114] Ibidem, p. 174.
[115] T. Storsul, A. Fagerjord, *Digitization…*
[116] J.F. Jensen, *Communication*..., p. 42.
[117] A. Nilsson, U. Nuldén, D. Olsson, *Mobile Media: The Convergence of Media and Mobile Communication*, "Convergence: The International Journal of Research into New Media Technologies" Vol. 7 (2001), No. 1, p. 38, http://con.sagepub.com/cgi/reprint/7/1/34 [accessed: 23.11.2007].
[118] R. Dawson, *Living...,* p. 123.
[119] Ibidem, p. 125.

media practice: the growth in importance of the new media's every potential user.

Content convergence

Content convergence is understood as a series of processes of convergence, integration and intersecting of the media in the range of its content during the whole process of its creation, starting with planning, through creating and supplying, to using.

■ Media content

From the perspective of a producer (a professional) convergence is top-down and corporate driven process. It demands the use of a range of strategies and tactics that make it effective and attractive. On the level of concrete message units content convergence is about the convergence of the form and content of the media message. Its example is rhetoric convergence consisting in transformation of kinds as a result of convergence of older elements in new solutions[120]. Detailed model of rhetoric convergence of Anders Fagerjord assumes the existence of four axes of texts that can be replaced independently from each other: "mode of distribution (the balance of amount of material and time between authoring and reading); mode of restrictions (range and detail in space and time); mode of acquisition (the reading process required of the reader); and mode of signification (the particular combination of sign systems). […] the perceived convergence of media may be viewed as combinations of earlier form, or forms sliding towards each other as variables change"[121].

In reflection also appears the term "functional convergence". A subject of an interest is the way old "analogue technologies" are re-created on the new media similarity[122] and the new media evolve thanks to symbiosis with the old media. For adjusting forms of messages in traditional media to "the size of the network and the terms of issue by hypertext" the term mimetic convergence is suggested[123]. What is more, "multimedia message becoming similar to the pattern of the message perception binding among traditional audience" is defined as mimicry convergence[124].

For obtaining the overall picture of convergence, it should be perceived as a principle of media environment. The principle present since the beginnings of media communication

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[120] T. Storsul, A. Fagerjord, *Digitization...*
[121] A. Fagerjord, *Four Axes of Rhetorical Convergence*, "Dichtung Digital" Vol. 30 (2003), No. 4, ww.dichtungdigital.org/2003/4-fagerjord.htm [accessed: 21.07.2008].
[122] D. Holmes, *Communication...*, p. 64.
[123] I. Fiut, M. Matuzik, *Hipertekst...*, p. 86.
[124] Ibidem.

and the other media occurrence: its differentiation and assimilation. Convergence is not a fusion or integration – „Convergence is more like a crossing of paths or marriage, which results in the transformation of each converging entity, as well as the creation of new entities"[125]. Convergence is not new, what we observe is a result of mini-convergences that took place in the past on a smaller scale: "Convergence has in fact, always been essential to evolution and the mediamorphic process"[126]. "Media convergence is an ongoing process […], it's not an end state"[127].

At the level of the whole of communication strategies, content convergence is a process that targets creating multi-platform universe of media product or media brand. It is a process which is, as H. Jenkins determines, corporate driven and powered at the grassroots; this is why content convergence stimulated by media industry is accompanied by "grassroots convergence: informal, sometimes unauthorized flow of media content"[128] that is also a process that "paves the way" for corporations. Both processes integrate in a specific way for media production. In case of convergent strategy designed for the needs of media products, which core is a movie (i.e. Matrix), the process is totally different from the case of TV series (i.e. Dawson's Creek).

■ Media users

For the needs of integration of both dimensions of the phenomena in theoretical reflection Jenkins suggested the term the culture of convergence or simply: convergence. „Convergence: a word that describes technological, industrial, cultural, and social changes in the ways media circulates within our culture. Some common ideas referenced by the term include the flow of content across multiple media platforms, the cooperation between multiple media industries, the search for new structures of media financing that fall at the interstices between old and new media, and the migratory behavior of media audiences who would go almost anywhere in search of the kind of entertainment experiences they want"[129]; […] convergence represents a cultural shift as consumers are encouraged to seek out new information and make connections among dispersed media content"[130]; "convergence occurs within the brains of individual consumers and through their social interactions with others"[131]. In the author's opinion,

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[125] R. Fidler, *Mediamorphosis…*, s. 27.
[126] Ibidem.
[127] H. Jenkins, *Convergence? I Diverge…*
[128] Idem, *Convergence Culture…* p. 285.
[129] Ibidem, p. 282.
[130] Ibidem, p. 3.
[131] Ibidem.

convergence is not a routine but a continuous process or series of happenings[132]. Colin Mercer perceives convergence as „a new relationship of interaction between producers and consumers – where consumers, because of interactivity, can become creators and producers"[133].

Case studies that come from Jenkins's book *Convergence Culture* have became model patterns of convergence understood as mutual power of the activities of professional and amateur media that base on blurring various boundaries. Classic studies over such media productions as *The Robinsons*, *American Idol*, *Matrix*, *Star Wars*, *Harry Potter* have set the way of reflections of media scholars all over the world who have undertaken the research over phenomena of collective intelligence, transmediality (transmedia storytelling in particular), the relation between production, advertising and receiver's involvement (determined as synergy), emotional capital and lovemarks creation, franchising and multi-platform media strategies or media fandom. Despite the fact that Jenkins' work is sometimes stated as „21st century marketing manifesto"[134], it also cast a light on the relations between "aesthetics, communication infrastructure, organizational logic, media consumption habits, and the balance of cultural power"[135] – „[…] we are seeing a significant qualitative shift in the intensity and characteristics of connections between people, technologies, imaginations, and economies"[136] resulting from mediality. It also presents new phenomena in "total" connection not trying to abstract individual elements of one complex process.

Phenomenon diagnosed by Jenkins or Mercer are included in the broader trend of prosumer[137] or produsage[138]. "The ongoing merger of production and consumption across the various media, cultural and creative industries signals the emergence of a global convergence culture, based on an increasingly participatory and interactive engagement between different media forms and industries, between people and their media, as well as between professional and amateur media makers"[139]. As Mark Deuze remarks, we observe convergence within the

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[132] Ibidem, p. 256.

[133] C. Mercer, *Culture in the Age of Convergence: The Need for a New Policy Stance and Platform for Europe*, „AI & Society" 2003, Vol. 17, No. 1, www.springerlink.com.till.biblextern.sh.se/content/wt042hy8qq01wepc /fulltext.pdf, 12 [accessed: 1.05.2011].

[134] A. Sinnreich, *Come Together, Right Now: We Know Something's Happening, But We Don't Know What It Is*, „International Journal of Communication" 2007, No. 1, p. 45, http://ijoc.org/ojs/index.php/ijocarticle/viewFile/ 48/12 [accessed: 1.09.2008].

[135] Ibidem.

[136] *New Media: a Critical Introduction*, ed. M. Lister and oth., London–New York 2009, p. 262.

[137] A. Toffler, *The Third Wave*, London 1981.

[138] A. Bruns, *Towards Produsage. Futures of User-Led Content Production*, [in:] *Proceedings: Cultural Attitudes towards Communication and Technology 2006*, ed. F. Sudweeks, H. Hrachovec, C. Ess, Perth 2006, chapter available also at: http://snurb.info/files/12132812018_towards_produsage_0.pdf [accessed: 15.11.2009].

[139] M. Deuze, *Media Industries, Work, and Life*, „European Journal of Communication" Vol. 24 (2009), No. 4, p. 472, http://ejc.sagepub.com/cgi/reprint/24/4/467 [accessed: 1.12.2009]. The blurring of division into sender and

bounds of human's identity and experience thanks to the versatile phenomenon of media convergence; it concerns both professional and amateur media creators[140].

The worker of contemporary media experiences convergence of work: convergence of place and convergence of technology. There takes place a process of blurring the boundaries between his place of work and home. However, digital network software suits creative work, also this work's management and control[141]. In opinion of Deuze, convergence influences not only media content, relation between producers and consumers, film structure but also the way of performed work. Most of all, it means content creating for many media platforms simultaneously[142], in practice it is related to requirements concerning varied competences from the field of many branches and specializations, and flexible work on the intersection of many, so far independent positions. "The making of television is not what it used to be few years ago anymore, nowadays it means creation of cross-media strategies, adjusting format appropriate for needs of interacting with users, searching for sponsors, investors and advertisers who would want to invest in created content."[143]

For user convergence mostly means „convergence of all walks of life"[144]. It is simultaneous transfer of a number of everyday activities to the media, mediatization, often automating of these activities and involvement in media: in technology, content, media culture. „[…] life, work, and play converge"[145]. Part of users are described as pro-am[146]: professional-amateur. Those users voluntarily support media production. They significantly contribute to bringing into being, development and enduring of specified media products. They correspond to the higher order logic of media activity. The first order logic is striving for creating of the most lucrative content. Second order logic means creating the most innovative content. The higher order logic is consumer-focused: content is supposed to be generated, created and managed by the consumers[147]. So as Deuze notices, convergence should be understood as „cultural logic that at its core integrates users and producers in the

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recipient effected in, among others, changes in advertiser-consumer relations that are described by Jacek Wójcik as social convergence. J. Wójcik, *Konwergencja mediów – stare i nowe wyzwania dla komunikacji marketingowej*, "Zeszyty Naukowe Uniwersytetu Szczecińskiego" No. 473 (2007), p. 311.

[140] Ibidem, p. 473.
[141] Idem, *Media Work*, Cambridge 2007, p. 70.
[142] Ibidem, p. 71.
[143] Ibidem, p. 187.
[144] Ibidem, p. VIII.
[145] Ibidem, p. 7.
[146] Ch. Leadbeater, P. Miller, *The Pro-Am Revolution: How Enthusiasts Are Changing Our Economy and Society*, London 2004, available at: www.demos.co.uk/publications/proameconomy [accessed: 15.12.200].
[147] M. Deuze, *Media Work…*, p. 99.

process of creating mediated experience"[148]. "Media convergence must also be seen as having a cultural logic of its own, blurring the lines between economics (work) and culture (meaning); between production and consumption; between the competition and cooperation ('coopetition') implied in creativity, commerce, content and connectivity; between making media and using media; and between active or passive spectatorship of mediated culture"[149].

Media convergence in Poland is coming to the stage of intensification. After the phase of innovative actions initiation in the field of technology, management, creation and content distribution there goes standardization. By focusing on the profit increase and competition overtake in the use of innovation, media companies more and more often and on a larger scale apply convergent strategies meeting the needs of increasingly demanding users. Convergence, to a greater extent, means the involvement of users in production and promotion. Thus, the process crossbreeds many areas of practice and media content. Zbigniew Bauer wrote: "This is a process transforming the whole culture: probably we observed the same when the film was born […] and then television […]. But convergence is not something autonomous, it is an effect of peoples activity, decisions, determining the aims and evaluation of the effects. That is why convergence is a social phenomena – it corresponds to what is happening with the society and inside the society"[150]. For media scholars it means the necessity of hybridization of the area of research and the use of integrated methods. Convergence is a phenomenon that covers wide range of issues. It results in media environment transformation towards its integration with other areas of human activity forcing to the deepened reflections on character and the significance of contemporary new media[151].

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[148] Ibidem, p. 80.
[149] Idem, *Media Industries, Work…*, p. 474–745.
[150] Z. Bauer, *Dziennikarstwo wobec nowych mediów. Historia, teoria, praktyka*, Kraków 2009, p. 304.
[151] The publication was written with the financial support of the Foundation for Polish Science. Translation: Anna Kozłowska.