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Information & Communication Technology and 'Individual': Prospects & Concerns Muhammad Zubair Khan¹ and Dr. Amanullah Khan Miankhel² ¹ Gomal University, KPK, Pakistan. Received: 11 December 2012 Accepted: 3 January 2013 Published: 15 January 2013

7 Abstract

⁸ Technologies have always played a significant role in the development of human civilization.

⁹ The contemporary information and communication technologies are also expected to play a

¹⁰ similar role. These technologies facilitate of connectivity and cost-effectiveness are such

¹¹ characteristics of ICTs that help individual raise its political, economic and social capabilities.

¹² However, ICTs also pose certain threats to the socio-economic life of individuals. The

¹³ individual seems threatened by loss of privacy, become prey to techaddiction, and suffer from

¹⁴ piracy issues. The very nature of ICTs makes these issues global in character, demanding fresh

¹⁵ legislation equally global in nature. This article explicates this issue at length by juxtaposing

¹⁶ the research findings from the existing research and comes up with a theoretical model for

17 better understanding.

18

Index terms— individual; information and communication technologies; privacy; net addiction; globalization.

21 **1** Introduction

istorically speaking technology has played a significant role in the evolution of human civilization. From hunting gathering societies to agrarian, and from industrial to information, technologies have served as one of the major determinant of sociopolitical and economic system of a society (Hoyle, 1953). The invention of wheel and printing press are significant examples of how technologies can set off cascades of revolutions within societies ??Mc Chesney, 1995). Technology refers to the hardware and software i.e. instruments and techniques to resolve human issues or achieve certain objectives (Tehranian, 2004).

Political organizations and businesses of each epoch in history seem to be the major benefactor of technologies; 28 however a profound look suggests that technologies have always been the invention of the individuals and for the 29 individuals. It is the novel use of technology that gives birth to newer political, economic and social values and 30 institutions of the society. Technologies, not only facilitate the social life but also the economic and political life 31 of individuals. The blessings of technology for social life of individuals need no praises; however the political and 32 need no praises; however the political and economic aspects of technology for individual have remained a vital 33 concern for scholars for years. Technologies have always enabled individual to participate in political, economic 34 35 and social life of the society (Tehranian, 2004). New technologies in every age raised discussions about their 36 mobilizing power. In order to become a participant of any political process, the individual requires information. 37 The emergence of newspapers in Europe helped change the role of individuals from spectator to participant in the 38 political process (Gordon, 2004). The 18th century bourgeoisie were facilitated by printing press, along with other gradual developments that reduced the cost of production. The invention of electric telegraph by Samuel F.B. 39 Morse in 1837 and the telephone by A.G. Bell in 1876 facilitated people to communicate at long distance, again 40 supported by additional developments like automatic switch boards to reduce costs and ameliorate quality. The 41 radio-the invention of Marconi in 1895, probably carried with it high expectations of its democratizing power 42

43 followed by the Baird's invention of television in 1923 (Gordon, 2004). However, owing to state and market

interference, along with the rise of the cultural industries, individual lost many of its political, economic and even 44 social benefits and got 'refeudalized' (Habermas, 1989). 45

Nevertheless, with the emergence of information and communication technologies (ICTs), several new prospects 46 47 ushered in for individual and a possibility to achieve its lost status of participant in the political and economic affairs of the society. The role of the internet and other digital technologies is paramount in this respect. ICT 48 influences the lives of a rising number of individuals in different ways all over the globe. ICTs have not only been 49 an essential element at the macro-level as in process of globalization, but equally at the micro-level where the 50 enhanced use of mobile phones, for example, transformed daily communication methods universally ??Weigel & 51

Waldburger, 2004: 16). 52

Ever since the inception of the internet in the last decade of the 20th century, the number of the internet 53 users has been on the rise across the world. It is being used by common citizens, activists, nongovernmental 54 organizations, telecommunications firms, software providers, and governments across the world (Shirky, 2011). 55

This first section of this paper explores the significant digital technologies that directly influence the life of 56 individual. The next section highlights the prospects generated by ICTs for individual. ICTs have1 (D D D D 57

DDDD) 58

also created some challenges for individual which would be discussed next. Finally, the whole debate would 59 60 be capsuled in a schematic model for the sake of clarity.

$\mathbf{2}$ II. Information Technology Revolution 61

ICTs refer to the entire range of technologies devised to retrieve process and communicate information in the 62 shape of text, sound, data and images. ICT cover the full range from conventional widely used appliances such 63 as radio, telephone or television to more stylish devices like computers, the Internet, networks, hardware and 64 65 software, satellite systems, and podcasting Internet. The blend of technologies used might be determined chiefly

66 by the particular local perspective and demand ??Weigel & Waldburger, 2004).

ICTs as high-tech tool are rather well-known; however their significance lies as stimulators of novel associations 67 and spaces. ICTs are actually generating a new global arena attracting a fresh competition regarding the 68 distribution of power, information, and resources (Van Dijk, 2006). 69

Industrial societies played significant role in the rise of informatics revolution. Different labels have been 70 used to describe it like 'Post-Industrial', 'Knowledge', 'Information', 'Postmodern' and 'Network Society'. The 71 different labels actually describe the various aspect of the same phenomenon. The most remarkable changes 72 can be observed in communications systems at both global and national levels. Information revolution has 73

(1) facilitated merger of telecommunication and computers, (2) offered smart personal communication devices, 74 (3) swiftly expanded the wireless networks and devices (4) facilitated the storage, processing and retrieval of 75

information in all sectors of the economy (Tehranian, 2004). 76

The invention of press (1450) is a typical illustration of how novelty can set off cascades of revolutions within 77 societies. ICTs are expected to play similar role. Due to their service potentials and prevailing nature ICTs have 78 social, political and economic implications ?? Mc Chesney, 1995). They offer a variety of tools to businesses, 79 states, civil society and individuals to achieve their goals. 80

In order to estimate the impacts of ICTs on individual, it would be useful to have a broader review of those 81 information technologies that facilitate individual in various ways. a) Digital Technologies Digital technologies 82 fundamentally are the extensions of the ways individual communicate. The human desire to communicate 83 effectively and easily motivated the efforts for development of these technologies. Digital technologies involve 84 creation, sharing and usage of information in digital form. Digital information is in the form of 'data' that can 85 86 be structured, manipulated, stored and exchanged through digital equipments.

There is a huge variety in the available digital technologies that perform varieties of functions. Moreover their 87 speed, efficacy and cost-effectiveness are rapidly increasing. 88

3 i. Internet 89

The Internet is 'an interconnected system of networks that connects computers around the world via the TCP/IP 90 protocol' (Online American Heritage Dictionary). It is a network of networks which enable users at any one 91 computer, if they have authorization, to obtain information from any other computer and sometimes talk directly 92

to users at other end (Gordon, 2004). 93

The Internet is a public, accommodating, and self-sustaining service accessible to hundreds of thousands of 94 95 people across the world (ACARM, 2005). It is a unique matrix of networks which is established on a "many-96 to-many" model of information distribution, contrary to the "one-to-many" structure of mass media (Crack, 97 2007).

Electronic mail (e-mail) is probably the most frequently used service on the Net. It has provided a substitute, 98 to almost all the Internet users, for the conventional postal service in order to send short written messages. World 99 Wide Web (WWW) is the most extensively used element of the Internet. Through the Web, one can get access 100

to millions of websites containing bulk of information (Rouse, 2008). 101

ii. Networking A digital network connects two or more computers through wires, telephone lines, radio waves, 102 satellites, or infrared light rays and enables them to share resources, exchange data, and facilitate electronic 103

communications (Winkelman, 1998). The Internet is the largest digital network in the world. Networked
 computers can expand the scale of the world to unprecedented levels (Bell, 2008).

There is substantial evidence that virtual networks facilitate diasporic public spheres; support ethnicity by e-mail and uphold the functions of INGOs and social movements. They also offer information, support and facilitate possibilities for companionship for a multitude of people poorly served by the available facilities in the civic spaces where they actually live. In sum, most suitable to the global context, networks can construct social associations without limitations of physical space or presence (Axford, 2004).

Moreover, it is expected that with the passage of time the networked population will not only increase in number, rather they will also acquire better access to information, enjoy more opportunities for debates and collective action (Shirky, 2011).

¹¹⁴ 4 Global Journal of Computer Science and Technology

¹¹⁵ Volume XIII Issue VII Version I (Oblak, 2002). The different types of social media are similar in that they all ¹¹⁶ posses' dense fundamental network structures that supply metadata and environment that can be useful while ¹¹⁷ retrieving information from their content ??Finin et al., 2008).

The Internet-based social media systems including blogs, wikis, message forums and mediasharing sites, have turned out to be significant modern ways to pass on information, hold discussions, and shape social communities on the Internet. Their coverage and ramifications are important, with hundreds of millions of people supplying content consistently from around the world. Recent researchers suggest that social media systems are shaping about one third of new web content **??**Finin et al., 2008).

Social networking sites may be defined as webbased facilities through which individuals can (1) create a profile, public or semi-public, within a circumscribed system, (2) generate a list of other users with whom they share a link, and (3) observe and navigate their list of associations and those made by others within single system.

Social network sites (SNSs) are unique, not because they help individuals connect with strangers, but because they facilitate users to articulate and make observable their social networks. This result in links between individuals that would not otherwise be possible, but that is seldom the objective and these interactions are often between 'latent ties' who share some offline association (Haythornthwaite, 2005).

Though community based websites still exist and flourish, SNSs are essentially woven around individuals, not interests. Initial public online communities like Usenet and public interaction forums were arranged by topics, however, SNSs are designed as personal networks, with the people at the core of their own community. Facebook is a good example in this perspective (Boyd, 2008).

¹³⁴ 5 iv. Mobile Phone

A mobile phone, sometimes also called as a cellular phone, or cell phone, is a communication invention that can make and receive telephone calls over a wireless link within a wide geographic area. It operates by linking to a cellular network offered by a mobile phone operator, permitting access to the public telephone network

to a cellular networ(Tanenbaum, 2002).

Contemporary developments in the mobile phones technologies include the improved features of phones to generate and pass on contents other than SMS. High standard image and video facilities in the latest generation of mobile phones has paved the way to several new software that enable individuals to publish images, audio, and videos from mobile phones directly to related websites. Similarly, bulk SMS can also be sent through mobiles

143 (Yadav & Rani, 2011).

By the end of 2011, there were around 6 billion mobile subscriptions around the world (ITU, 2012). That translates in to 87 percent of the entire world population. It is an enormous rise from 5.4 billion in 2010 and 4.7 billion mobile ownership in 2009. This shows that individual access to modern technologies is on the rise.

¹⁴⁷ 6 III.

¹⁴⁸ 7 Prospects for Individual

Like any dominant technology of each epoch, ICTs are the characterizing technology of information age. Just as it
 has facilitated state and businesses in variety of ways, similarly it has opened new avenues for individual as well.

151 It is creating an environment in which individual's political, economic and social capabilities get ameliorated due 152 to various factors. However, the same technologies have also raised some of the newer concerns for a citizen.

153 8 a) Access to Information

In the modern age, due to ICTs greater number of citizens can access unlimited information. The Internet plays a significant role in this perspective. It supplies millions of pages of information on almost every subject (Khan et al., 2011). Owing to advancement in the Internet technologies both the quantity of available information and quality of access is ameliorating. Today, any one with some fundamental computer literacy and access to the Internet can easily retrieve information of his/her need from the Internet .

Access to information is a step forward in empowering individual. Obtaining and diffusing political communication through the Internet is swift, convenient, and cost-effective. New technologies supply information and apparatus that may raise the position of the public in the socio-political domain (Papacharissi, 2002). Certainly, the swift diffusion of the ICTs into various aspects of public life was chiefly raised by its historically

matchless capabilities for "interactive, unmediated and synchronous communication" (Oblak, 2002). Moreover,

164 ICTs supply strategic devices that serve as stimulant for transformation by raising efficiency and effectiveness

165 (Kalas & Finlay, 2009).

¹⁶⁶ 9 b) Connectivity

167 ICTs help connect people together. An individual as a student, worker, or as a businessman may be extremely 168 busy but if he/she can remain in touch with his/her network of relations simply by a cell phone. Higher levels 169 of literacy or computer skill are no more required. The various social technologies not only link people within 170 a state, rather these also facilitate ICTs capabilities to produce networks of knowledgeable citizens reflect their 171 political powers. Cyber enthusiasts contend that the Internet can strengthen democracy by connecting people, 172 with utter disregard to territory, and by fostering public spheres and fresh social movements (Min, 2010).

¹⁷³ 10 c) Innovative Platforms for Expression

The potentials of the Internet for facilitating public debates cannot be overlooked. Today, individuals have numerous opportunities for expressing their views. There are hundreds of thousands of political web sites with local, national, and global scope; some of them are partisan, but most are not. It is easy to find chat rooms, discussion forums, new types of journalism, civic associations' platforms, advocacy sites, and sites for promoting citizens' awareness . Individuals can easily find spaces for expressing their views to influence political decisions. Increasingly a consensus is emerging among researchers that ICTs are facilitating a virtual public sphere which can help bring the state in touch with the needs of the public .

One might contend that the net-based virtual sphere has a great potential as a political medium, particularly in redesigning political processes and revitalizing political practices. Moreover, the internet and associated technologies encourage political discussion and provide spaces for it (Papacharissi, 2002).

The Internet acquires a pivotal position in the arena of new politics, particularly its potential for the "horizontal communication" of civic engagement is highly significant. There is little doubt that access to the internet and other technologies like cell phones, has assisted the rise of large-scale cyber networks of activists.

¹⁸⁷ 11 d) Economic Opportunities

ICTs potentials to exchange information in run time and facilitate networks reflect the economic prospects for individual. Like technological changes of the past, information technology is also likely to boost productivity, raise the standard of life, decrease prices, and generate new economic activities leading to new employment openings and generation of wealth. The world is experiencing a transformation not due to the fact that computer operators have substituted the secretaries and the typists across the world, leading to reasonable hike in efficiency, rather the information technologies have restructured the economy on essentially different basis, commonly called as information based economy (Tezcan, 2006).

The changes in economy are opening new prospects for individuals. Temporal and spatial transformations brought about by ICTs are facilitating individuals in performing their jobs in relaxed environment at their convenient timings. Similarly, the enhanced 'connectivity' is also giving birth to new economic prospects for individual.

¹⁹⁹ 12 e) Educational Opportunities

Significance of education for individual needs no explanation. ICTs facilitate education processes in variety of ways right from the elementary level to the higher education. The use of audio-visual aids in educational activities is not a new concept; however, computer and later the Internet brought a revolution in the field of education at all levels (Nawaz & Khan, 2012a).

From concept building to simulations, from collecting information to getting in touch with other students of same level and expertise, ICTs are facilitating each and every step in the educational process. The use of ICTs in higher education has particularly been emphasized by the educationists and social scientists for over a decade. Moreover education for all (E4A) in developing countries seem to be a realizable goal because of the proliferation of ICTs in education sector (Nawaz & Khan, 2012b).

209 IV.

²¹⁰ 13 Concerns for Individual

Though ICTs are facilitating individual in many ways and have raised individual's socio-political and economic capabilities however, these have also given birth to numerous novel challenges for the individual. These concerns

range from privacy issues to tech addiction which influences the individual and collective lives of modern citizens.

²¹⁴ 14 a) Privacy

Privacy is an individual's condition of life. Its major quality is exclusion from publicity ??Neethling et al., 1996: 36). ICTs influence the various areas of individual's privacy. For example, the interception and reading of Emails, the electronic screening of individuals in the workplace, and the integration of different databases which contains individuals profile information. Another significant challenge to privacy is the emergence of 'hackers' and 'crackers' who break into others computer systems (Ashoor & Gore, 2011). The hackers and crackers are novel thieves of the information era. They not only steal data rather they can also steal someone's identity by pretending to be who they are not.

ICTs impacts on the individual's privacy can lead to loss of dignity and spontaneity. Moreover it also poses threats to individual's freedom. So ICTs to a certain extent threatens privacy of individual (Rosenberg, 1993).

The Internet addiction is a kind of psychological disorder which refers to socio-psychological state of those individuals that spend excessive amounts of time over the Internet at the cost of several other social aspects of

individuals' lives (Young, 1998). The Internet addiction can take several forms; 1) spending huge amounts of time

in establishing online relationships in different chat rooms at the expense of real friends and family members, 228 2) spontaneously gambling or trading online, 3) compulsive information searching on websites and database, 3)

Gaming: compulsive computer games that can be multi-user games as well and 4) addiction to cyber sex or pornography on the Internet ??Childnet International, 2006).

The Internet addiction leads to loss of time eventually in the loss of variety of social activities. This in turn creates a range of psychological and sociological anomalies in the life of an individual (Akin & Iskender, 2011).

233 15 c) Propaganda

Propaganda is traditionally defined as dissemination of particular information by words of mouth or printed pamphlets distributed by a certain group within a limited community. However, the ICTs make information easily accessible to a wide and diverse audience utterly irrespective of their location (Crilley, 2001). ICTs can easily facilitate groups, cults, political parties in their propaganda campaigns. On the one hand, it drastically hampers the formation of real public opinion and on the other it can also facilitate extremists and terrorist groups

239 in achieving their goals.

The prominent features of the Internet like easy access to information, swift broadcast of multimedia information to large and widely dispersed audiences, low levels of censorship, and cost-effectiveness are all such qualities of the modern technologies that different groups can use to propagate their agendas (Weimann, 2004). An individual can easily become a victim of such propaganda during its search for objective information. Different groups use the websites for disseminating speeches, images, training manuals, audios, videos, slides, blogs, and

²⁴⁵ Web casts for the sake of achieving their goals (Porth, 2006).

²⁴⁶ 16 d) Piracy Issues

Piracy refers to act of unlawfully reproducing copyrighted material like books, music, movies, and computer programs etc. Before the advent of ICTs, it was uncommon and difficult to print books or burn movies and then circulate on a large scale; however ICTs have made this task quite easy and have given birth to what is commonly called as digital piracy (Al-Rafee & Cronan, 2006).

Piracy on the Internet is not simply a concern of the individual rather organizations of all types also face similar threat. Piracy and copyright issues include intellectual property theft and infringement -the unlawful copying and distribution or sale of books, music, films, software, games, and other intellectual properties ??CSIS, 2008).

²⁵⁵ 17 e) Financial Concerns

In the information era, money has become digital and payment systems has also taken digital form. According to the Federal Deposit Insurance Corporation (FDIC) reports online bill payment systems and softwares have become the most frequent target of digital thieves. Such crimes include the data theft particularly stealing of credit-card information, account details, social-security number and other profile information **??**CSIS, 2008). Corporations generally have better guard-systems against such cyber thieves however individuals always remain at higher risks in this perspective.

262 V.

263 18 Discussion

The Internet integrates various stages of the communication process, for example storage and sharing of information, interaction, and transformation of the communication channels in an unprecedented manner. Internet is a catalog of unlimited information and a medium for its communication, and is particularly significant for its capacity to link different agents efficiently, swiftly and reciprocally. It has really opened several new opportunities for the amelioration of individual's political, economic and social life (Oblak, 2002).

A glimpse at the mobile phone sector suggests that mobile phone ownership in the developed world has touched saturation level with minimum one mobile subscription per person. This shows that recent market expansion

is being driven by demands in the developing world, spearheaded by China and India. These two states jointly 271 increased 300 million new cell phone subscriptions in 2010 that is more than the entire mobile users in the US. 272 By the end of 2011 there were around 4.5 billion mobile phone subscriptions in the developing world that is 76 273 percent of worldwide subscriptions. Mobile penetration stands at 79 percent in the developing world ??ITU, 274 2012). This suggests that the most emphasized ailment of the information era i.e. digital divide, is gradually 275 ebbing away and individual in the developing world are also now enjoying or beginning to enjoy the miracles of 276 'connectivity' and 'access' to information. The internet, cell phone and social media played the central role in 277 perspective of political protests in 2011 particularly in Arab world, both as a planner of physical dissent and as 278 a civic realm in its own right. London riots are yet another case in this respect. 279

Moreover, as ICTs operates beyond territorial boundaries so these facilitate civic interactions beyond nationstate territorial confines. Moreover, speedy and Year efficacious access to information raises transparency and assists individuals in making their governments accountable. Similarly by providing citizens information regarding rights, facilities and services, citizens can be empowered and opportunities for public debates can be augmented (Weigel & Waldburger, 2004). Drache optimistically contends that contemporary era through the ICTs and information flows provide the common citizen limitless social opportunities to innovate and shape discursive communities on a range of issues (Drache, 2008).

However, it is a fact that the ICTs on the one hand has raised the accessibility to information but on the other
hand, because of low/no mechanisms for controlling the dissemination of information, ICTs are also creating
problems for individuals, state and markets in the shape of hiking information security concerns (Papacharissi,
2002;Kapitonenko, 2009).

Similarly, there can be no disagreement that a number of such issues have surfaced due to ICTs which require fresh legislations. For example, credit card thefts, illegal fund transfers, profile thefts, copyright issues, and intellectual property rights etc. The severity of these concerns for individual is certain. Furthermore, ICTs make these issues global in nature; therefore a global set of digital laws has become a dire need of the day (Segura-Serrano, 2006).

Moreover, despite numerous positive qualities of ICTs, individual's personal character, aptitude, motivation and Internet skills play significant role in determining the impacts of ICTs on individual and society (Bargh & McKenna, 2004). It is the individual personal character and motivation which leads to problems of 'net addiction'. The off-line crimes can shift to online realm owing to motivation and character of certain individuals. Citizens in

any society face risks of theft, violation of intellectual property rights etc., ICTs seem to have augmented these challenges in the face of low/no regulation of the flow of information over the Internet (Min, 2010).

Individual is experiencing a kind of ambivalence with respect to ICTs potentials. There is desire for free flow of information but the hazards of this phenomenon are also recognized at all levels (Otnes et al., 1997;Mick & Fournier, 1998). The human civilization is passing through a transition from industrial to information era. The realms of 'private' and 'public' are getting refined. Individual's private rights need to be redefined. The situation direly demands novel set of legislations with implications beyond nation-state territorial boundaries (Segura-Serrano, 2006).

Figure 5.1 is a schematic presentation of the issue discussed, showing the significant factors regarding ICTs that on the one hand offer a list of opportunities but on the other pose variety of threats for an individual.

310 **19** Conclusions

Information revolution is fostering numerous opportunities and concerns for individual. ICTs are supplying technological infrastructure for a new globalized world. These have in various ways strengthened the status of individual in society and have offered novel social, political and economic opportunities. However, certain socioeconomic and psychological concern cannot be undermined. The unchecked flow of information, often celebrated as a great blessing of the information era, at times seems to be curse for individual.

The need for fresh legislation for monitoring the flow of information seems imperative. However, such legislation can also threaten the newly won freedom of information for individual. Human civilization is passing through a transition, and like transitions of the past, the emerging newer global civilization can be optimistically expected to be more sophisticated, paying more respect to individual's social, political and economic rights.

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Figure 1:



Figure 2:

19 CONCLUSIONS

- 321 [Globalizations] , Globalizations . 4.
- 322 [Aaai Ai Magazine], Aaai Ai Magazine.
- 323 [Hershey], P A Hershey. Idea Group
- 324 [Presidency] , Presidency . http://csis.org/files/media/csis/pubs/081028_threats_working_ 325 group.pdf
- 326 [Habermas ()], Jurgen Habermas . 1989.
- 327 [Neethling et al. ()] , J Neethling , J M Potgieter , P J Visser . 1996.
- 328 [Porth (2006)], J S Porth . http://usinfo.state 2006. May 8. January 8, 2008. 2006/May/08-429-418.
- 329 [Acta Universitatis Danubius ()], http://journals.-univdanubius.ro/index.php/communicati0n/ 330 article/view/1653/1398 Acta Universitatis Danubius 2013. 6 (2) p. . (Retrieved on March 13)
- [A report produced by the Threat Working Group of the CSIS Commission on Cyber security for the ()] A report produced by the Threat Working Group of the CSIS Commission on Cyber security for the, 2008. p.
- 333

44.

- [Axford ()] Barrie Axford . Global Civil Society or 'Networked Globality': Beyond the Territorialist and Societalist
 Paradig. Globalizations, 2004. 1.
- [Carey and Glasser Salmon (ed.) ()] J Carey . Public Opinion and the Communication of Consent, T Glasser, C
 Salmon (ed.) (New York) 1995. Guilford. p. .
- 338 [Tehranian (2004)] Civilization: A Pathway to Peace? Globalizations, Majid Tehranian . September, 2004. 1.
- [corresponding to the fifth wave of the World Value Survey ()] corresponding to the fifth wave of the World Value
 Survey, 2005-2008. World Value Survey
- [Dahlberg ()] Lincoln Dahlberg . the internet and democratic Discourse. Information, Communication & Society,
 2001. 4 p. 4.
- ³⁴³ [Drache ()] Defiant Publics: The Unprecedented Reach of the Global Citizen, Daniel Drache . 2008.
- 344 [Rouse ()] Definition: Internet, Margaret Rouse . 2008. (TechTarget)
- [Salter ()] Democracy, new social movements, and the internet. A Habermasian analysis in Cyberactivism online
 activism in theory and practice, Lee Salter . 2003. (Routledge)
- [Chandler ()] Deriving Norms from 'Global Space': The Limits of Communicative Approaches to Global Civil
 Society Theorizing, David Chandler . 2007.
- [Oblak ()] 'Dialogue and Representation: Communication in the Electronic Public sphere'. Tanja Oblak . The
 Public 2002. 9 (2) .
- [Al-Rafee and Cronan ()] 'Digital Piracy: Factors that influence attitude towards behavior'. Sulaiman Al-Rafee
 T P Cronan . Journal of Business Ethics 2006. 63 p. .
- [Gordon ()] Does the internet provide the basis for a public sphere that approximates to Habermas' vision?, Jake
 Gordon . 2004. (His web essay)
- [Wessels ()] 'Exploring the Notion of the Europeanization of Public Spheres and Civil Society in Fostering a
 Culture of Dialogue Through the Concept of "Proper Distance'. Bridgette Wessels . Sociologija. Mintis ir
 veiksmas 2008. (2008. (3) .
- issa [FACTSHEET: Internet Addiction Child net International ()] 'FACTSHEET: Internet Addiction'. http:// www.childnet.com/downloads/factsheet_addiction.pdf Child net International 2006.
- [Rosenberg ()] 'Free speech, pornography, sexual harassment and electronic networks'. R S Rosenberg . The
 Information Society 1993. 9 p. .
- ³⁶² [Khan et al. (2012)] 'From Habermas model to new public sphere: A paradigm shift'. M Z Khan , I S Gilani ³⁶³ , Allah Nawaz . http://socialscienceresearch.org/index.-php/GJHSS/article/download/

364 **312/271** Global Journal of Human Social Science 2012. February 23. 2013. 12 (5) p. . (Retrieved on)

- [Min ()] 'from the digital divide to the democratic divide: Internet skills, political interest, and the second-level digital divide in political internet use'. Seong-Jae Min . Journal of International Technology & Politics 2010.
 7.
- [Habermas ()] 'Further Reflections on the Public Sphere'. Jurgen Habermas . Habermas and the Public Sphere,
 C Calhoun (ed.) (Cambridge, MA) 1992. MIT Press. p. .
- [Kapitonenko ()] 'Globalization, nationstate and global security arrangements'. Mykola Kapitonenko . Euro
 POLIS 2009. 2009. 6.
- 372 [Rosenau ()] 'Governance in the twenty-first century'. J Rosenau . Global Governance 1995. (1) p. 1.
- Acarm ()] Guide to the Internet and World Wide Web for Archivists and Records Managers, London:
 Association of Commonwealth Archivists and Records Managers, Acarm. 2005.

- 375 [Calhoun ()] Habermas and the Public Sphere, Craig Calhoun . 1992. Cambridge, MA: MIT Press.
- 376 [Haythornthwaite ()] C Haythornthwaite . Social networks and Internet connectivity effects. Information,
- 377 Communication & Society, 2005. 2005. 8 p. .
- 378 [ICT4D -Connecting People for a Better World] ICT4D -Connecting People for a Better World,
- Information Communication Technology and 'Individual': Prospects Concerns 67 Weigel, Gerolf. Waldburger, Daniele ()]
 'Information & Communication Technology and 'Individual': Prospects & Concerns 67'. Weigel, Gerolf. &
- 381 Waldburger, Daniele 2004.
- 382 [Akin et al. ()] 'Internet Addiction and Depression'. Ahmet Akin, ?skender, Murat. http://www.iojes.net/
- userfiles/Article/I0JES_436.pdf Anxiety and Stress. International Online Journal of Educational
 Sciences 2011. 2011. 3 (1) p. .
- [Young ()] 'Internet Addiction: The Emergence of a New Clinical Disorder'. Kimberly S Young . Cyber Psychology
 and Behavior 1998. 1 (3) p. .
- ³⁸⁷ [Ubayasiri ()] 'Internet and the public sphere: A glimpse of'. Kasun Ubayasiri . Youtube. e Journalist 2006. 6.
- [Segura-Serrano (ed.) ()] Internet regulation and the role of internet, Antonio Segura-Serrano . A. Von Bogdandy
 & R (ed.) 2006.
- [Taylor ()] 'Interpreting Global Civil Society'. Rupert Taylor . Voluntas: International Journal of Voluntary and
 Nonprofit Organizations, 2002. 13.
- 392 [Bartelson ()] 'Is There a Global Society?' Jens Bartelson . International Political Sociology 2009. 3.
- [Nawaz and Khan (2012)] 'Issues of Technical Support for e-Learning Systems in Higher Education In stitutions'. Allah Nawaz , M Z Khan . http://www.mecs-press.org/ijmecs/ijmecs-v4-n2/
 IJ-MECS-V4-N2-6.pdf International Journal of Modern Education and Computer Science 2012b. 2012.
- 396 November 25. 2012. 2 p. . (Retrieved on)
- 397 [Keane ()] John Keane . Global Civil Society? UK, 2003. Cambridge University Press.
- [Khan et al. ()] M Z Khan , A K Miankhel , Allah Nawaz . diminishing digital divide: Dynamics and implication,
 2012.
- [Nawaz and Khan ()] 'Metaphorical interpretation of eLearning for Higher Education Institutions'. Allah
 Nawaz , M Z Khan . http://www.world-education-center.org/index.php/wjet/article/
 view/4-1-1/pdf 81 World Journal on Educational Technology 2012a. 2012. 2012. 4 (1) p. . (Retrieved
- 403 on September 25)
- 404 [Neethling's law of personality] Neethling's law of personality, Durban: Butterworths.

405 [Winkelman ()] Networking Fundamental. Online workshop based on information from Florida Center for

- Instructional Technology, Roy Winkelman . 1998. Tampa, FL. College of Education, University of South
 Florida
- [Volkmer ()] News in the global sphere: A study of CNN and its impact on global communication, Ingrid Volkmer
 . 1992. Eastleigh, UK: University of Luton Press.
- [Katre ()] 'One-handed thumb use on smart phones by semi-literate and illiterate users in India: A usability
 report with design improvements for precision and ease'. Dinesh Katre . Workshop on Cultural Usability and
 Human Work Interaction Design, NordiCHI Conference, (Lund, Sweden) 2008.
- ⁴¹³ [Hara and Shachaf ()] 'Online peace movement organizations: A comparative analysis'. N Hara , P Shachaf .
 ⁴¹⁴ Social information technology: Connection society and cultural issues, I Chen, & T Kidd (ed.) 2008.
- [Mick et al. (1998)] 'Paradoxes of Technology: Consumer Cognizance, Emotions and Coping Strategies'. David
 Mick , Susan Glen , Fournier . Journal of Consumer Research 1998. September. 25 p. .
- 417 [Wolfrum] Planck Yearbook of United Nations Law, Max Wolfrum . 10 p. .
- [Kalas and Finlay (2009)] Planting the Knowledge Seed: Adapting to Climate Change Using ICTS, Patrick
 P Kalas , Alan Finlay . http://www.apc.org/es/system/files/BCO_Clim-ateChange.pdf 2009.
 2009. February 23. 2012. (Building communication opportunities (BCO) alliance. Retrieved)
- 421 [Warner ()] Publics and Counter publics, M Warner . 2002. New York: Zone Books.
- 422 [Report of the International Telecommunication Union. Mobi Thinking Global mobile statistics (2012)]
- 423 'Report of the International Telecommunication Union. Mobi Thinking'. Global mobile statistics, 2012.
 424 February 2012.
- [Fraser (ed.) ()] Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy,
 N Fraser . C. Calhoun (ed.) 1992. Cambridge, MA: MIT Press. p. .
- 427 [Yadav and Rani ()] 'Role of Communication in Climate Change and Sustainable Development'. Dr Y P Yadav
- , R J Rani . Global Media Journal -Indian Edition Winter Issue 2011. 2 (2) .

- ⁴²⁹ [Shaw ()] Martin Shaw . Theory of the Global State: Globality as Unfinished Revolution, (Cambridge) 2000.
 ⁴³⁰ Cambridge University Press.
- [Boyd and Ellison ()] 'Social Network Sites: Definition, History and Scholarship'. Danah M Boyd , N B Ellison
 Journal of Computer-Mediated Communication 2008. 13 (1) .
- 433 [Structural Transformation of the Public Sphere] Structural Transformation of the Public Sphere, Cambridge,
 434 Mass: MIT Press.
- 435 [Swiss Agency for Development and Cooperation (SDC) and Global Knowledge Partnership (GKP) (2004)]
- http://www.conectividad.org/archive-/libros/gkp/ICT4book.pdf Swiss Agency for
 Development and Cooperation (SDC) and Global Knowledge Partnership (GKP), (Berne, Switzerland)
 2004. May 27. 2012.
- [Knoche and Huang (2012)] Text is not the enemy: How illiterates' use their mobile phones, Hendrik & Knoche
 Jeffrey Huang . May, 2012. ACM. NUI Workshop
- [Tezcan ()] Mediha Tezcan . the Role of Education and ICT in Economy. International Conference on Human
 and Economic Resources, (Izmir) 2006.
- [Bohman ()] 'the Globalization of the Public Sphere'. J Bohman . *Philosophy and Social Criticism* 1998. 24 (2/3)
 .
- [The Information Ecology of Social Media and Online Communities ()] The Information Ecology of Social Media
 and Online Communities, (Cambridge, UK) 2008. (Polity. 22. Fin in, Tim. et al. (fall)
- [Bargh and Mckenna ()] 'The Internet and Social Life'. John A Bargh , Katelyn Y A Mckenna . Annual Review of Psychology 2004. 55 p. .
- [Mcchesney ()] 'The Internet and US Communication Policy-Making in Historical and Critical Perspective'. R
 Mcchesney . Journal of Computer-Mediated Communication 1995. 1 (4) .
- [Dahlgren ()] the Internet, Public Spheres, and Political Communication: Dispersion and Deliberation, Peter
 Dahlgren . 2005. Political Communication. p. 22.
- [Dahlgren ()] the Internet, Public Spheres, and Political Communication: Dispersion and Deliberation, Peter
 Dahlgren . 2005. Political Communication. p. 22.
- 455 [Van Dijk ()] The Network Society, J Van Dijk . 2006. (2nd ed. London: Sage)
- [Castells (2008)] 'The new public sphere: Global civil society, communication networks, and global governance'.
 Manuel Castells . ANNALS March, 2008. AAPSS. p. 616.
- [Tanenbaum ()] The Physical Layer' in Computer Networks, Andrew S Tanenbaum . 2002. New Jersey: Prentice
 Hall. (Fourth Edition)
- [Hoyle (1953)] 'The Place of Technology in Civilization'. Fred Hoyle . Engineering and Science February, 1953.
 Xvi. (Http://Calteches.Library.Caltech.Edu/ 657/2/Technology.Pdf)
- 462 [Shirky (2011)] 'the Political Power of Social Media'. Clay Shirky . Foreign Affairs 2011. Jan/Feb. 90.
- 463 [Lyotard ()] The Postmodern Condition, J F Lyotard . 1984. Minneapolis: University of Minnesota Press.
- 464 [Khan et al. ()] The problems and prospects of new public sphere for https://globaljournals.org/GJCST_Volume11/3 465 The-Problems-and-Prospects-of-New-Public, M Z Khan, I S Gilan, A Nawaz . 2011.
- (Habermas ()] 'The Public sphere: An encyclopedia article'. Jurgen Habermas . New German Critique 1974. (3)
 .
- ⁴⁶⁸ [Papacharissi ()] 'the virtual sphere, the internet as a public sphere'. Zizi Papacharissi . New media & society,
 ⁴⁶⁹ 2002. 4.
- [Bell ()] 'toward a Definition of "Virtual Worlds'. Mark W Bell . Journal of Virtual Worlds Research 2008. 1 (1)
- [Otnes et al. (1997)] 'Toward an Understanding of Consumer Ambivalence'. Cele Otnes , Tina M Lowrey , L J
 Shrum . Journal of Consumer Research 1997. June. 24 p. .
- 474 [Crack (2007)] 'Transcending Borders? Reassessing Public Spheres in a'. Angela M Crack . Networked World.
 475 Globalizations September, 2007. 4 (3) .
- 476 [Weimann (2004)] 'United States Institute of Peace'. G Weimann . No. 116. http://www.usip.org/pubs/
- specia-lreports/sr116.html www. terror.net: How modern terrorism uses the Internet, 2004. January
 8, 2008. (Special Report) (Retrieved)
- 479 [Ashoor et al. (2011)] 'What is the difference between Hackers and Intruders'. A S Ashoor , Prof 480 Gore, Sharad. http://www.ijser.org/researchpaper%5CWhat_is_the_differ-ence_between_
- 481Hackers_and_Intruders.pdfInternational Journal of Scientific & July 2011. January 31. 2013. (Re-482trieved on)