QUID 2017, pp. 1624-1629, Special Issue N°1- ISSN: 1692-343X, Medellín-Colombia

DIGITAL TRANSFORMATION AS THE FACTOR OF THE GENERATION DYNAMICS IN THE INFORMATION SOCIETY

(Recibido el 10-05-2017. Aprobado el 18-08-2017)

Maksimova Olga Aleksandrovna
Kazan Federal University, Associate Professor of the Department of General and Ethnic Sociology - responsible author,olga_max@list.ru

Eflova Maria Iurievna
Kazan Federal University, Professor of the Department of General and Ethnic Sociology

Ermolaeva Polina Olegovna
Kazan Federal University, senior lecturer of the Department of General and Ethnic Sociology

Abstract.The research of the influence of digital transformation on generation dynamics under the formation of the information society in Russia is carried out. Based on the primary empirical data, the consequences of forming a digital divide between generations are revealed.
The study used quantitative and qualitative methodology of sociologic research for empirical data collection: a massive survey of population of the Republic of Tatarstan (N=1500 pers.), in-depth narrative interviews with several generations of the same family (N=20), narrative essays by students of various universities of Kazan (N=100), focus groups with active Internet users, and the analysis of social networks.
Interpretation of the obtained results made it possible to formulate a number of conclusions that indicate that in the information society the traditional forms of transmission of values between generations are subject to digital transformation, changing the entire socialization process.

Keywords*:* digital transformation, digital society, information and communication technologies, virtualization of society, digital generation, generation dynamics.

Citar, estilo APA: Aleksandrovna, O, Iurievna, M & Olegovna, P. (2017). Digital transformation as the factor of the generation dynamics in the information society. *Revista QUID (Special Issue)*. 1624-1629.

1. INTRODUCTION

Information society is a fundamentally new socio-cultural environment, formed in the late XX - early XXI century, and having a significant impact on all spheres of society, including the process of socialization of new generations. The researches characterize information society as a society which social structure is built up in connection with information networks and Internet-structured microelectronic information technologies (Masuda Y., 1983; Castells, Himanen, 2004). From this point of view, the Internet is considered not simply as a technology, but as a completely new communication tool for human history, transforming the social structure in a special way.

According to researchers, there was the restructuring of the identification space observed in the post-Soviet period, accompanied by the devaluation of the previous rigid identification framework. As a result, individuals were forced to re-define themselves in an actively transforming social space. Young generations often find such a field of self-identification in a virtual reality.

The definition and scientific substantiation of the mechanisms, methods and directions of digital transformation, which changes all spheres of the life activity of the society and including generation dynamics, is one of the most actual discourses of modern scientific theory, which has no clarity and generally accepted point of view yet.

In recent years, a number of scientists have formulated a number of hypotheses in this field. However, it is worth noting that until now the concept of "digital divide" applied to generation dynamics remains still rather blurred and needs further reflection, including at the empirical level.

2. MATERIALS AND RESEARCH METHODS

The research methodology is based on the generational approach used in sociology, which formulates the basic principles of the study of generations. According to the generation discourse, the generation change is a universal process based on the biological rhythm of human life, so that new members appear in the socio-cultural sphere of society, and the old ones gradually disappear. Representatives of each generation can act only in a limited chronological interval of the historical process, therefore the society needs to constantly transmit the accumulated cultural heritage, which is carried out by a succession of generations (Mannheim, 1952; Eisenstadt, 1964; Mead, 1970).

In the information society, virtual reality has become a familiar environment for the formation of children's identity from an early age. Generations whose active socialization takes place in the digital environment as a social environment due to the ubiquitous spread of digital technologies are characterized by different authors as "digital generation", "network generation", and "digital natives" (Prensky, 2001; Palfrey and Gasser, 2008). According to the characteristic given by M. Prensky, digital native people are "people who were born during the digital revolution and, therefore, have been under the influence of digital technologies from the very moment of their birth" (Prensky, 2001).

In the course of the study, we used a modified typology of generations, proposed by N. Hove and W. Strauss (Howe, Strauss, 1991), according to which the new digital generations are the Millennium generation or Y generation, born in the period of 1982-2004, and Z generation, born after 2005. Representatives of these generations, in our opinion, can be described as "digital aborigines", because their socialization is influenced by the digital environment. But if the Y generation in the Russian conditions began to master digital technologies in adolescence (since the 1990s), the Z generation, according to the exact description given by J. Tapscott and E. Williams, "bathes in bits since their birth" (Tapscott, and Williams, 2007).

In addition, the study is based on the concept of the digital divide, introduced by M. Castells to describe the different levels of access to digital technologies (Castells, 2001). But if Castells made a distinction between societies with unequal digital possibilities, then we use this term in relation to generational analysis (Maksimova, 2013).

Based on the methodology of generation analysis and the discourse of the digital divide, the research team with the participation of the authors of the article carried out an empirical study of the influence of the process of digital transformation on the dynamics of generations in the information society. The research was carried out within the framework of the projects "The Role of Information and Network Technologies in the Formation of Ethno-Confessional Tolerance / Intolerance of the Young

Generation of the Republic of Tatarstan" (RFBR grant according to the research project No. 17-46-160490) and "Dynamics of Real and Conditional Generations in the Information, Polyethnoconfessional Society (on the example of the Republic of Tatarstan)" (RFBR grant according to the research project No. 17-06-00474 A) in 2017.

The study used quantitative and qualitative methodology of sociologic research for empirical data collection: a massive survey of population of the Republic of Tatarstan (N=1500 pers.), in-depth narrative interviews with several generations of the same family (N=20), narrative essays by students of various universities of Kazan (N=100), focus groups with active Internet users, and the analysis of social networks.

3. RESULTS

Socialization of young generations in the information society is carried out under the influence of digital transformation, which, inter alia, determines the practice of communication in a virtual environment, which the older generations did not have. This fact can be considered as a conditional border separating one generation from another. According to our research, a digital divide has been formed between children, adolescents, youth and older generations. With respect to generational analysis, the digital barrier is characterized by the lack / shortage of skills in the digital environment in the older generation, which in turn aggravates the intergenerational gap. As a consequence of the digital transformation of the communication sphere, parents, teachers and psychologists have reasonable grounds for concern about the digital environment, where young people spend so much time.

On the other hand, it should be noted that in the information society, the very principle of succession of generations as a process of traditional translation of values and knowledge from older generations to younger ones can be questioned, since in certain situations it is transformed into its exact opposite. Our in-depth interviews of the representatives of different generations found out that younger family members due to digital transformation often have better skills in working with digital technology and become a subject teaching older generations the skills to work with it. Thus, the digital environment in the everyday interaction of generations can play not only the role of the digital barrier, but, on the contrary, a communication channel. However, this process has negative aspects too, since the older generation lose their authority, and is perceived by the younger as "uneducated", "illiterate" and, therefore, unteachable. Thus, the narrative essays by the university students written on the topic of intergenerational relationships contained the following statements:

"Me and my family have mastered digital technologies quite well. There are no problems with the TV, as well as with a cell phone and a computer, but if you compare the operation speed, then of course parents do it much slower than me and my sister. Grandma and grandfather initially had great difficulties with mastering the new technology, so we had to make a lot of efforts to teach them. In principle, when you show them how it works, they remember, but if something breaks, they wait for me to fix it and there is always a small point in it, and this sometimes infuriates me" (M, 19 years old).

"My grandmother had difficulties in coping with a cell phone and I had to draw a diagram and a button to press on the paper sheet so that she could answer the call. She doesn't get along with computers at all. Mom and dad are more advanced in this regard, they can easily search information on the Internet, play various games, use social networks. Sometimes, when my dad has some difficulties he calls me and I try to tell him as much as possible what to do, but when he does not understand or says that there is nothing like this, I start to get irritated and explain even more in detail" (M. 21 years old).

"I always scold my parents when they dab with their fingers on a tablet instead of just touching it" (M. 19 years old).

Such a situation of loosing parental authority leads to that virtual environment and, first of all, social networks and virtual communities increasingly become the socialization environment. This impact can be both positive and negative.

Digital transformation in the context of generation dynamics can be illustrated on the basis of data obtained by us during the mass survey. Thus, the frequency of visiting the Internet by representatives of different generations is as follows (Table 1).

frequency of visiting the Internet	Respondents' age (years)					
	16-24	25-34	35-44	45-54	55-64	65 years and older
Every day	83.1	72.7	43.3	32.2	20.4	5.0
Several times a week	12.1	10.8	18.1	13.4	10.8	8.9
Occasionally	2.6	11.5	23.3	27.4	20.4	10.9
Do not virtually use the Internet	2.2	5.0	15.2	27.0	48.5	75.2
Total	100	100	100	100	100	100

Table 1.The frequency of visiting the Internet by representatives of different generations

(% of surveyed)

As can be seen from the data in the table, a significant proportion of representatives of the "digital" generation aged 16-24 years go online every day (83.1%) or several times a week (12.1%), whereas those using occasionally and virtually not using the Internet in this age cohort are the minimum amount (2.6% and 2.2%, respectively). As the age of the respondents increases, the reverse downward trend is observed: if among the 25-34-year-olds the percentage of people daily visiting the Internet is high (72.7%), then there is less than half (43.3%) among the 35-44-year-olds, less than a third (32.2%) among the 45-54-year-olds, the fifth part (20.4%) among the 55-64-year-olds, and only 5% among those over 65 years. Thus, it can be stated that a daily visit to the Internet is the norm of the lifestyle of young generations, but it is not characteristic of older generations.

It is important to note that the above trend, in our opinion, is indicative of the fundamental generational differences rather than of strictly age differentiation. To support this hypothesis, it is useful to cite the argument of R. Inglehart, who for several decades has been studying the shifts in the worldview of the population of many countries of the world from traditional values to secular-rational and from values of survival to values of self-expression (Inglehart & Welzel, 2005). Describing differences in the world view of different generations, he notes that in some situations it may be assumed that age-related differences reflect only the features of the person's life cycle, and not changes associated with the change of generations, i.e. that in old age all people attach greater importance to traditional values and values of survival. But in this case the hypothesis about the "life cycle" does not work. Inglehart argued reasonably that generations who acquire certain values at a young age, as a rule, do not lose them in later life. We cannot confirm our hypothesis with real research, since this will become possible only in a few decades, when the current "digital" generation will reach adulthood, but it can be assumed, similarly to Inglehart's data, that, as one grows up, members of this generation will not give up daily use of the Internet, since virtual reality is already an integral part of their lifestyle.

An important role in the formation of the identity of representatives of the younger generation under the influence of digital transformation belongs to social networks. According to the results of our study, only 4% of young people aged 16-24 years are not registered in any social network, whereas among 25-34-year-olds the proportion of those not registered in social networks increases immediately to 13%; 35-44-year-olds - 34.4%; 45-54-year-olds - 51.6%; 55-64-year-olds - 65.8%; and 88.1% of the elderly people over 65 years old are not registered in any social network.

4. SUMMARY

The digital environment has created fundamentally new conditions for the social identification, self-expression and lifestyle of young people, which have a dual character. On the one hand, it fundamentally changed the ratio of the private and public spheres of human life, which in turn led to the formation of new ways of identifying the individual: there is an increasing degree of individualization, the concentration of young people on their own style of life. On the other hand, communication in virtual reality provided young people with the opportunity to form their own individual style in the private sphere, which is largely predetermined by tastes and styles from the outside.

While the older generations, in an ubiquitous digital transformation, fail to control the actions of their children in the virtual space, both because of the individualized Internet practices of adolescents and young people, and because of the lack of digital competence of older generations. Parents are in fact

not ready to anyhow influence the activity of their children in the virtual space. The existing tendency to substitute the digital impact of the socializing influence of the family in the long term may lead to negative consequences and, in our opinion, needs to intensify the search for possible solutions.

5. CONCLUSION

Over the past twenty years, the structural and functional organization of Russian society has changed significantly under the impact of the market, scientific and technological progress, the development of information and communication technologies. A significant factor in these changes is the dissemination of the latest digital technologies, which bring many changes to the social landscape of Russian society. Some of them are the emergence of new types of social relations and practices based on impersonal virtual participation, the formation of new types of inequalities and social roles, the robotization and automation of public spheres, the virtualization of infrastructure in cities, the networkization of society, the formation of new concepts for urban development ("smart" city, "sustainable" city, "green" city). The study of the processes of digitalization of Russian society today obviously lags behind the needs of theory and practice. The proposed study is aimed at partially filling this gap, both in applied and general theoretical sense, by understanding digital intergenerational gaps.

Based on the empirical research data, the authors concluded that to date a digital divide has been formed between children, adolescents, youth and older generations in Russia. It is characterized by the lack / shortage of skills in the digital environment in the older generation. The development of information and communication skills among young people is associated with the growing virtualization of their routine life – work, study, leisure. Thus, the digital divide generates inequality in the digital skills and knowledge of the generations through different degrees of actors' involvement in virtual reality (Deursen & Dijk, 2014). Among the causes of the divide, scientists also pay great attention to the low digitization of the older generation during their education and/or work qualifications, as well as because their work and leisure were not related to the use of the Internet (Volchenko, 2016).

On the one hand, the digital environment in the everyday interaction of generations can play not only the role of the digital barrier, but, on the contrary, a communication channel. On the other, it undermines the authority of the older generation. Digitization generates new risks and anxieties in the intergenerational relationships – if parents were previously worried about "bad influence" - a manifestation of different kinds of deprivation from the external environment, in the era of digital transformation, new causes of parental alarms appeared, including the risks of digital extremism, cyberbullying, trolling, flaming, online recruiting by terrorist and extremist organizations, etc.

ACKNOWLEDGEMENTS

The work is performed according to the Russian Government Program of Competitive Growth of Kazan Federal University.

The reported study was funded by RFBR according to the research project № 17-46-160490.

REFERENCES

Castells, M. (2001) The Internet Galaxy, Reflections on the Internet, Business and Society. Oxford, Oxford University Press. 304 pp.

Castells, M., Himanen, P. (2004) The Information Society and the Welfare State: The Finnish Model. Oxford: Oxford University Press. 216 pp.

Deursen A.J. & Dijk J.A. (2014). The digital divide shifts to differences in usage. New media & society. Vol. 16. № 3. P. 507—526.

Eisenstadt, S. N. (1964) From Generation to Generation. Age Groups And Social Structure. London. 425 pp.

Howe, N., Strauss, W. (1991) Generations: The History of America's Future, 1584 to 2069. New York: William Morrow & Company. 544 pp.

Inglehart, R. & Welzel, Ch. (2005) Modernization, Cultural Change and Democracy: The Human Development Sequence, New York: Cambridge University Press. 323 pp.

Maksimova O.A. (2013) "Digital" generation: life style and construction of identity in the virtual space // Bulletin of the Chelyabinsk State University. No. 22 (313). p. 6-10.

Mannheim, K. (1952) The Problem of Generations, in: Mannheim, K. Essays in the Sociology of

Knowledge. London: Routledge and Kegan Paul, pp. 276-322.

Masuda, Y. (1983) The Information Society as Postindustrial Society. Washington. 171 pp.

Mead, M. (1970) Culture and Commitment. A Study of the Generation Gap. N.Y. 91 pp.

Palfrey, J., Gasser, U. (2008) Born Digital. Understanding the First Generation of Digital Natives. Perseus Books. 375 pp.

Prensky, M. (2001) Digital Natives, Digital Immigrants, in the Horizon: MCB University Press, Vol. 9 No. 5, October, pp. 1-9.

Tapscott, D. and Williams, A.D. (2007) Wikinomics: How Mass Collaboration Changes Everything. New York: Penguin, 320 pp.

Volchenko O.V. (2016). Dynamics of the digital divide in Russia. // Monitoring of the public opinion: economic and social changes. № 5. P. 163—182.