

Features of the mentality of generations X, Y, Z

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Abstract. The article presents a comparative study of the mentality of generations X, Y, Z. The following approaches to the study of mentality are considered: historical, psychogenetic, psycho-physiological, socio-cultural, informational. The socio-psychological approach is recognized as the most significant in comparative research of generations. Generations are carriers of a unique mentality. We have identified four types of mentality: traditional, transitional, innovative, and post-innovative. The structure of the mentality includes: archetypes, image of the world, way of life, styles of thinking, relationships, and interaction of generations. We assume that statistical differences will be found in the components of the mentality of generations. the study involved: 150 schoolchildren from the city of Azov; 210 students and young workers; and 245 working adults from the city of Rostov-on-Don. We used techniques: technique of generational identity; the technique determined the type of mentality. The results showed that mature people identified with the transition generation, students with the information generation, and schoolchildren with the new generation. In the mentality of the transitional generation, archetypes, relationships are traditional; the image of the world, the style of thinking and interaction are in innovation. In the mentality of the information generation, archetypes, image of the world, lifestyle and interaction are in the innovation zone; style of thinking and attitudes in the post-innovation zone. In the mentality of the new generation, the image of the world, lifestyle, style of thinking, interaction are in the innovation zone; archetypes in the transition zone, and relationships in the tradition.

1 Introduction

The interest to the problem of generations succession increases every day. The UN has included the problem of relations between generations in the fifteen global challenges of the modern world. The representatives of various scientific fields study the problem of generations [1, 2, 3, 4, 5, 6, 7, 8]. There is an obvious relevance of socio-psychological research of generations on the Russian material, to identify the difficulties and opportunities of building a constructive interaction between representatives of different generations. However, the debate continues. Generation is understood both as a real group, from the perspective of the classical approach and as a way of understanding the world from the perspective of the constructivist approach.

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The generation is a «symbolic community», not quantitative, but qualitative distinctness, that is united by common life experiences, with no clear chronological boundaries, and reflects the dynamics of the change of customs, manners, behavior types. The life path of generation is determined by historical events, changing of education methods, lifestyle changes and the system of relations, the sum of the values and life program [1, 2, 3, 4]. The generations theory is based on two main assumptions [7, 8]. First, the socialization hypothesis suggests that adults' values are formed in childhood and in early adolescence and that, these basic values stay relatively stable through life. Second, the social constructivist theory suggests that reality is socially constructed by individuals and groups and is formed in social interactions. Many authors attribute the age in the group with generations.

Contextually, some works reflect certain identification and typological features of generations of different eras. We emphasize the following approaches to the problem of generations: historical, psychogenetic, psycho-physiological, socio-cultural, cognitive, informational.

Historical approach can be seen in the works of Howe & Strauss (2007), which, through the method of historical reconstruction, determined the recurring character of four generational types in Anglo-American history, each of which has a clear collective person, and a corresponding cycle of four different types of era, each with a special mood [1].

Psychogenetic approach reveals questions of inheritance of general features of generation through the hereditary code. Murray Bowen defines the emotional symptoms of the family, the transmission of injuries and joyful events [9].

Psycho-physiological approach – Kitayama, King, Yoon, Tompson, Huff & Liberzon (2014) found out that the prefrontal region of the brain produces dopamine - a neurotransmitter that has different concentrations [10]. The dopamine gene is DRD4. This substance, as it was shown in his laboratory, has different concentrations in different cultures. It is responsible for the activity of cultural representatives. When we understand generations as a certain kind of culture, we can refer to this study.

In the **socio-cultural** approach, culture and social relations are the most important aspects of the interaction of generations. Twenge (2010), Campbell, Twenge, & Campbell (2017) found out in his study that narcissism is much more common than in past generations. Only 12% of adolescents in the early 1950s agreed with the statement "I'm an important person", but by the end of the 1980s, this figure had risen to 80% [3]. Livingston (2018) confirmed the research data [4].

Pishchik (2019) considers the change of generations mentality as a key factor [7].

Cognitive approach unites the authors with the main idea that generations are united by “collective memory” and “collective oblivion”. Collective memory is defined as memories of shared past that have all members of a group or community [11]. Mannheim (1998) believed that the events of life experienced in youth affect the subsequent life and will be similar in representatives of generations, as well as the rejection of unnecessary information. However, his ideas are criticized [2, 12]. At the same time, today it is the mass media that involve representatives of the generation in joint experiences.

Marcinkovskaya & Chumicheva (2015) writes that it can be assumed that at present the generation is united by common social ideas, value orientations and attitudes to the world [13]. Therefore, the most significant studies and results are associated with **socio-psychological** and **personality-oriented** approaches to the problem of generation. The authors look for foundations in the social identity of generations.

Today, the **information** approach is becoming widespread [14, 15, 16]. The younger generations are attributed to characteristics of the individual immersed in the information space.

The presented approaches to the problem of generations show the diversity of consideration of generation as a cultural phenomenon. Each approach focuses on the problem

of cultural, social, informational, genetic, behavioral, etc. continuity between generations. Howe & Strauss (2007) even suggest value cyclicity and repeatability in the succession of generations [1]. More modern studies show turning points that lead to changes in the trends of values in world culture [7, 8, 17, 18].

Generation has a cultural identity. It is interesting to study the features of the modern generations of Russians and repeatability of types of generations mentality. The question is what repeats and what is left unchanged in generations.

As the unit of generation analysis, we define its value-semantic integrity at the level of mentality, stressing on the socio-cultural approach to the definition of «generation». When a person shares the beliefs and values dominant in certain historical conditions, he is identified with a certain generation. We have defined a generation as community of representatives, born in a certain period and combined by experiences of specific historical events and bearers of a type of mentality [7].

We consider mentality in this sense as a complex system of overlapping senses, meanings, and values that guide the socio-psychological features of generations. The mentality is not an individual characteristics but a group one and is manifested at the group level.

In the organization of mentality we determine: super-systems (religion, ethnos and society), subsystem (image of the world and way of life) and the actual structure of mentality (components, constructs, items and contexts). The nuclear components of the mentality system (senses, meanings, values) are indirectly connected with the outside world through social and psychological characteristics. Socio-psychological characteristics are the periphery of the mentality.

The comparison of socio-psychological characteristics allowed to reveal different types of mentalities. We have identified four types of mentality: traditional, transitional, innovative and post-innovative.

The combination of stability in the image of the world, of collectivism in lifestyle and of dependence in communication involves a traditional mentality. The relationships between people are mediated by tradition. The combination of dependence in communication, readiness for the new lifestyle and instability in the world's image involves a transitional, crisis mentality. The relationships between people are mediated by breaking traditions.

The combination of dependence in communication, readiness for the new lifestyle and instability in the world's image involves a transitional, crisis mentality. The relationships between people are mediated by breaking traditions. The combination of instability in the way of the world, individualism in the lifestyle and independence in communication creates an innovative mentality. The relationships between people are mediated by innovative social action. The connection of independence in communication, conservatism in lifestyle and stability in the world image produces post innovation mentality that can change into traditional one under certain cultural and historical conditions. The relationships between people are mediated by departing from the innovation.

Generations, formed in different social and cultural conditions may differ by the dominant super-system, type, transformation orientation and socio-psychological characteristics of mentality. All types of mentality can be presented in every generation, but the dominant type is the one that was originally formed in certain social and cultural conditions.

We determined the following typology of generations (the difference in the generations is 18 years).

1. "Traditional, Soviet generation", years of birth 1946-1964, bearers of traditional mentality;
2. "Unbelieving, transitional generation", years of birth 1965-1983, bearers of transitional mentality;
3. "Information generation", years of birth 1984-2002, bearers of innovative mentality;

4. "New, network generation" (post-innovation- bearers of post-innovation mentality), years of birth 2000-2018.

5. "Generation of a global breakthrough", years of birth 2003-2040.

We assume that it is the transformation of mentality that leads to the movement of changes in generations. In the course of transformation, there is a change in the coordinates of the space of mentality-archetypes, values, meanings, values, space, time and its transition to a new qualitative type. This completely changes the socio-psychological characteristics of generations.

2 Materials and Methods

In our empirical research the sample was represented by the following groups of generations of the city of Rostov-on-Don: school student (born in 2004 – 2005 years) - 150 people, schoolchildren of Grade 9 and Grade 10, from secondary School № 1 in the town Azov; students (born in 1995-1999 years) - 210 people, students, young workers; adult people (born in 1965-1982 years) - 245 people, working adults.

With the help of Ivanova's modified methodological technique [19] we determined the generational identification of respondents. The subjects are assessed on a 10-point scale, to what extent they feel like a representative of the Soviet generation (whose values were formed in the era of the USSR); a representative of the transitional generation (whose values were formed in the era of perestroika, the collapse of the USSR); a representative of the post-Soviet ("New") generation (whose values were formed in the era of stabilization of the social and economic situation in Russia). The method allows you to evaluate personal identification with one of the three generations, to see how much a person relates himself to a particular generation, and the values of which generation are closer to him.

The results are presented in table 1.

Table 1. Average values of degree of identification by types of generations.

Generation	The degree of identification with generation			
	Statistics	Transitional	Information	New
People. working adults	Average	7.85	3.23	2.20
	Standard deviation	1.41	1.87	1.59
	Dispersion	1.99	3.50	2.53
Students	Average	5.78	5.13	3.83
	Standard deviation	3.44	3.15	2.51
	Dispersion	11.83	9.94	6.31
School student	Average	2.25	3.86	6.80
	Standard deviation	1.66	2.69	2.42
	Dispersion	2.767	7.236	5.858

The group of students included respondents aged 14-15 years. Since most of them identified themselves with the new generation ($X^2=142,614$; $p\leq 0,001$), they can be considered a fairly homogeneous group.

Identification with the information generation prevails among students ($X^2= 69,203$; $p\leq 0,001$), they can be considered a fairly homogeneous group.

The group of working adults belonging to the Soviet generation by year of birth, in the majority subjectively feels themselves representatives of the transitional generation ($X^2=123,684$; $p\leq 0,001$); $p\leq 0,001$), they can be considered a fairly homogeneous group.

To determine the type of mentality we used the technique of determining the type of mentality by Pishchik (2019) [7]. The scales of the technique include archetypes of mentality, features of the world image, lifestyle, thinking style, features of relations and interaction of generations. The technique gives the possibility to identify four types of mentality: traditional, characterized by traditional values, a stable image of the world, the collectivist way of life; innovation type that defines the independent, individualistic values, the changing image of the world, diverse way of life. Between traditional and innovative types of mentality is a transitional type, in which in equal shares are stable and changing components. After the innovative type of mentality goes post innovative, which is characterized by a more stable image of the world, little changing lifestyle. We suppose that then there is again traditional type of mentality but with other traditions.

We used the SPSS software version 22 for data analysis. The Mann-Whitney test (U) for independent samples proved hypotheses about the validity of differences.

Based on the presented problem, we put forward several research hypotheses: We assume that:

H1: there are statistically significant differences in archetypes, worldview, lifestyle, thinking style, relationships, and interaction between the transition and information generations.

H2: there are statistically significant differences in archetypes, worldview, lifestyle, thinking style, relationships, and interaction between the information and new generations.

3 Results

In the group of transition generation (Table 2) in a zone of tradition there are only the archetypes and the peculiarities of relationship to the work, yourself and others (the significance of the differences with other types of mentality at the level $p < 0.001$). Other components: world image, lifestyle, style of thinking and interaction peculiarities are in the zone of innovation.

Table 2. Components of generation mentality.

Type of mentality	Traditional			Transitional			Innovative			Post-innovative		
	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z
Generations	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z
Components of the mentality	M											
Archetypes	4.5	1	4	0.3	1.5	4.1	2	4.6	0.5	2	1.3	0.5
World Image	2.1	0.5	0.2	1	1.3	0.6	5	4.3	5	1.1	1.3	0.6
Lifestyle	4	0.7	0.3	0.1	0.5	0.7	4	4.6	4.5	2	4.5	0.2
Style of thinking	2	0.9	0.6	2	1.4	0.6	3.5	1.4	1.5	2	1.5	0.2
Relationship	5	1	4.6	2	1.2	0.4	1	1.3	0.5	2	4.4	0.5
Interaction	2.8	0.5	0.4	1.8	1	0.4	4	3.5	4.4	1	1	0.5

Where: U – the Mann-Whitney difference criterion, X – transition generation, Y–information generation, Z – new generation mentality.

The Transitional generation is preceded by the Soviet generation, which is the bearer of traditional mentality. Traditional mentality is characterized by collectivism, a stable image of the world, the typical way of life, homogeneous discourse. Transitional generation is

located between the traditional mentality of the Soviet generation and innovative mentality of the information generation, so we can see the combination of tradition and innovation in the components of the transitional mentality.

In the group of Information generation (Table 2) in the zone of innovation are archetypes, world image, lifestyle and peculiarities of interaction. In the zone of post innovation are thinking style, peculiarities of relationships (the significance of the differences with other types of mentality at the level $p < 0.001$). Therefore, Information generation has innovative mentality, which is characterized by individualism, the unstable image of the world, an active lifestyle and heterogeneous discourse. However, the next generation is a «New» generation, the bearer of post innovation mentality, so we assume that the information generation has the peculiarities of post innovation mentality.

As it can be seen from Table 2 in the area of archetypes transition mentality (the significance of the differences with an innovative and post innovative mentalities at the level of $p < 0.001$) and traditional mentality dominate (the difference with other types is not significant).

In the area of peculiarities of the world image, lifestyle, thinking styles and the interaction peculiarities dominates innovative mentality (the significance of the differences with other types of mentality at the level $p < 0.001$).

In the area of relationships peculiarities traditional mentality dominates (the significance of the differences with other types of mentality at the level $p < 0.001$).

Thus, innovative mentality on the whole dominates in a "New" generation. Transformation of mentality particularly affected the lifestyle, the image of the world, way of thinking and interaction peculiarities – here innovative type of mentality dominates, however, in the zone of archetypes and relationships peculiarities we can also see traditional mentality, and in the area of archetypes there is also and a transition one. In other words deep structures of mentality, such as archetypes, the system of relationships are more traditional. In general, the components of mentality of the "New" generation are fairly consistent.

Next, we determined the significance of differences in the expression of the type of mentality in the transitional and informational generations. The results are shown in table 3.

Table 3. Indicators of the significance of differences between the group of transition and information generations.

Criteria statistics ^a				
Criteria	Type of mentality			
	Traditional	Transitional	Innovation	Post-innovative
U Mann-Whitney Statistics	161.500	112.000	373.500	434.500
W Wilcoxon Statistics	791.500	437.000	1003.500	1064.500
Z	-4.171	-4.902	-.971	-.046
Asymptote. value. (bilateral)	.000	.000	.331	.963

a. Grouping variable: grouping variable

Hypothesis H1 is proved.

Next, we determined the significance of differences in the expression of the type of mentality in the informational and new generations. The results are shown in table 4.

Table 4. Indicators of the significance of differences between the group of information and new generations.

Criteria statistics ^a	Type of mentality			
	Traditional	Transitional	Innovation	Post-innovative
U Mann-Whitney Statistics	395.500	243.500	310.000	588.000
W Wilcoxon Statistics	2286.500	2134.500	563.000	841.000
Z	-3.020	-4.537	-3.779	-.862
Asymptote. value. (bilateral)	.003	.000	.000	.389

a. Grouping variable: grouping variable

Hypothesis H2 is proved.

4 Discussion

The goal of our research was to identify the repeatability of the structures of mentality types from the previous generation to the next one. We didn't find many such repetitions.

So, in this connection we think the following. In the development of personality and its nature, we observe two opposite processes or mechanisms: externalization and interiorization. Vygotsky (2003) believed that first external relationships between a child (the new generation) and an adult (transitional or information generation) are developed, and then they are interiorized [20]. Because personality traits represent the answers to life's difficulties, their manifestation is always associated with certain life scenarios. That is, if a situation arises in the cognitive scheme the appropriate assessment is actualized and a certain stereotyped behavior is stimulated and we see its manifestation. As a result, we see a transfer of life experience from generation to generation.

However, this explanatory scheme can be useful in the case if there is a direct transmission between generations (a direct transmission of cultural experience from generation to generation through the learning process). Codrington & Bush (2012) presented a study that showed that the younger the person, the less race and age are predictors of attitudes and behavior [21]. The young people of South Africa have more in common with each other than either of them has in common with their own parents. Similar studies carried out in Japan, Turkey [22] confirmed this result. Twenge (2010) conducted a study of young people, where he showed their fundamental difference in several positions (confidence, leadership qualities, motivation to achievement) [3]. Therefore, for the modern generations transmission is not direct. The results are comparable with the studies [4, 6].

The most difficult question is why there is a lot of repeatability in the structures of mentality between the information and new generations, but there is not repeatability at all between the transitional and information generations. We can assume that this is because the birth years of the representatives of the new generation in the sample are close to the birth years of the information generation. This phenomenon is considered in [5]. In families during the perestroika period in Russia, there was a split between the values that were transmitted by parents of the Soviet generation to the transitional generation. Mothers, who are the representatives of the transitional generation of that period, were very anxious and did not pass on traditional values to the information generation. We meet these ideas at work [6, 9].

Generations X and Y were formed in the information age [15], so they have many similar mental formations [16, 23, 24]. Hence, behavior models can be transferred not only by the

family, but for example, by mass media that can offer a repertoire of life scenarios. The approval of my choices from peers, for example on the forum, in a blog, in Twitter etc. determines in this case the choice of scenario, which in the future will be fixed in the general terms of the new generation in its mentality. This result is combined with the study [25, 26].

5 Conclusions

We have analyzed different approaches to the problem of generations. It was shown that the alternation of generations implies a certain continuity in various indicators: values, perceptions, behavior, collective memory, information, discourses. The construct is a very mobile formation. The boundaries of generations cannot be less than 10 years, since the formation of basic values takes place in adolescence.

The author's concept of mentality was proposed. Mentality is represented as a formation inaccessible to direct observation, but which can be deduced logically and built on the basis of observable features, which actually acts as a construct. In the system of mentality, the leading value-semantic and socio-psychological characteristics of generations are combined, aggregated (combining several elements into one whole). We understand the Transformation of the mentality of generations as a change in the coordinates of the space of mentality – archetypes, values, meanings, values, space, time and its transition to a new qualitative type. Mentality from these positions is the background of life, the context, the frame. Representatives of the generation inscribe their explanatory schemes of the world in the mental boundaries. It turns out that each new generation reproduces the mentality, but reproduces it in its own way, in a new way.

The empirical part of the research allowed us to find out the continuity in the structures of mentality in the information generation only in structure – interaction, which is in the innovative zone. The same is in the transitional generation.

The new generation has relations in the zone of traditions, as well as the transitional generation. We also found repetitions in the image of the world, lifestyle and interaction in the new generation and in the information generation. They are in the zone of innovation.

The dominant type of mentality of representatives of the new generation is innovative mentality, which dominates in the information generation. Innovation is the most sustainable in all generations in interaction. Presumably, interaction is associated with the general field of generations life. Transition and the new generation also have manifestations of traditional mentality. This may mean that children born in 2000 can't be fully attributed to the new generation, rather, they represent a transitional group, which has the features of both the previous and the subsequent generations, which makes them more flexible and adapted. Innovative mentality dominates in the way of life, world image, style of thinking and interaction features of the new generation. It has such social and psychological characteristics as independence from the group, instability, continuum of openness to experience and individualism.

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References

1. N. Howe, W. Strauss, Business, Medicine. Harvard business review **85(7-8)**, 41-52 (2007) <https://pubmed.ncbi.nlm.nih.gov/17642125/>
2. C. Rudolph, R.S. Rauvola, D. Costanza, H. Zacher, *Generations and Generational Differences: Debunking Myths in Organizational Science and Practice and Paving New Paths Forward* (2020) DOI: 10.31234/osf.io/yq64d
3. J.M. Twenge, Journal of Business and Psychology **25**, 201–210 (2010) <https://doi.org/10.1007/s10869-010-9165-6>
4. S. Livingstone, Journal of Children and Media **12(1)**, 118-123 (2018) DOI: 10.1080/17482798.2017.1417091
5. S.M. Campbell, J.M. Twenge, W.K. Campbell, Work, Aging and Retirement **3(2)**, 130–139 (2017) <https://doi.org/10.1093/workar/wax001>
6. E. Kufiyak, Procedia – Social and Behavioral Sciences **159**, 180–183 (2014) DOI: 10.1016/j.sbspro.2014.12.353
7. V.I. Pishchik, *The Mentality of generations in the fluid modernity* (Monograph).(INFRA-M Academic Publishing LLC, Moscow, 2019) doi.org/10.12737/monography_5ba0ee24675441.11909669
8. A.V. Miklyaeva, M.I. Postnikova, Social Psychology and Society **10(2)**, 114–126 (2019) DOI: 10.17759/sps.2019100209
9. J. Haefner, Issues in Mental Health Nursing **35(11)**, 835-841 (2014) DOI: 10.3109/01612840.2014.921257
10. S. Kitayama, A. King, C. Yoon, S. Tompson, S. Huff, I. Liberzon, Psychological Science **25(6)**, 1169—1177 (2014) DOI:10.1177/0956797614528338
11. J. Assmann, *Cultural Memories. Knowledge and Space (Klaus Tschira Symposia)* (Springer, Dordrecht, 2011) https://doi.org/10.1007/978-90-481-8945-8_2
12. D.M. McCourt, *Theory and Application of the “Generation” in International Relations and Politics* (Palgrave Macmillan, New York, 2012) https://doi.org/10.1057/9781137011565_3
13. T.D. Martinkovskaya, I.V. Chumicheva, Psychological research **8(39)** (2011) <http://www.psystudy.com/index.php/num/2015v8n39/1094-martinkovskaya39.html>
14. C.S. Marcum, L.M. Koehly, Advances in Life Course Research **24**, 10-20 (2015) <http://dx.doi.org/10.1016/j.alcr.2015.04.001>
15. T. Issa, P. Isaias, Information Processing & Management **52(4)**, 592-617 (2016) <https://doi.org/10.1016/j.ipm.2015.12.006>
16. V.I. Pishchik, G.A. Molokhina, E.A. Petrenko, Y.V. Milova, International Journal of Cognitive Research in Science, Engineering and Education (IJCRSEE) **7(2)**, 67-76 (2019) DOI <https://doi.org/10.5937/IJCRSEE1902067P>
17. G. Hofstede, Online Readings in Psychology and Culture **2**, 1-26 (2011) <https://doi.org/10.9707/2307-0919.1014>
18. R. Inglehart, *Culture Shift in Advanced Industrial Society* (Princeton University Press, 2018) DOI: 10.2307/j.ctv346rbz
19. N.L. Ivanova, T.V. Rummyantseva, *Social identity: theory and practice* (Social and Humanitarian University, Moscow, 2009) <https://search.rsl.ru/ru/record/01004373023> (In Russ.)

20. L.S. Vygotsky, *Psychology of human development* (Publishing house Smysl, Publishing house Eksmo, Moscow, 2003) <https://search.rsl.ru/ru/record/01002149598>
21. G. Codrington, N. Bush, *Future-proof Your Child: Parenting The Wired Generation* (Kindle Edition, SA Penguin, 2012) <https://www.goodreads.com/book/show/21391061-future-proof-your-child>
22. J. Marcus, S. Ceylan, C. Ergin, *Journal of Cross-Cultural Psychology* **48(1)**, 58–74 (2016) <https://doi.org/10.1177/0022022116673909>
23. I.V. Abakumova, E.S. Zorina, *International Journal of Cognitive Research in Science, Engineering and Education (IJCRSEE)* **5(2)**, 41-46 (2017) <https://doi.org/10.5937/IJCRSEE1702041A>
24. E. Suroedova, Yu. Tushnova, E. Belousova, E3S Web Conf. XIII International Scientific and Practical Conference “State and Prospects for the Development of Agribusiness – INTERAGROMASH 2020” **175**, 15028 (2020) <https://doi.org/10.1051/e3sconf/202017515028>
25. O. Nikolenko, L. Zheldochenko, N. Lomova, E3S Web of Conferences **175**, 15029 (2020) <https://doi.org/10.1051/e3sconf/202017515029>
26. G. Kozhukhar, A. Belousova, *9th International Conference on Education and New Learning Technologies* (Barcelona, 2017) doi: 10.21125/edulearn.2017.2311