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**AMBIVALENCE OF CONTRADICTIONS OF STUDENTS'
VALUES IN THE DIGITALIZATION OF EDUCATION**

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Abstract

The article discusses such effects of the axiological sphere of personality as mutual influence, coexistence, contradiction, ambivalence. The results of psychological monitoring of the value sphere of fresh men students for 8 years of observation are presented (sample of 1551 people, $M = 18.08$; $SD = 0.65$; 54 per cent of men). Four pairs of opposite personal values were diagnosed: "collective - individual", "spiritual - material", "radical - conservative", "process - result". Over the observation period, an upward tendency of ambivalence (uncertainty) by 10 per cent in the first three pairs of values was found, in the fourth pair of "process - result" ambivalence it increased by 27 per cent (from 20 per cent in 2013 to 47 per cent in 2020). We explain this by the increasing volume of informational impact on students in connection with the digitalization of the education system. The analysis of the degree of ambivalence of the above values in relation to the eco-psychological types of subject-environmental interactions "student - digital environment of the university" is carried out. It was found that with the object-subject type of student interaction with the spatial-subject component of the digital environment, the ambivalence of the student's personal values "self-development - stability" is higher than that with a resolved contradiction. That is to say with a passive position of the student in relation to the digital environment of the university; the ambivalence of personal values and a condition of uncertainty are greater.

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1. Introduction

Strengthening cooperation and increasing mobility in society promote to a more intensive exchange of values inherent in a particular culture. This leads to the emergence of various effects in the axiological sphere of the individual, for example, the polarization of values. For example, there are contradictions between such values as "collective" and "individual" as a preference for the interests of society or selfish interests.

The explanation of many of them is associated, according to Schwartz et al. (2012), with the prevailing value attitudes as a stable coordinate system that play the role of guiding principles in the life of a person and a group. In the understanding of Schwartz (1992), values make a motivational continuum, and "motivational differences between values can be viewed as continuous rather than discrete" (p. 45). He notes that the main groups of values are universal, interrelated and influence each other, and can contradict each other to a certain extent. This led to the appearance in S. Schwartz's theory of a circular structure of values with two bipolar dimensions of meta-values. The first dimension is the meta-values "openness to change" and "preservation" versus independence and obedience. The second bipolar dimension is the meta-values "self-development" and "self-transcendence", which describe the interests of one person in relation to the well-being of others (Schwartz, 1992).

The development of Schwartz's theory resulted in the emergence of research related to the refinement and expansion of the number of values. At the same time, researchers pay attention to the context of age differences in the perception of values. Increasing the relevance (Bardi et al., 2009) of any value is accompanied by a slight increase of compatible values and a decreasing the relevance of conflicting values. It is emphasized that intra-individual changes of values are not chaotic, but occur in such a way that the structure of values is preserved. The larger the scale of life-changing events, the more the change of a specific value is detected, while age is only a marginal negative predictor of value change when life events are taken into account.

Along with the universality of values (the value of security, etc.), there is also a value gap between generations of Russians. We can give an example - the independence of thought of young people and the independence of actions of the older generation, which is most likely caused by the various influence of digital technologies (Fedotova, 2017).

The change of the values of the personality structure in connection with the reform of modern Russian society, as an objective component of the social situation of personality development, draws attention in the studies of Molchanov (2005). He notes the increase of value contradictions common to modern Russian adolescents and young men, in which an individualistic focus on personal achievement conflicts with a collectivist concern for social well-being. The resolution of this contradiction is associated with the development of forms of cooperation and collaboration with other people in significant activities.

Kim Ji-An (2020) discusses the emergence of dual values as the coexistence of traditional and new cultural values, such as "collective attention and personal attention", "humanism and materialism", "authoritarian and egalitarian", "special care and attention". One of the effects of the value sphere is the ambivalence of values as their equal importance to the individual. How the behavior of a person is formed with equivalent life guidelines?

Fisch (2017) discusses the ambivalence as "paralyzing indecision" or "the possibility of the impossible". He notes that the creative result of normative ambivalence is to keep the two tense options in an unstable and initially unnatural equilibrium that crystallizes over time into a twofold, mutually enriching whole. He raises the question of the willingness and ability to live creatively in indecision between contrasting normative options, to overcome incongruous and initially ambivalent normative differences, resisting the temptation to resolve them and trying to somehow combine them into interesting, albeit tense, wholes larger than their parts.

Currently, we assess the value changes in society and the views of the individual from the point of view of the impact of digitalization processes that qualitatively change a person's life. The digital transformation of all spheres of life, on the one hand, develops and expands the possibilities of human realization, and on the other, as Luksha et al. (2020) writes, it leads to a rash rethinking of the game's rules of our civilization and the prospects of our future on Earth. Luksha et al. (2020) emphasizes the diversity, sometimes paradoxicality of human interactions, focusing on the need to understand the surrounding world as an ecosystem: ecosystem of an enterprise, a city, an education. Participation of many interested parties in an ecosystem makes it multifaceted and many-sided. But, on the other hand, the growing complexity of the world, its multilevel and heterogeneous development gives rise to an increasing uncertainty and ambiguity in understanding what is happening. Researchers determine the index Uncertainty avoidance (Hofstede, 2010) as indicators of tolerance and intolerance to uncertainty (Kornilova & Chumakova, 2014)

As we can see, many researchers indicate the possibility of contradiction and coexistence of opposite values. However, there are not enough studies of uncertainty in connection with the axiological sphere, namely the ambivalence of opposing personal values, which makes this topic relevant.

2. Problem Statement

The study of changes in students' personal values over 8 years of observation has shown that the ratio of the expression of values and contradictions in the value sphere have regularities due to changes in the social situation of development. It is known that the assignment of values by an individual occurs as a result of the interaction of the individual with his environment (Zhuravleva, 2013). The hierarchy of values plays a special role in the personality's development (Schwartz & Bardi, 2001). Moreover, at the student age, the presence and resolution of contradictions in the value sphere is relevant (Buravlyova, 2011). Thus, in the sample of students, the tendency of the predominance of the values of individualism over collectivism is emphasized, which is partially confirmed by our research (34 per cent of students with a predominance of individual values compared to 15 per cent with collective). However, almost half of the students have an ambivalent (unresolved) condition of contradiction (Kaptsov, 2012), which remains unattended when using Sh. Schwartz's method of diagnosing personality values (Karandyshev, 2004). And the value component in decision-making plays a significant role and distinguishes, according to Kornilova (2016), the concept of "awareness" from "information", to which value is added when it is processed in the "intellectual cycle".

In the case of an unresolved contradiction in the value sphere of the individual, the decision-making situation does not promote, but only exacerbates the growth of uncertainty. In this regard, the problem of identifying the factors of changing the ambivalent condition of value contradictions in the minds of students

arises. Among the factors that determine the dynamics of the value sphere of the individual are interactions with the social environment, which has recently been experiencing intense digitalization.

3. Research Questions

The subject of this research is the study of the dynamics of ambivalent conditions of contradictions in the value sphere in relation to the eco-psychological types of interaction "student - digital educational environment". The study set the following tasks: to reveal the dynamics of changes in personal values and contradictions in the value sphere of students over 8 years of observation; to determine the eco-psychological types of students' interaction with the components of the educational environment of the university; to determine the relationship between the dynamics of ambivalent conditions of contradictions in the value sphere of students with the severity of eco-psychological types of interaction with the digital educational environment.

4. Purpose of the Study

The aim of the study was to identify the relationship between the level of the ambivalent state of contradictions in the value sphere of students and the severity of eco-psychological types of interaction with the digital educational environment of the university. The values included in the set of a pair according to the principle of opposition are recognized as ambivalent if the indicators of their expression have the same values. If the measure in the set of a pair of values differ from each other, then the opposite (inconsistency) is considered allowed in the direction, the indicator of which value has the greatest measure. The severity of eco-psychological types in this work is understood as the relative frequency of preference for each type in comparison with the possible preferences of other types.

5. Research Methods

The study was conducted from 2013 to 2021 during the implementation of psychological monitoring of fresh men students. The study involved 1,551 people ($M = 18.08$; $SD = 0.65$; 54 per cent men) on average about 200 people per year. To diagnose the value sphere, the author's test of the axiological orientation of the personality of ANL4 was used. This makes it possible to determine four pairs of opposing personal values: "collective - individual", "spiritual - material", "radical - conservative", "process - result" (Kaptsov, 2012); as well as a methodology for assessing the types of student interaction (Panov, 2020) with the three components of the digital educational environment (spatially-subject, communicative and technological) (Domestic eco-psychology..., 2020, p. 205).

In each sample in the diagnosed pair of opposite values, the relative number of students with an ambivalent and resolved condition of value contradictions was calculated separately, and a linear approximation was constructed. In the last sample (freshmen of 2020), differences were revealed between the frequency of preference for eco-psychological types of interaction among students with a resolved and ambivalent contradiction (Mann-Whitney's test).

6. Findings

Based on the data given in Table 1, it can be seen that the largest amount of the ambivalent condition of contradictions in the value sphere is mainly in the first two contradictions: "collective - individual" and "spiritual - material", and the smallest - in the "process - result" contradiction.

Table 1. The relative amount (per cent) of the ambivalent condition of contradictions in the value sphere

Year	N	«collective - individual»	«spiritual - material»	«radical - conservative»	«process - result»
2013	192	51	49	51	20
2014	128	55	43	52	33
2015	249	57	45	47	40
2016	136	53	43	49	39
2017	128	55	53	52	38
2018	267	52	54	48	36
2019	92	60	52	47	35
2020	359	59	55	49	47

It is noticeable that the values of ambivalent conditions are of an oscillatory nature, for example, with the minimum values in 2016. Nevertheless, linear approximation is inherent in the growth of the ambivalent condition of the "collective - individual" contradiction ($t = 2.83$ at $p = 0.03$). This actualizes the consideration of the correlation of personal interests with the conditions of the environment in which they are located - with eco-psychological types of interaction with the educational environment of the university.

The following differences were revealed in the types of interaction "student - digital environment of the university". With the subject-generating type of interaction in the communicative component, less influence of the type is revealed and the ambivalence of the contradiction "collectivity - individuality" is less common ($U = 4181.50$ at $p = 0.04$).

In the absence of interaction in the communicative component of interaction with the digital environment and with the object-subject type in the technological component, the ambivalence of the contradiction "radical - conservative" ($U = 4250.0$ at $p = 0.03$), is less common. More often ambivalence occurs with the subject-isolated type in the technological component ($U = 4545.50$ at $p = 0.04$). The introduced additional set "self-development - stability" revealed new results. In the spatially-objective component with the object-subject type, the ambivalent condition of this value contradiction ($U = 3954.50$ at $p = 0.03$) is more common and less common with the subject-generating type ($U = 3750.00$ at $p = 0.003$).

7. Conclusion

The obtained results show that the ambivalence of personal values is made in all components of the digital educational environment. This conclusion is important for stating the equivalence of the contribution of the components of the educational environment to the formation of the competencies of students at the university. The objects through which informational influences are carried out (spatial-object component), along with communicative-digital means (communicative) and instrumental digital actions (technological

component), are important. That is, the educational environment of the university appears as an ecosystem of instrumental (not living) and subjective (people) interaction.

However, the spectrum of influence of eco-psychological types on the manifestation of the ambivalence of personal values is ambiguously subjective. It turns out that the influence is also exerted by the object-subject type of interaction (the influence of the environment on the student without his activity) and even the absence of interaction (more precisely, the influence of the digital environment is present, but it is invisible for the student). At the same time, we see that the passive position of the student in relation to the digital environment of the university is associated with the ambivalence of some personal values and the condition of uncertainty. It is important to correctly direct the process of axiogenesis so that it is constructive and the interaction of opposing values does not stop the students' development.

Characteristically, the influence is established for individual diagnostic sets of pairs of opposite values ("self-development - stability", "collectivity - individuality" and "radical - conservative"). The results do not contradict the axiological sphere described by other researchers, especially about the strengthening of the individualistic position of young people in the value of "collectivity - individuality".

Thus, it has been revealed that each of the contradictions in the value sphere has its own dynamics of changes over time. During the period of research the ambivalence of contradictions is growing. Eco-psychological types of subject-environmental interactions in the system "student - digital environment of the university" are associated with the process of the formation of personal values and their ambivalence. Exactly with the object-subject type of student interaction with the spatial-subject component of the digital environment, the ambivalence of the student's personal values "self-development - stability" is higher than with a resolved contradiction. That is, with a passive position of the student in relation to the digital environment of the university, the ambivalence of personal values and, accordingly, the level of the condition of uncertainty are greater. With active interaction with the digital environment (subject-generating eco-psychological type), the ambivalence of the student's personal values "self-development - stability" is lower than with a resolved contradiction. We can say that educational cooperation and collaboration reduces the level of uncertainty.

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