SCIENTIFIC RESEARCH OF THE SCO COUNTRIES: SYNERGY AND INTEGRATION 上合组织国家的科学研究:协同和一体化

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# 上合组织国家的科学研究:协同和一体化 国际会议

# 参与者的英文报告

# International Conference "Scientific research of the SCO countries: synergy and integration"

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这些会议文集结合了会议的材料 - 研究论文和科学工作 者的论文报告。 它考察了职业化人格的技术和社会学问题。 一些文章涉及人格职业化研究问题的理论和方法论方法和原则。

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#### 如何提高管理机构决策的质量 HOW TO IMPROVE THE QUALITY OF DECISIONS MADE BY MANAGEMENT BODIES

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抽象的。 提出\*最佳解决问题的方法、\*最佳项目、\*最佳专家、\*最佳外观版本的过程中直观协调集体选择的方法。 同时,专家们:不知道谁参与了调查; 不知道是谁做了什么决定; 他们不知道是谁和什么为他们的决定辩护,也可能不知道专家调查组织者的真正目标。 同时,专家可以通过模拟建模得到所需指标分布的统计特征。

关键词:专业知识,直觉一致的选择,Kemeny 距离和中位数,模拟,统计特征

Abstract. The method of intuitively coordinated collective choice in the process of examination of \*the best way to solve the problem, \*the best project, \*the best expert, \*the best version of the appearance is proposed. At the same time, the experts: do not know who participates in the survey; do not know who made what decision; they do not know who and what justified their decision, and may not know about the true goals of the organizers of the expert survey. At the same time, experts can obtain, as a result of simulation modeling, statistical characteristics of the distribution of the desired indicator.

*Keywords: expertise, intuitively consistent choice, Kemeny distance and median, simulation, statistical characteristics* 

**Introduction.** Previously, we have shown (see, for example, [1, 2]) that NO ONE, including decision makers (DM) at all levels of power structures, can avoid mistakes when solving complex extraordinary problems. And the higher the level of decision-making, the greater the social and economic damage to the population of the country will bring an erroneous decision of the decision maker. And the whole history of the development of human civilization, unfortunately, confirms this conclusion.

Let's suppose now that decision makers are \*sincerely interested in the growth of the country's GDP and in improving the living standards of citizens, but, as a rule, \*do not have sufficient competence to choose the best way to solve problems that arise in the management of decision makers. In this case, decision makers are forced to turn to experts in a particular subject area, hoping for their help in choosing the best solution. However, even in this case, the decision maker may unexpectedly encounter a number of difficulties that will negatively affect the quality of the decision made. After all, even if the formation of a database containing information on the composition and skill level of leading specialists in various subject areas is carried out according to the methodology described in Problems will be faced by persons: \* incompetent, \* not fully interested in obtaining an objective, most reliable result, \* dependent (in a broad sense) on the organizers of the examination, \* competing with each other in various aspects, not even related to the problem being solved, \* negative or even hostile towards each other.

**1.** A list of tasks that need to be solved. Let's suppose that the management structures of various socio-economic systems - the government of the country, the governing body of an administrative-territorial entity, the board of directors of a large company, etc. - ordered well-known specialists to develop a project aimed at solving a complex problem that is relevant for large groups of the population. In pursuance of the order, n groups of specialists presented their *projects* (*ways, methods, algorithms*) for solving a specific problem (*economic, technical, military, environmental*, etc.).

**[Examples** of such, permanently requiring the solution of complex socio-economic problems: In what ways (promptly and with minimal expenditure of labor, material, energy and financial resources) \* improve the standard of living of the population; \* budget revenues, \* achieve higher GDP growth, tax revenues; or \*improve the competitive market position of one of the largest (in the country, world) banks, enterprises, etc.]

The question is, *which* of the *n* presented *methods for solving an actual problem* is optimal according to the established criterion in specific implementation conditions? And how is it right, objectively, reasonably to establish? After all, the projects were prepared by different groups of specialists, with *different professional competence, different creative abilities, with different ambitions and different degrees of interest in* the results of an objective solution to this complex problem. And at the same time, each of the n groups is convinced that it is the project prepared by it that is the best, most effective.

Now for the top-level system - *the government, the ministry, the board of directors*, etc. - it is necessary to choose from n ways to solve an actual problem the best one according to the established criteria. But to do this is not at all easy.

What difficulties arise in the implementation of the *selection procedure*? First, when choosing *any* of the *n* competing methods of solving the problem, among the developers of the *rejected projects* and their supporters there will be dissatisfied with the *result of the choice of experts* - according to the well-known proverb:

"Who are they to judge us?!", i.e. The first difficulty is the selection of the composition of experts for the comparative evaluation of competing projects according to the criterion established by the customer of the project. After all, expertisereviewing of projects should be carried out by competent, talented, responsible people interested in the optimal solution of the analyzed problem. But such people still need to be found! Secondly, today there is no unambiguous understanding of what the procedure for assessing the correctness, objectivity, and effectiveness of a particular method of solving complex problems should be. Therefore, the second difficulty is the search for a procedure for the formation of a collective choice in the process of examination. And the authorities of all levels have to deal with such difficulties on a regular basis. At the same time, an error in the choice, as a rule, is associated with very significant losses of the resources invested in the implementation of the project: with a possible decrease in the standard of living of the population, the bankruptcy of a company, an increase in unemployment, a waste of resources, etc.

Let us represent the task of comparative evaluation and choice of a method for solving a complex problem as a set of individual tasks. **Task 1.** - Formation of the composition of expert reviewers of ways to solve the problem. **Task 2.** - Analysis and ranking of factors affecting the implementation processes and the effectiveness of each of the presented projects (methods) for solving the problem under consideration. **Task 3.** - *Quantitative assessment* for each project (method of solving the problem): \* the cost of labor, material, energy and financial resources for the implementation and implementation of projects; \* the time from the moment of investment to the return (time lag, delay); \* economic efficiency of projects. **Task 4.** Analysis of the results of a comparative quantitative assessment of indicators characterizing the effectiveness of the presented methods for solving the problem (the results of solving Tasks 2 and 3) and implementing the procedure for choosing the best method.

The article proposes a method for *the formation of an intuitively agreed collective choice* ("IAC choice of the best solution") with a *comparative expert assessment* of the effectiveness of the methods proposed by various groups of specialists for solving a complex problem. The procedure for choosing the best method involves the implementation of two stages: at the first stage, experts with professional competence and creativity are selected, and at the second stage, the formation of an agreed collective choice in the process of examination.

**2.** Formation of the composition of experts (Task 1). Tasks related to the selection of experts for a comparative assessment of the effectiveness and validity of the proposed methods for solving complex problems arise quite regularly. Therefore, it seems appropriate to create a (centrally) unified database (DB) containing information about potential participants in such examinations. The information

presented in the database may include *open information* about publications on a certain topic, the number of citations of the expert's work, the experience of successful participation in examinations, etc. Moreover, when creating such a database, the algorithms described in [3, 4] can be used.

Let us assume that the necessary subset of potential experts has been formed. Here are the next steps:

**2.1.** The created subset of examination participants (reviewers of competing projects) is divided into two groups: the first subgroup **G1** develops *quantitative estimates* of quality characteristics for each of the projects - solves Tasks 2 and 3, and the second **G2** - *analyzes the results* of the examination and *selects* the best project, i.e. solves problem 4.

**2.2.** Subgroup G1 *is expanding* to conduct a collective quantitative examination of projects by joining n groups of specialists who presented their projects (methods for solving the problem under consideration).

Let us list the advantages that arise when all developers of competing projects are included in the G1 subgroup. *Firstly*, each of the developers, as a rule, knows the features of his project quite well and therefore will be able to *reasonably supplement the composition* of the factors affecting the effectiveness of the project, *indicate the advantages* and *refute the noted shortcomings* of his project, i.e. will be able to actively, often unconsciously participate in the solution of Tasks 2 and 3. *Secondly*, since the developers, participating in the examination, know both all the justifications of the experts presented in defense of very different answers, and the results of processing the answers after each round of surveys, it significantly *decreases the likelihood of criticism* of the results of the examination.

**2.3.** All *N* participants of the examination (formed from *n*, **G1 and G2** groups) are assigned identifiers using a table (or sensor) of random numbers and provide free access to the Internet.

**3. Identification and ranking of determining factors (Task 2).** At the first stage of the examination, it is necessary to identify and streamline the factors that affect the implementation processes and the effectiveness of each of the n projects. But how to do that? Which of the known examination methods should be used?

It seems to us that the use of the PURO method [5, 6] is quite justified - a step-by-step refinement of the ranking of objects (factors, features, subjects, indicators, etc.), based on the integration of the Delphi procedure for predicting the future (developed by O. Helmer, N. Dolki , T.J. Gordon) with the proposed J. Kemeny (Kemeny J.G.) estimate of the distance and median between the rankings of factors-objects.

**3.1. The procedure for classifying (grouping) participants in an expert survey.** Let us now assume that the step-by-step ordering of the set of factors has been successfully completed. The matrix of Kemeny distances between all rank-

ings of experts is obtained. The question is, how, if possible, to correctly identify the *agreed groups of experts' answers*?

Let us consider the *procedure for searching for consistent groups* of experts' answers (*classes of experts*) and choosing a *consistent ordering* of answers for this selected group.

Let a group of n experts obtain Kemeny distances between rankings {dij} as a result of a step-by-step ordering of a set of m objects (projects, solutions, etc.).

Step 1. Convert the elements of the distance matrix into relative units using the formula  $d_{ij}^{0} = d_{ij}/d_{max}$ . The maximum distance between factor rankings is  $d_{max} = m(m-1)$ . We get the Kemeny distance table in relative units  $\{d_{ij}\}$ .

Step 2. Based on the actual degree of agreement between the experts' answers, select the threshold value of the distance  $d_{non}$ .

Step 3. Let us transform the matrix of relative values of the Kemeny distance  $\{d^{\theta}_{ij}\}$  in accordance with the chosen threshold value  $d_{nop}$ . In the process of such a transformation, each value  $d^{\theta}_{ij}$  is compared with  $d_{nop}$  and if  $0 < d^{\theta}_{ij} \le d_{nop}$ , then 1 is set, otherwise 0.

Step 4. A ranking is searched for that is most consistent with the *selected group* of related answers. Moreover, the consistent ranking should be the point most consistent with the set of possible orderings. However, with a sufficiently large number of experts, the calculations can be significantly simplified if we focus only on the answers of the participants in the examination. After all, if the sample is large enough, then the probability of obtaining the desired consistent ordering is very close to one. For this purpose, the values  $\Sigma d_{ij}$  and  $\Sigma d_{ij}^2$ , are calculated. Ranking of an expert whose value is  $\Sigma d_{ij}^2$ , minimum is considered to be the most consistent with the selected group of answers.

**3.2. Evaluation of the novelty and prospective usefulness of the method:** *The novelty of the method:* 1) The Delphi procedure is used when ranking objects - factors, signs, phenomena, etc. (and not to predict the future). 2) For quantitative analysis of the degree of convergence of expert opinions after each round of surveys, identification of agreed groups of experts and assessment of the feasibility of completing the examination, the Kemeny distance (a measure of proximity on linear order relations) is used, and the Kemeny median is used as the resulting ranking. 3) For the grouping of experts (examination participants) who may have similar views on the ranking options for the objects under consideration, threshold values of the Kemeny distance between the answers of experts are set, based on the *probability of coincidence* of expert opinions, for example, close to 0.8; 0.9; 0.95; 0.99. 4) To search in each of the formed groups of experts, the *most consistent* ranking (ordering) of objects with the members of the group, the Kemeny median is calculated.

Advantages of the method: 1) Correctness of the method (the theorem on the correctness of the calculation of the median was proved in 1978 - "the Kemeny

median is the only resulting strict ranking that is neutral, consistent and condorset"); 2) Increasing the accuracy of the results of the examination due to the presence of feedback during the implementation of each subsequent round. 3) When using step-by-step refinement of object ranking, the well-known advantages of the Delphi procedure (anonymity and the ability to familiarize yourself with the explanations presented in defense of very different answers) and the search algorithm for a consistent ordering of objects are preserved - the correct calculation of the median and Kemeny distance. 4) The joint use of both the Delphi procedure and the approach proposed by Kemeny to order objects made it possible: \*to obtain a meaningfully acceptable quantitative criterion for a reasonable completion of the examination - a certain value of the relative (for example, 5%) change in the total distance of Kemeny is established. \*to form groups of experts, focusing on the selected (depending on the degree of agreement of opinions) threshold values of the Kemeny distance and explore the reasons for the relationship of expert assessments. \* find the ordering of objects most consistent with the members of each group of experts by calculating exactly or approximately the Kemeny median, 5) The method of stepwise refinement of the ranking of objects, being simple and correct, has no restrictions on the number of participants in the examination.

*Approbation and use of the method*: The method has been successfully tested \*when solving various applied problems; when performing scientific research, incl. for ranking objects in any subject area, for highlighting determining factors, features, indicators; when comparing and choosing a design option, when comparing software tools according to the criterion "Ease of maintenance and maintenance", etc.

4. Quantification of costs and effectiveness (Task 3). For a comparative assessment of the values of indicators characterizing the usefulness and effectiveness of the analyzed methods of solving the problem, it is proposed to use the method of stepwise refinement of the values of various indicators with an assessment of the characteristics of the distribution of HSS-OCR [7-9].

4.1. Description of the method. The method is focused, firstly, on the use of a multi-step procedure, at each step of which simulation is carried out, and, secondly, on the integration of the Delphi method with expertise aimed at obtaining a generalized opinion of a group of experts about the possible range of values of the desired indicator.

Let's assume that the integration with the Delphi method is implemented. But, one wonders, how to determine that the collective opinion has stabilized and it is time to stop further polls? What is the probability, for example, that a certain value of the desired indicator will not be exceeded? What is the probability that the value of the indicator will be within the given confidence limits? The list of such questions could be continued.

To answer the questions, the following operations are implemented: The estimates of each i-th expert at the **j-th** step  $\mathcal{P}_{i}^{(j)}$  are approximated by uniform (if the expert indicated two values of the indicator) or triangular (if three values were indicated) distributions. The generalized collective opinion of  $\mathbf{n}$  experts on the desired value of the indicator is determined as the average of n random variables having a uniform or triangular distribution by implementing at each k-th step of the simulation the *function*  $\mathcal{P}^{(k)}_{a,a} = (\Sigma \mathcal{P}^{(k)}_{a,a})/n$ , (*i* $\in$ *n*). As a tool for the implementation of simulation modeling, a software product is used [10, 11], which makes it possible to build a simulation model with minimal labor costs (in an automated mode). As a result of simulation modeling, at each k-th step, statistical characteristics (mathematical expectation, variance, coefficient of variation, kurtosis, asymmetry) and distribution (table and histogram) of indicator values are obtained - functions  $\mathcal{P}_{ab}^{(k)} = f(\mathcal{P}_{i}^{(k)})$ . After each step (peer review cycle), the panellists are presented with the explanations presented in defense of the widely differing estimates of indicator values and are asked to change their previous answers if they wish. At each next j-th step, the change in the values of the coefficient of variation  $K^{(j)}_{var}$  of the function  $\mathcal{P}^{(j)}_{ar}$  is estimated. If the coefficient of variation deviates from the previous value, for example, by 5% or less, it can be considered that the experts' assessments have stabilized and it is advisable to complete the examination. Based on the simulation results, at the last step, the confidence limits of the indicator values and the probability that its values will be more or less than a certain number are estimated.

Automated synthesis of simulation models in the process of implementing the algorithm allows you to repeatedly reduce the cost of labor resources to obtain the desired values of indicators.

**4.2. The procedure for classifying (grouping) participants in an expert survey.** When using the HSS-OCH algorithm, it is possible to determine how the answers of the expert group participants are interconnected, what is the degree of this relationship, and what factors influence the existence of such a relationship (does the level of education, place of work, specialty, work experience, features of the object of analysis, etc.)

**4.3. Evaluation of the novelty and prospective usefulness of the method:** The novelty of the method. 1) Integration of the Delphi procedure, commonly used to predict the future, with expertise aimed at obtaining the value of the desired indicator; 2) Implementation of feedback during the examination process by informing expert experts about the results of the previous step; 3) The use of a program of successive steps, each of which implements a full cycle of examination; 4) Approximation of the estimates of each expert, represented by three values of the desired indicator (minimum, maximum and most probable value) by a triangular distribution, and represented by two values (minimum and maximum) by a

uniform distribution; 5) Using simulation to determine the generalized collective opinion of n experts as the average of n random variables having a triangular or uniform distribution (opinions of n members of the expert group); 6) Obtaining estimates of statistical characteristics (mathematical expectation, variance, coefficient of variation, kurtosis, asymmetry) and the distribution of the values of the desired indicator (in the form of a table and a histogram); 7) The ability to determine the probability that the values of the indicator will not exceed a specific value or fall within a given range of values.

Advantages of the method: 1) Increasing the accuracy of the examination results due to \*the presence of feedback during the implementation of each subsequent round; \* providing the expert with the opportunity to indicate three or two values of the desired indicator; \*determining, based on the results of simulation modeling, the probability that the value of the indicator will fall within the specified range of values. 2) Reducing the psychological burden on the expert and the negative impact on the results of the examination of the presence of bosses and ambitious personalities, since anonymity is maintained, and the experts do not communicate with each other and do not know who gave a specific justification in defense of very different indicator values. 3) Representation of the total distribution as an average (mathematical expectation) of the sum of triangular or uniform distributions of estimates of individual experts makes it possible to obtain the resulting distribution of indicator values even if experts indicate two or three values and a large dispersion of estimates. 4) Identification of spontaneous groupings of experts, whose estimates are close relative to the desired values of the indicator, makes it possible to investigate the reasons for the formation of such groups. The formation of expert groups is carried out on the basis of a given threshold value of the probability of a specific range of values of the predicted indicator.

Using the method. The method is widely used both in scientific research and in the educational process. Thus, the economic feasibility of applying the method for estimating the values of demand for a specific product, the time of performing a specific operation of a business process, losses from possible unfriendly sanctions of competitors, the time spent on hacking an information system, the predicted time for solving a problem, estimating the total cost of owning durable objects, to assess the economic damage from the implementation of threats to the security of the enterprise, etc.

To solve problem 4, you can use the PURO method and its modifications.

Conclusion. Method "ISC choice ...". Features and benefits. It seems to us that such a formulation of the name of the method is quite justified for a number of reasons. Firstly, because no one, neither the organizers of the examination, nor the participants in the expert survey themselves know what the answer to the question posed by the organizers of the examination should be, and what is the probability that the answer is reliable. Secondly, no one, neither the experts nor the organizers of the examination, know who substantiated their answer and how. Thirdly, no one knows how many steps the examination will take. Fourthly, no one knows what the average level of competence of a randomly formed group of experts is and how the reliability of the result depends on the number of experts participating in the survey. Fifth, no one knows whether there will be a relationship between individual experts (in terms of the level of similarity of answers) and how strong it will turn out to be. Therefore, in the conditions of almost no information for an objective quantitative assessment of the result of interest to the decision maker and with an unknown value of its error, we can only talk about an intuitively agreed collective choice of the best solution - when choosing the best project according to a certain criterion, the best forecast (minimum error), for example, the value demand, when choosing the optimal composition of importers and exporters according to the criterion of minimum damage to the country if the importer refuses to purchase or the exporter refuses to supply goods, etc.,

Indeed, many years ago, we accidentally discovered in the process of searching for a subset of determinants in the construction of regression models that all members of one of the numerous groupings of survey participants (using the method of stepwise refinement of the ranking of objects) not only almost accurately predicted the composition of the determinants, but even correctly foresaw ranks of b- coefficients characterized by the ratio  $b/\sigma_{bi}$ . Moreover, the members of this group \* did not communicate with each other, \* lived in different cities and \* did not know that they were jointly participating in surveys. Thus, it turned out that some spontaneously formed group of specialists had greater competence than other groups. But, unfortunately, it was possible to discover, identify such a group only after a retrospective analysis of an already solved problem (see Explanation in [1]). True, similar results were obtained by us in solving many other problems. Often, after some time, in the process of instrumental quantitative research, it was unexpectedly discovered that earlier (using the intuitively agreed collective choice of the best solution) the optimal way to solve a complex problem had indeed been found. So, after as a result of repeated application of the PURO method from thousands of indicators characterizing the state and dynamics of the economies of the countries of the world (World Bank database), it was possible to isolate a limited subset of the determining factors-indicators from the initial set of large power and only then build more than 2- x dozens of regression models for predicting the dynamics of the country's GDP and life expectancy of citizens (moreover, models with a surprisingly good assessment of their significance according to standard statistical criteria -  $R^2_{ckodd} \approx 0.9$ ; Fkp>>100,  $b_i/G_{bi}$ >>2 [12]). At the same time, the calculation of errors using simulation showed that the average error of the response functions over a 10-year forecast period for the countries under study is less than 5% with a lag of independent variables from one to 3 years,

Comparative advantages of the proposed method of forming an intuitively agreed collective choice of the best solution in the process of implementing expertise: 1) The formation of expert groups that make a collective choice occurs spontaneously, intuitively, without outside pressure, without the participation of third-party guiding subjects. 2) Activation of the intellectual activity of experts by providing specialists participating in the examination with the opportunity to consider objections and proposals of other members of the expert group in an atmosphere free from the influence of the personal qualities of the participants. Therefore, there is no negative impact on the results of the examination of the presence in the expert group of superiors and subordinates, friends and enemies, persons with different reaction rates, with different cultural and religious traditions, etc., since experts: \* usually do not know who participates in the survey; \*do not know who and how answered, who made what decision; \*do not know who and what justified their decision, their position; \*and may not be aware of the true goals of the organizers of the expert survey; \* but at every step they see all the justifications for the decisions of the survey participants and the agreed opinion of experts. 3) The ability to use the so-called "informed intuitive judgment" of a specialist expert by creating conditions for active, anonymous interaction with other specialists in areas related to various aspects of the problem under study. At the same time, direct communication of specialists with each other is replaced by a sequence of steps, each of which *implements a full cycle of expertise*, including informing expert experts about the results of the previous step. 4) In the conditions of the Internet, experts can be located in different cities and countries, and their number can reach hundreds and thousands. 5) When using the methods, a correct quantitative determination of the moment (step number) of the completion of the expert survey is provided (by the magnitude of the change in the coefficient of variation or the Kemeny distance). 6) The reliability of the evaluation results is increased by providing the participants with the opportunity to justify and specify their answers, for example, indicate the range of values of the indicator characterizing the consumer quality of the project, and, as a result of subsequent simulation modeling and a step-by-step procedure for clarifying the values, statistical characteristics and distribution of the indicator being evaluated.

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#### 诺夫哥罗德地区不可或缺的道路。 林区道路建设问题 INDISPENSABILITY OF ROADS FOR THE NOVGOROD REGION. PROBLEMS OF CONSTRUCTION OF ROADS IN THE FOREST

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注解。 考虑了诺夫哥罗德地区道路的规定。 最紧迫的问题是林业道路的建 设。

关键词:林道、商业、林业、投资

*Annotation.* The provision with road of Novgorod region is considered. The most urgent problem is construction of forest roads for timber industry. *Keywords:* forest road, business, forestry, investment.

The transport infrastructure in the Novgorod region is significantly developed by a network of railways and auto roads and limited waterways.

There are the main railway and highways connecting Moscow with St. Petersburg, the Baltic and Scandinavian countries in the Novgorod region. The total length of roads in the region is 14 thousand square meterskm, of which 9 thousand km are local road.

At the same time, the road network in the rural areas of the region cannot be considered satisfactory. This negatively affects the development of the timber industry complex, which has a leading place in the economy of the region. The forest provides raw materials wood processing, there is an important fuel and energy resource. Now the energy balance is 64% provided by gas, 26% by coal, 5% by fuel oil. There is 5% accounted for by local fuel and energy resources.

It's required 10-12 km of logging roads per 1000 ha for the normal activities of forestry and logging companies. In fact, epy road length in the Novgorod region is 4.8 km per 1000 hectares (2.3 times less than the standard) [3].

The insufficiency of the road network and using forestry roads only during the dry season and in winter makes it difficult to carry out forestry activities.

The Novgorod region has a significant potential for local (wood) renewable fuel and energy resources. Endowment with natural resources of the region, dependence on imported fossil fuels, ensuring the stability of heat supplies to the population and the social sphere determin the development of the fuel industry (using own natural resources). Almost all municipal districts and cites of the region use a fairly wide range of fuels, both fossil and renewable. The region is dominated by boiler equipment that uses imported fuel from fossil raw materials. It's negatively affects the environmental situation, and also does not allow the full use of internal potential. Although there are all prerequisites for transferring public heat supply sources to the consumption of local wood fuels.

The most important quality of wood fuel before oil products and especially coal is environmental friendliness and environmental protection due to the low content of sulfur and ash. One of the priority areas for the development of the timber industry complex is the integrated use of the entire biomass of trees, and from this point of view, the use of wood as a fuel is a priority. However, it's emerging a scientifically based approach to the distribution of fuel resources in the overall balance of wood consumption and the choice of appropriate technologies.

As the analysis showed in value terms (as of January 1, 2021), the balance of annual consumption of fuel and energy resources for all types of fuel is estimated at 1,171 million rubles.

In Novgorod region it's the imported fuel, 27 times more funds are spent than on local fuel:

41.8 million rubles are annually spent on external fuels;

1129.2 million rubles are annually spent on imported fuels.

In such an operating balance, the huge funds go to the district enterprises that supply fossil fuels and enterprises of the coal and oil and gas industries (including being directed to intermediary wages, which are included in the budgets of other regions).

The Novgorod region can use enough its colossal resources of local biofuel forestry for

to improve the efficiency and ensure the raw material reliability of the energy sector of housing and communal services,

to create added value on its territory,

to attract investments in the development,

to use of fuel biomass, including opportunities its supply to the foreign market in a refined form (fuel wood briquettes and pellets).

Novgorod region has the conditions for the development of the production of pellets, processing of logging waste, stumps into wood fuel.

The state has a program for the development of the forest industry, then the state should stimulate the creation of processing capacities as part of the program for allocating funds to reach remote areas of the forest territory. Joint financing of forest roads has economic, social and political meaning [4].

The road network is located unevenly in the territory of the forest fund, it determines the inaccessibility of projects for part of the forest resources, it has re-

tained the most valuable mature and overmature plantations (reserves of structural and biological diversity). Forestry enterprises are poorly provided with roads, where the main reserves of the operational fund are concentrated.

The construction of new and repairs of roads is required to ensure the availability of forest resources and the organization of high economic activity.

The cost of building logging roads depending on the environment can vary depending on the side effects, but they are large:

- winter road - 300-600 thousand rubles / km;

- grader road - 2-4 million rubles / km.

The most important problems of forest roads are:

- restrictions on road parameters, in particular, the small width of the route;

- can't account a road as an asset.

All these problems can be solved to make simple stage of developing procedures, decisions, techniques and balancing for forest users, who does road construction.

Narrow-gauge railways are practically not considered in solving issues to related to the construction of logging roads. However, they require lower construction costs. They can be distributed in the most difficult places, and the rails can be moved from one place to another. This is an environmentally friendly transport.

Today there is a lot of discussion about who should be involved in the construction and implementation of forest roads. All identified parties is needed to create a transport situation in the forest. As a rule, a logging road is also a agricultural road, and in the future it will become a general road. The road network is necessary for the state. Regional and federal budgets should participate in the creation of such infrastructure for forest users [1].

The Forest Code should not directly address the issue of road construction. However, the law has included the possibility of obtaining certain preferences related to priority investment projects in the field of wood processing.

Today there is talk about the possibility of creating regulations that determine the procedure for the participation of the federal and regional budgets in the construction of forest roads. The most of the powers in the field of forest development have been transferred to the regions. Regions should determine by regulations the possibility of participation of their budgets in the construction of forest roads.

This is necessary to attract the regional budget for the construction of forest roads:

The first is the company's statement about the intention to build roads, justifying the need for road construction and ways to finance.

The second. The project documentation should be ready. The budget can participate to making projects, when the main roads are used for the transportation of forests, and to have signs of common use. So, it is necessary to finance the design works, receive the project, and then seek the inclusion of applications in the draft budget for the next year [2].

There is uncertainty in the regulatory framework related to whose balance sheet forest roads occur. Undoubtedly, enterprises that use forests compile and build logging exits of logging roads. Recovery of attachments and a guarantee of return is important for the state, for investors. This is not present at the moment. Moreover, today it is very difficult to find such a universal mechanism.

At present, it is difficult to give an unambiguous answer to the question: "Should the state build roads on forest areas?" The main timber harvesting facilities are located in the north-eastern part of the region: in Malovishersky, Khvoininsky, Lyubytinsky and Pestovsky districts. More than half of the volume of wood produced in the region is harvested here.

The main woodworking enterprises are located in Veliky Novgorod, Borovichi, Parfino, Okulovka, Chudovo, Pestovo, Lyubbytino, Malaya Vishera. The zone of economic stability of the logging center is mainly for transporting timber by automobile road up to 200-220 km, by rail - up to 400-600 km, by water - up to 1500 km around the processing center. Above this limit, the economic meaning of the forest for the company disappear. As a result, we have 42% of the allowable cutting area in the Novgorod region.

Necessary stimulate business to develop the territory. If the calculations of the processing company show it will be provided with raw materials in the adjacent areas in the next 10-15 years, it will not go to remote forests for wood. This will be thought of by those companies that plan to create new processing facilities to expand their business or to provide raw materials for existing facilities. Will the state pay for the construction of such roads? Yes, if it has some interest of his own here.

The state agrees to build forest roads, declares its readiness to participate in this process. In many places people don't know which road they are driving on. The local population is also dissatisfied with the current situation. People often cannot go to the forest by car for mushrooms, to hunt, to have a rest, because the roads are broken. The tenants are also unhappy: they build roads, but they cannot charge anyone for using these roads.

I want to say that the state cannot get away from solution of the problem the issue of forest roads, because it is own the forest. It's the difficult, the status of forest roads has not yet been determined. It needs to be defined, there is a question related to certain land ownership.

It is always clear how the development plan of the territory is built, how the transport and investment policy is calculated. There must be high conditions and clear laws. A transparent, understandable scheme for financing the construction and use of forest roads in working order is needed.

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#### 林业部门对改善乌兹别克斯坦农业用地的影响 THE IMPACT OF THE FORESTRY SECTOR ON THE IMPROVEMENT OF AGRICULTURAL LAND USE IN UZBEKISTAN

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抽象的。 文章在综合分析的基础上,提出科学实用的建议,通过组织有效利 用国家林业基金土地,提高耕地灌溉效率,确保环境稳定。 通过创建用于风蚀的 新型和设计的抗侵蚀林带。 土壤。

关键词:森林、土地、绿色花园、效果、风蚀、林带、耕地、组织、泡桐、桑树。

**Abstract.** In the article, on the basis of a comprehensive analysis, scientific and practical recommendations have been developed and given to ensure environmental stabilization of the environment by organizing the effective use of the country's forest fund lands, as well as increasing the efficiency of irrigated arable land through the creation of anti-erosion forest belts of a new type and design used in wind erosion. soils.

*Keywords:* forest, land, green gardens, effect, wind erosion, forest belts, arable land, organization, paulownia, mulberry.

#### Introduction

Forests, like land in Uzbekistan, are the national wealth of the country. They are an important source of environmental stability, one of the most important factors in the development of the economy and the well-being of the population. Forests have a positive effect on the hydrographic and hydrological conditions of the river and other water sources, climate, atmosphere, protect soils from wind and water erosion. Along with the above, forests in the Republic of Uzbekistan serve to restore human health, to ensure the cultural and aesthetic needs of the population. Therefore, in the conditions of the current level of development of society, finding the best ways to improve the efficiency of agricultural land use based on the development of forestry, the development of scientific and practical recommendations for expanding the areas of green spaces that have a positive impact on the state of irrigated agriculture and the environmental safety of agricultural land is one of the most important problems of the country [9].

#### **Results and discussion**

According to the Cadastral Agency under the State Tax Committee of the Republic of Uzbekistan, the total area of agricultural land, as of January 1, 2022, in the republic is 27148.5 thousand hectares (60.48% of the total area), of which the area of irrigated land, where intensive agriculture is carried out, is only 4.2 million hectares (9.4% of the total area). At the same time, the total area of the lands of the forest fund of the republic, for this period, is 12057.3 thousand hectares, i.e. it makes up 26.86% of the unified land fund of the country. However, of these, the areas occupied by forest plantations are 3215.9 thousand hectares, i.e. 26.7% of the total forest fund land area [8]. If we consider that 36.0 million people currently live in the Republic of Uzbekistan, then for each person there are only 0.09 hectares of green spaces. This is much less than other countries near the Republic of Uzbekistan. Thus, in the Russian Federation it is 7.7 hectares, in the Republic of Kazakhstan - 1.8, in the Kyrgyz Republic - 2.3 hectares [7]. These data indicate the need to increase the area of green spaces to stabilize the environmental situation and create favorable living conditions for the population of the country. The distribution of the area of the forest fund of the republic, as well as the land occupied by forest plantations by regions, is given below in table 1.

Indeed, from the data in Table 1 it can be seen that the share of green plantations in the total area of the forest fund varies by regions. So, if in the Bukhara region it is 56.0%, in the Surkhandarya region - 53.0, in the Jizzakh region - 48.3%, then in the Namangan region it is only 11.7, in the Tashkent region - 12.1, and in the Samarkand region regions - only 13.7%. These data once again confirm the need for the development of forestry in the republic, where hot and sharply continental weather conditions are observed.

Lands of the forest fund of the country, according to natural distributed zones, are divided into 4 groups: lands of the forest fund of the steppe zone; lands of the forest fund of the foothill zone; lands of the forest fund of the mountain zone and lands of the forest fund located on the banks of the rivers [7]. The conducted studies show that the share of forest land in the steppe zone is approximately 85.0% of the total land area of the country's forest fund. The remaining 15.0% of the forests are located in the foothill, mountainous zones, as well as on the banks of large rivers. The presented information indicates that the increase in the areas of green spaces, especially in the zone of intensive life of the population of the republic (in the foothill and mountain zones), plays an important role in ensuring the stability of the ecological environment, radically improving the cultural life of the popula-

tion, optimizing the natural and climatic conditions of the territory [6,7]. Based on the above conditions, on the basis of the Decree of the President of the Republic of Uzbekistan dated December 30, 2021 No. UP-46 "On measures to accelerate the work on landscaping and further effective organization of tree protection in the republic", a special nationwide project "Green Land" began to be implemented throughout the country. "

#### Table 1

Nº	Name of regions regions	Total area, thousand ha	Of which forest plantations, thousand ha	Share of area occupied by forest plantations in total area, %
1	Republic of Karakalpakstan	6614,5	1008,4	15,2
2	Andijanskaya	11,0	1,7	15,4
3	Bukharskaya	580,6	326,0	56,4
4	Jizzakhskaya	318,2	153,7	48,3
5	Kashkadarinskaya	412,1	1499	36,4
6	Navoinskaya	2903,6	1269,4	43,7
7	Namanganskaya	152,4	17,9	11,7
8	Samarkandskaya	56,2	7,7	13,7
9	Syrdarinskaya	10,1	1,5	14,9
10	Surkhandarinskaya	323,0	171,1	53,0
11	Tashkentskaya	572,0	69,1	12,1
12	Ferghanskaya	15,2	7,1	46,7
13	Kharazmskaya	88,4	32,4	36,7
	By republic	12057,3	3215,9	26,7

Distribution of lands of the forest fund of the republic by regions (as of 01.01.2022)\*

\* Calculations made by the authors based on data from the Cadastral Agency

During the implementation of this project in the coming years, it is envisaged to address the following issues:

- improvement of the management system in the field of planting and caring for trees;

- conducting research and analysis aimed at determining the soil-climatic and other features of the regions, based on scientific approaches, as well as developing, based on their results, a single map of the republic in the context of regions;

- increase in the number of nurseries, localization of ornamental trees imported from abroad, corresponding to the climate of the regions, taking into account soil fertility;

- creation of "green parks" and "green public parks" in the regions;

- revision of the tree watering system, ensuring its effective functioning;

- determination of persons responsible for the care of each tree, the widespread introduction of incentive mechanisms in this direction;

- strengthening responsibility for damage and destruction of trees, further increasing public control in this direction.

The above-mentioned issues are very relevant and relate to improving the efficiency of using the country's forest fund lands. Therefore, for these purposes, specific plans for their implementation in the industry were developed. In particular, on the basis of this decree, in the period 2022-2024, "green parks" are being created throughout the republic on an area of 1278.2 hectares; only in the Tashkent region such "green parks" are being created on an area of 116.6 hectares. In addition to these, over the years, "green public parks" have also been organized throughout the republic on an area of 1082.34 hectares or on the basis of numerous parks of culture and recreation, a number of administrative regions are also planned to create such "green public parks" [2].

It should be noted that in order to positively resolve the issues noted above, a number of specialized scientific and design organizations of the republic carry out specific activities directly on the ground. In particular, the «Urmonloikha» Design Institute is developing and implementing special pilot projects in specific places to create "green parks" and "green public parks". The full implementation of such projects in the near future will be of great practical importance in the planting of greenery in the settlements of the republic.

In the system of improving the efficiency of the use of forest fund lands and agriculture of the country, along with others, work on the reconstruction of shelterbelts, the creation of new ones, with the planting of more useful and fast-growing trees suitable for use in agriculture and construction, is becoming important. It should be noted that shelterbelts, as one of the most important anti-erosion measures, have been used in the irrigated fields of the republic since the last, twentieth century, as one of the effective measures to protect soil from wind and water erosion. The fact is that certain areas of arable and other agricultural lands in the republic are subject to erosion processes. So, according to the results of numerous studies, a number of agricultural scientists found that annually about 15.0-16.0% of the area of irrigated arable land is subject to water erosion, and about 30.0-32.0% of the area of arable irrigated land is subject to wind erosion of soils. [4,5,6,7]. Naturally, such processes cause great harm to agriculture: the top fertile soil layer is washed away or blown out, crop yields are reduced, settlements and irrigation canals are flooded with sand and other soil particles. According to G.A. Talipov, as a result of the harmful effects of soil erosion, in the 90s, the republic annually lost about 1.0 million tons of raw cotton [7]. Therefore, in order to prevent or reduce erosion processes, even then, i.e. 50-70s of the last century, protective forest strips were planted on an area of 34.6 thousand hectares of irrigated arable land. However, as a result of the lack of the necessary state funds for the care and maintenance of these forest belts, as well as the liquidation of collective and state agricultural enterprises and the creation of small farms on their basis, more than 80.0% of these forest belts were cut down by the beginning of the 2000s and eliminated, which, in turn, contributed to the re-intensification of erosion processes. A sharp decrease in the areas of protective belts in the republic were fraught with the observation of an ecological disaster in certain regions, i.e. there is a process of blowing salts from the dried bottom of the Aral Sea and their distribution in the nearby territory. Therefore, planting shelterbelts of new designs and types, their care and maintenance are also becoming an important problem for the country's economy today in preventing the above negative processes, stabilizing the ecological situation of the environment, and effectively protecting agricultural lands from wind and water soil erosion. In particular, on the basis of the Decree of the Cabinet of Ministers of the Republic of Uzbekistan dated July 14, 2021 No. 442 "On measures for the efficient use of forest fund lands and irrigated lands and further increase in timber production", a special targeted program was adopted in the republic for the creation and reconstruction of soil-protective forest strips to prevent wind erosion, soil erosion and sand flooding of water facilities for the period 2022-2030. According to this program, until 2030, it is planned to create field-protective and other fast-growing trees in the republic on an area of 26200.0 hectares, or, for example, in the Tashkent region on an area of 1860.0 hectares, and in the Namangan region - 916.0 hectares [3]. At the same time, on the lands of reserves belonging to district khakimiyats, along the edges of land areas of agricultural crops, in recreation parks, settlements, in river bank protection zones in the period 2022-2024, it is planned to plant paulownia and other fast-growing trees in the republic as a whole for area of 14518.0 hectares, of which in 2022 - 3604.0 hectares, in 2023 - 4863.0 and in 2024 - 5961.0 hectares.

For the timely fulfillment of the above tasks, the Urmon Loyiha design institute is also developing pilot projects to create protective forest belts on agricultural lands. Such projects provide specific recommendations on the design of protective forest belts, tree species, areas occupied by them, distance between trees and between rows, as well as specific sound recommendations on the practical use of trees for forest belts. The fact is that it is recommended to include mainly mulberry and paulownia in the construction of new forest belts, sometimes there are also fruit trees along with these trees. The mulberry tree, after 3-4 years of care, along with the protective function, also serves as a food base for the silkworm, paulownia is used as a good building material, and fruit trees provide fresh fruits to the population. Based on these, the recommended tree species, in our opinion, are quite suitable for creating effective shelterbelts in the zone of irrigated agriculture of the republic, which, in turn, contributes to an increase in the efficiency of using forest land and agriculture.

The received official data testify that in recent years the rate of creation of shelterbelts in the republic has again been growing rapidly. These findings are clearly reflected in the data in Table 2.

The data in Table 2 clearly indicate that really great importance is attached to forest reclamation anti-erosion measures, in particular, to the organization of new shelterbelts as an effective fight against wind erosion of soils. So, if in 2018, 500.4 hectares of protective forest belts were planted in the republic to organize the protection of irrigated agricultural lands from soil erosion, then starting from 2019, the area of such protective forest belts in the country as a whole and in the regions increased compared to 2018 by almost by 4.0 - 4.5 times and brought to 2022 in the republic 2.4 - 2.5 thousand hectares. In the future, if 2.4 - 2.5 thousand hectares of protective forest belts are planted annually in the republic, then by 2030 they will completely cover the zones of strong wind activity with new forest belts. In the near future, the mulberry trees planted in them, together with their protective functions, serve as a fodder base for sericulture. If the planted mulberry trees are well cared for for 3-4 years and after this period they are used for growing silkworms, then according to preliminary calculations, the production of cocoons in the whole republic will increase by 6.0 times compared to 2018. Consequently, an increase in the production of cocoons contributes to a more complete supply of processing enterprises with raw materials and the creation of additional jobs in these enterprises.

#### Table 2

№	№         Name of regions regions		2019	2020	2022	2022 in relation to 2018,
1	Republic of Karakalpakstan	50,0	260,0	210,0	250,0	+, - +200,0
2	Andijanskaya	0	145,0	95,0	140,0	+140,0
3	Bukharskaya	50,0	250,0	220,0	220,0	+170,0
4	Jizzakhskaya	50,3	225,0	180,0	200,0	+149,7
5	Kashkadarinskaya	100,3	224,8	205,7	200,0	+99,7
6	Navoinskaya	0	200,0	95,4	200,0	+200,0
7	Namanganskaya	0	100,0	115,0	140,0	+140,0
8	Samarkandskaya	0	220,0	100,0	412,0	+412,0
9	Syrdarinskaya	50,0	220,0	135,0	220,0	+170,0
10	Surkhandarinskaya	50,0	140,0	155,0	200,0	+150,0

Information on the areas of newly planted shelterbelts in the period from 2018 - 2022 in the context of the regions of the republic\*

11	Tashkentskaya	50,0	210,0	145,0	240,0	+190,0
12	Ferghanskaya	49,8	225,2	240,0	200,0	+150,2
13	Kharazmskaya	50,0	75,0	125,0	200,0	+150,0
	By republic	500,4	2495,0	2020,1	2812,0	+2311,6

\*Compiled on the basis of data from the «Urmon Loyikha» Institute

It should be noted that in the field-protective forest belts created in the 60s of the 20th century, there were various varieties and species of trees, such as poplar, willow, elm, dates, etc. [7]. The basis of the currently created field-protective forest belts is mulberry. An analysis, study and comparison of these two types of protective belts shows that earlier forest belts mainly played a protective role, as they were not useful as building material. Large areas of irrigated arable land were allotted for their creation even then. And today's new plantings of protective plantings, on the one hand, protect irrigated fields from wind erosion, on the other hand, they will be used for growing silkworms and thereby contribute to an increase in the efficiency of the use of forest land and agriculture. One of the main issues here is their timely care and normal maintenance by the agricultural land users on whose lands they are located.

#### Conclusion

Based on the conducted small studies and comprehensive analyzes, it can be concluded that the widespread implementation of the tasks provided for by state projects and programs, the full implementation in practice of the developed pilot projects to create various «green gardens» and protective forest belts contribute to the improvement of the ecological state of the environment, increase in local building materials, increase the efficiency of the use of forest land and agriculture, which will ultimately develop the economy in a market environment.

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#### 克拉斯诺亚尔斯克边疆区材料和资源基础分析:问题和前景 ANALYSIS OF THE KRASNOYARSK TERRITORY MATERIAL AND RESOURCE BASE: PROBLEMS AND PROSPECTS

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注解。 文章分析了克拉斯诺亚尔斯克边疆区材料和原料基地的现状。 考虑 了自然资源的主题规定。 得出了境内资源潜力独特、勘探程度低的结论。 作者 根据国家统计数据分析了碳氢化合物原料的使用情况。 得出了旨在补充物质和 原料基础的勘探工作资金不足的结论。 确定领土资源潜在利用的主要问题和前 景。

关键词:自然资源基地、碳氢化合物原料、矿产、资源潜力、克拉斯诺亚尔斯克边疆区。

Annotation. The article analyzes the current state of the Krasnoyarsk Territory material and raw material base. The subject provision with natural resources is considered. The conclusion about the unique resource potential of the territory and the low degree of its exploration is made. The authors analyzed the use of hydrocarbon raw materials based on state statistics. The conclusion about the insufficient funding of exploration work aimed at replenishing the material and raw material base is made. The main problems and prospects for the territory's resource potential use are determined.

*Keywords:* natural resource base, hydrocarbon raw materials, minerals, resource potential, Krasnoyarsk Territory.

The Krasnoyarsk Territory is located in the central part of Russia in Central and Eastern Siberia. It occupies the 2nd place in Russia in terms of territory – about 2366.8 thousand km2 or 13.86% of the Russian Federation area [1]. The Krasnoyarsk Territory is a pivotal region of Russia, one of the leaders among the constituent entities in terms of the most important macroeconomic indicators and contribution to the overall indicators of the country's development. The region occupies one of the leading places in terms of the diversity of resource potential [2]. Information about the minerals and raw materials of the subject is presented in Table 1.

The region is rich in natural resources. The region economy basis is industry, the structure of which is dominated by industries for the extraction and processing of raw materials, the fuel and energy complex and mechanical engineering. In the Krasnoyarsk Territory, there are huge reserves of rare earth and precious metals, large deposits of oil and gas, iron ores, manganese, titanium, building materials, diamonds. The main mineral resources are palladium, nickel, gold, silver, and coal.

#### Table 1

Type of minerals				
oil, combustible gases, condensate				
coal, peat				
iron ores, manganese ores, titanium, vanadium				
copper, lead, zinc, bauxites, nepheline ores, antimony				
cadmium				
gold, silver, platinoids				
diamonds				
asbestos, graphite				

Minerals of the Krasnoyarsk Territory [3]

The exploration of oil and gas fields have the most important role in the development of the region's economy. The Krasnoyarsk Territory oil reserves amount to 59.4% of the Siberian Federal District reserves and 5.7% of all Russian Federation reserves [4]. The state balance of hydrocarbon reserves as of January 1, 2021 in the Krasnoyarsk Territory includes 16 fields:

- 5 oil fields;
- 1 gas and oil field;
- 10 oil and gas condensate.

The territories for the implementation of large industrial projects at the development stage include areas of large-scale oil production: the Vankor oil producing cluster, or the Vankor group of Rosneft Oil Company PJSC - Vankor, Suzun and adjacent fields in the Turukhansk region, fields of the Yurubcheno-Tokhomskaya zone, potentially also oil production areas of East -Taimyr (Khatanga) block.

Currently, to assess the exploration degree of hydrocarbon reserves, an assessment based on the following categories is used [5].

Category A reserves include reliable reserves identified on the basis of production drilling. The lithological structure of productive formations, fluid contact zones are known.

Category B1 includes reserves that have not been identified by production drilling, but are reliably known based on reservoir survey data.

Category B2 reserves are known based on seismic exploration and substantiation by geophysical studies of the formation. The main difference from the previous category – is that there is no confirmation of oil inflow.

To reserve category C includes commercial oil and gas reserves located within an oil and gas bearing area, estimated based on exploratory wells, and prospecting wells.

Category D is the describe resources of oil and gas. Productive formations are not discovered by drilling, the presence of deposits is predicted based on the geological structure and belonging to one oil and gas bearing region / province.

As of 01.01.2022, the explored reserves of hydrocarbons (HC) are: for oil - 1092.2 million tons, for gas - 990 million m<sup>3</sup>, for condensate - 39.154 million tons. Geological oil reserves in the region tend to increase. Thus, in 2020, the volumes of oil of category A + B1 + C1 increased by 20.2% and of category B2 + C2 by 24.8% [4]. Changes in oil reserves in the Krasnoyarsk Territory are due to exploration work both at new fields and at existing ones (in 2020, the increase in reserves amounted to 201.157 million tons, including 9.711 million tons for new fields) and revaluation. Information about the state of the region resources is presented in table 2.

Type of HC			Potential resources D <sub>0</sub>	Inferred resources	Degree of exploration of total resources, %	
	$A+B_1+C_1$	B <sub>2</sub> +C <sub>2</sub>		$\mathbf{D}_1 + \mathbf{D}_2$	Initial	Current
Oil	1082,901	2403,267	1572,205	3496,452	14,9	12,66
Gas	938,822	980,286	3258,415	23232,078	3,66	3,3
Condensate	38,354	58,448	18,441	2013,467	2,14	1,8

## The state of hydrocarbon resources of the Krasnoyarsk Territory for 2022 [4,6].

As of January 1, 2020, the level of exploration from the initial total oil resources was 14.9%. At the same time, the total forecast resources of category D oil are estimated at 5068.657 million tons, and gas - 26490.493 billion m3, and condensate - 2031.908 million tons.

With all the abundance of hydrocarbon resources, the problem of low rates study of the presented raw material base is relevant. During the period of active commissioning of oil and gas fields starting from 2009 (commercial operation of the Vankor oil and gas condensate field), the level of exploration is less than one sixth of it. This fact, in turn, indicates a lack of interest on the part of development companies and low funding for exploration work from the state.

Table 2

The Krasnoyarsk Territory oil and gas fields have not yet exhausted their potential. The degree of hydrocarbon deposits depletion in the region at the beginning of 2021 does not exceed 2% [7]. Thus, the territory has significant prospects for the development of the fuel and energy complex.

At the same time, it should be noted that the main problems in the reproduction and use of the mineral resource base are:

1) poor knowledge of the territory of the region;

2) the problem of lack of qualified personnel;

3) insufficient level of financing of exploration work from the federal budget;

4) insufficiently developed infrastructure.

One of the ways to replenish the resource base is geological exploration work in unexplored territories. Funding sources are divided into three categories [8]:

1) funds from the budget of the Russian Federation;

2) funds from the budget of the Krasnoyarsk Territory;

3) funds of subsoil users.

At the expense of subsoil users, prospecting, appraisal, exploration work is carried out directly on the license area, which includes one or more mineral deposits of commercial value.

At the expense of the federal budget and the budgets of the constituent entities of the Russian Federation, regional subsoil geological exploration is carried out, including the search for and evaluation of HC deposits, exploration of HC deposits. (Article 36.1 of the Subsoil Law). Also at the federal budget expense, state monitoring of the subsoil state is carried out. Currently, the study of the geological structure and prospects for oil and gas potential in the eastern part of the Kara Sea and the Yenisei Bay is underway.

At the expense of the Krasnoyarsk territory budget, comprehensive programs for the development of territories focused on the development of the HC resource base are being developed. For example, the program for the development of the Northern regions. In accordance with the order of the Krasnoyarsk Territory government dated February 26, 2020 No. 122-r «On approval of the Strategy for the socio-economic development of the northern and Arctic territories and support for the indigenous peoples of the Krasnoyarsk Territory until 2030», the northern and Arctic territories of the Krasnoyarsk Territory provide more than 55% region industrial products at the extraction of natural resources. In the coming years, new projects in the oil and gas, coal industry, and mining development will be launched in these territories. Priority in the development until 2035 in the Krasnoyarsk Territory Arctic zone belongs precisely to hydrocarbon raw materials.

In addition to developing the continental resources of the Krasnoyarsk Territory Arctic zone, in the long term, it is possible to develop adjacent areas of the Arctic continental shelf. Thus, all this provides significant prerequisites and prospects for the resource base development of the Krasnoyarsk Territory as a whole, as well as the intensification of the development of the northern sea route.

Based on the foregoing, it should be concluded that the resource base of the Krasnoyarsk Territory is unique and diverse, and therefore there is a huge potential for the economic development of the region. It is necessary to improve the system of interaction between federal and regional authorities and private enterprises in the field of geological exploration of the territory. An important negative factor in the exploration of mineral deposits is inaccessibility. At the same time, the development of logistics have a key role in the economic development of the northern territories and the subject as a whole.

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# 低碳经济的区域土地利用和碳排放计算 REGIONAL LAND USE AND CARBON EMISSIONS CALCULATION FOR A LOW-CARBON ECONOMY

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摘要:在当前全球气候变暖的时代背景下,全球气候问题逐渐受到广泛关注。 实施碳减排、发展低碳经济以应对气候变化已成为各国的共识[1-2]。多年来,国内 外学术界对碳循环的陆地生态学进行了广泛而深入的研究,并取得了丰富的成果。 根据相关研究报告,土地利用也是导致大气中二氧化碳增加的重要原因之一。它仅 次于化石燃料的燃烧。 改善土地利用结构不仅是区域生态系统碳排放和碳吸收 的改善,也是区域人为碳排放水平的间接改善。 制定区域土地利用规划,改善区 域土地利用结构,可以在一定程度上增加全球生态系统的整体碳储量,有效控制 因此,加强低碳经济发展与以生态效益为导向的区域土地利 土地利用碳排放。 用规划研究,探索基于低碳经济的区域土地利用结构优化,将有助于厘清区域土 地利用变化的原因和机制, 从而实现区域土地利用变化。 并且在过程中减少碳 排放的目标。由于土地利用系统的低碳形态需要土地利用实现低碳化,因此需要 科学计算区域土地利用的碳排放/碳汇,同时需要测算不同土地利用类型的净碳 排放变化,以及区域土地碳强度的变化。 不同地区土地利用碳排放的空间差异 各不相同。在此基础上,从宏观层面分析土地利用区域碳排放与经济发展的相互 影响关系,分析影响因素。 从而为研究区域土地利用减少碳排放提供一定的借 鉴意义[3]。

本文对我国(以武汉市为例)土地利用碳排放分析计算的研究进行了总结,并 给出了一些评价、解决方案和意见。有助于改进和提高效率的建议。因此,本文 的研究成果将有助于更好地理解中国区域土地利用区域土地利用碳排放的分析计 算,为国内外研究界提供非常有益的指导。

关键词:可持续发展,低碳经济,区域土地利用,碳排放量计算,中国。

Abstract. In the context of the current era of global climate warming, global climate issues have gradually attracted widespread attention. It has become the consensus of all countries to implement carbon emission reduction and develop

a low-carbon economy to cope with climate change [1-2]. Over the years, the academic circles at home and abroad have conducted extensive and in-depth research on the terrestrial ecology of the carbon cycle, and have achieved rich results. According to relevant research reports, Land use is also among of the significant reasons for the increase in carbon dioxide in the atmosphere. It is second only to the burning of fossil fuels. Improving land use structure is not only the improvement of regional ecosystem carbon emission and carbon absorption, but also theindirect improvement of regional anthropogenic carbon emission level. Formulating regional land use planning and improving regional land use structure can increase the overall carbon storage of the global ecosystem to a certain extent and effectively control land use carbon emissions. Therefore, strengthening the research between low-carbon economic development and ecological benefitoriented regional land use planning, and exploring the implovement of regional land use structure based on low-carbon economywill help clarify the reasons and mechanisms of regional land use change, and realize regional land use change. The goal of reducing carbon emissions in the process.

Since low-carbon forms of land use system requires land use to achieve lowcarbonization, it is necessary to scientifically calculate the carbon emissions/ carbon sinks of regional land use, establish changes in net carbon emissions for different land use types, as well as changes in carbon intensity across regional land. The spatial differences of carbon emissions from the land use between different regions are different from each other. On the base of the mutual influence relationship between regional carbon emissions come from land use and the development of the economy is analyzed come from the macro level, and the influencing factors are analyzed. So as to provide some reference for the study of regional land use to reduce carbon emissions [3].

In this article, it is summarize research on the analysis and calculation of carbon emissions come from land use in China (taking Wuhan City as an example), and give some assessments, solutions and opinions. Suggestions that help to improve and improve efficiency. Therefore, the research results of this article will help to better understand theanalysis and calculation of land use carbon emissions in China's regional land use areas, and provide very useful guidance for the national and international researchcircles.

*Keywords:* sustainable development, low-carbon economy, regional land use, calculation of carbon emissions, China.

# Introduction

Land is the carrier of natural and human activities. Therefore, this paper uses the current land classification system to comprehensively measure the carbon emissions from natural and human sources [4]. The sources of carbon and the sinks of carbon are two parts of carbon emissions from regional land use [5]. The source of carbon refers to the process or mechanism of releasing carbon dioxide in the atmosphere. According to the specific use of the land type, it mainly includes cultivated land, other agricultural land, industrial land, construction land. The use of land includes transportation land, residential areas, industrial and mining land, and special land. The sink of carbon refers to the process or mechanism that absorbs or removes carbon dioxide from the atmosphere. There are mainly types of land use such as farmland, the garden land, the forestland, the grassland, wetland and unused land [6].

This paper mainly studies the analysis and calculation of regional land use carbon emissions oriented by the low-carbon economy. Therefore, in the calculation of regional land use carbon emissions, the calculation method used is to first measure and calculate the various types of carbon source land according to different land use methods. Then measure the carbon sinks of various types of land use, and finally combine the above estimated carbon emissions and carbon absorption to estimate the total net the representation of carbon emissions in regional land use.

#### Materials and methods

Purpose of the study is a generalization of scientific approaches to the calculation of carbon emissions, as well as making proposals for improving the calculation methodology for regional land use. The object of the study is regional land use on the example of the urban and rural areas of the Wuhan city, China. The subject of the study is the analysis and calculation of carbon emissions from regional land use. The study used statistical data for the period from 1996 to 2010 due to some difficulties in collecting and processing information, but the study will be continued as new information becomes available.

Various research methods were used in the work. System Analysis is a research and problem-solving method that regards the research object as the whole system. According to the general principles of system analysis, thereare many factors affecting the sustainable use of regional land, and the change of any one of the relevant factors will have a certain impact on it. Taking the whole area of Wuhan, China as the research object, the net carbon emissions of various types of land use are calculated [7]. Using the method of synthesizing and analyzing data, we statistic, select and systemize the data, then analyze, based on which we can comment and evaluate internally essential content of the study. Empirical analysis, this method is to exclude all subjective value judgments when analyzing problems and establishing theories, according to the concept of "bold assumptions, careful verification", and based on this method to predict what will happen in the future [8].

It is proposed to start the study by calculation of farmland carbon emissions.

Mostly the carbon emissions from farmland are caused by direct or indirect greenhouse gases produced by the amount of agricultural inputs in agricultural

production activities, all the while, break down crop residues and the releases soil organic carbon are also carbon emissions from farmland [9]. The six items of carbon emissions from chemical manures, pesticides, agricultural film, agricultural machinery, agricultural cultivation, and agricultural irrigation are the main indicators for the calculation of carbon emissions from farmland use [10]. The carbon emission calculation formula is as follows:

$$E_t = \sum T_i \times \delta_i \tag{1}$$

In the formula,  $E_t$  is the total of carbon emissions from the use of farmland;  $T_i$  is the emission of each source of carbon emission, and  $\delta_i$  is the carbon emission coefficient of each source of carbon emission. According to previous research results, the carbon emission coefficients of each carbon emission sources of farmland are summarized in the following Table 1.

Carbon emissions sources, coefficient and reference sources of farmland [11]					
Carbon source	Carbon emission's coefficient	Unit			
Chemical fertilizer	0.8956	kgC/kg			
Agricultural film	5.18	kgC/kg			
Pesticide	4.9341	kgC/kg			
Agricultural diesel	0.5927	kgC/kg			
Irrigation	266.48	kgC/hm <sup>2</sup>			
Land plowing	312.6	kgC/ hm²			

1 .....

Next, we move on to calculating carbon emissions from other agricultural land. Other agricultural land is used as a carbon source: the carbon released from animal respiration and excretion, agricultural auxiliary production, and human activities on other lands of agriculture is the major sources of its carbon emissions [12]. The carbon emission calculation formula is as follows:

$$=\sum \lambda + \delta \qquad (2)$$

In the formula,  $E_o, Q_k, \lambda_k, S, \delta$  represent the carbon emissions of the other of agricultural land, the number of livestock and poultry k, the emission coefficient of livestock and poultry k, the area of other agricultural land, and the management coefficient of other agricultural land. According to relevant literature, the carbon emission coefficients of cattle, pigs, sheep, and caged poultry are respectively 0.796 t/a, 0.082 t/a, 0.075 t/a, and 0.00395 t/a, and the management coefficient of other agricultural land is 0.95 t/a.

Table 1

It is necessary to calculate separately carbon emissions from construction land.

The construction land is the major carbon source, and its carbon emissions mainly come from industrial energy consumption, commercial activity consumption, residential consumption, transportation energy consumption, and human respiration. According to Schimel et al. [13], through the classification and calculation of global anthropogenic carbon emissions, it is found that the carbon dioxide emitted by fossil fuel burning and cement production accounts for about 3/4 of the total emissions [14]. In the current related research, only the quantitative research on fossil fuel combustion in some cities in Chicago and South Korea is carried out, and the carbon dioxide emissions produced by coal, oil, natural gas and energy sources are measured, so as to obtain the corresponding carbon emission coefficient [15]. At present, there are few studies on actual measurement research in China, so the coefficient of carbon emission IPCC is used for research. The formula for calculating carbon emissions is:

$$E_c = \sum_j Q_j C_f + Y\lambda \tag{3}$$

In the formula,  $E_c$ ,  $Q_j$ ,  $C_f$ , Y,  $\lambda$  are the carbon emissions come from construction land, the *j*-th energy consumption, the *j*-th energy carbon emission factor, the population, and the per capita of emission coefficient. Among them, the per capita of carbon emission coefficient is 328.5Kg/person/a.

Tal	ble	2
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	Carbon emission coefficients of various energy [10]
Туре	Carbon emission coefficients (104t/104t)
Coal	0.7559
Coke	0.8550
Gasoline	0.5538
Kerosene	0.5714
Diesel	0.5921
Fuel oil	0.6185
Natural gas	0.4483

Carbon emission coefficients of various energy [16]

Another important part of the study is related to the calculation of regional ecosystems carbon sinks. This part of the work includes the following steps: 1) farmland carbon uptake calculation; 2) calculation of forestland, grassland and unused land; 3) calculation of soil carbon uptake; and in the final 4) calculation of net carbon emissions of land use in region.

The carbon uptake of farmland mainly comes from the carbon synthesized in the process of photosynthesis during the growth and development of crops, and the carbon uptake calculation formula is:

$$C_{t} = \sum_{i} C_{di} = \sum_{i} C_{fi} D_{wi} = \sum_{i} C_{fi} Y_{wi} / H_{i} \quad (4)$$

In the formula, is the carbon uptake of farmland; is the number of carbon uptake by the *i*-th crop during the whole growth period; is the carbon that the *i*-th crop needsto absorb to synthesize organic matter (dry mass) (that is, the carbon absorption rate); economic yield; Dwi the biological yield of the *i*-th crop; the economic coefficient of the *i*-th crop [17]. The economy coefficient and carbon absorption rate of crop in China are shown in Table 3.

Crop type	Economic coefficient	Carbon absorption rate			
Rice	0.45	0.4144			
Wheat	0.40	0.4835			
Corn	0.40	0.4709			
Sorghum	0.35	0.45			
Cereal	0.40	0.45			
Tubers	0.70	0.4226			
Beans	0.34	0.45			
Cotton	0.10	0.45			
Rapeseed	0.25	0.45			
Sunflower	0.30	0.45			
Peanut	0.43	0.45			
Sugar Cane	0.50	0.45			
Tobacco Leaf	0.55	0.45			
Others	0.40	0.45			

Economy coefficient and carbon absorption rate of crop in China [18]

Regional terrestrial ecosystems are the main reservoir of regional land use carbon emissions. According to Malhi et al. [19], the organic carbon storage of forest land accounts for 4/5 above ground and 2/5 below ground in terrestrial ecosystems. There are many ways to measure and calculation of forestland carbon emissions, mainly by measuring its biomass on the spot. There are two mainly commonly used methods, the first is the microclimate measurement method, which is mainly used to reflect carbon dioxide flux; the second method is the biomass clearing method, which is mainly used to reflect carbon deposition.

At present, although China has carried out a certain amount of statistics on forest and other data, there are few statistical data on forestland vegetation in each region. Therefore, this paper adopts the relatively simple calculation method adopted in the research of Whitford et al. [20], and the estimation formula is:

Table 3

forestland carbon absorption = carbon storage and carbon respiration, where: carbon storage =  $1.063 \times$  green coverage, carbon respiration =  $8.275 \times 103 \times$  green coverage. For the convenience of estimation and research, this paper set the carbon absorption coefficient of forestland as 0.644tC/hm<sup>2</sup>/a according to the calculation analysis and the research results of Fang Jingyun et al. [21].

The field mainly adopts the reference data of IPCC (2007), Cg=0.21 tC/hm<sup>2</sup>/a. The calculation results of Fang Jingyun et al. and Zhang Xiumei et al. were used for grassland, C=0.021 tC/hm<sup>2</sup>/a. The carbon emission and absorption mechanisms of waters, wetlands and other unused areas are relatively complex. This paper adopts theresearch results of Mudge and Adger, Zhang Wenju et al., Duan Xiaonan et al [19]. The local carbon emission coefficients are determined to be -0.218 tC/hm<sup>2</sup>/a, -0.41 tC/hm<sup>2</sup>/a, and -0.005 tC/hm<sup>2</sup>/a.

In the global terrestrial carbon pool, soil carbon storage accounts for 65% to 75%. Due to the fixed nature of soil organic carbon, it plays an important part in the global carbon cycle. Soil carbon storage consists of two parts: soil organic matter and vegetation litter. This chapter uses the soil carbon measurement formula proposed by Fang Yun et al. to estimate soil carbon storage [22].

The calculation formula is:

soil carbon storage = total soil area  $\times$  average soil depth  $\times$  average soil bulk density and average organic carbon content.

According to the soil census data in Wuhan, the area of various types of land in Wuhan, the average bulk density of the soil and the content of soil organic matter can be obtained, and the organic matter content of the regional soil can be estimated accordingly.According to previous research results, it was found that in the Yangtze River Delta region, the content of soil organic matter is equal to 1.724 times the total carbon content of the soil. Based on this, the soil carbon storage of the region is calculated.

Soil carbon emissions are mainly the process of soil releasing carbon dioxide. Soil carbon emissions are mainly released by the decomposition of roots or residues of vegetation, microbial decomposition, or mycorrhizal respiration.

The formula for calculating soil carbon emissions is:

soil carbon emissions = total soil area  $\times$  (annual accumulation of organic matter per unitsoil area - organic matter decomposition per unit soil area)  $\times$  conversion factor.

According to this formula, the soil carbon emissions in the study area can be calculated. According to the soil carbon stock and soil carbon respiration, the net soil carbon uptake can be obtained. Then according to the land category, the soil carbon emissions of farmland, garden land, grassland and unused land were calculated respectively.

According to the calculation method mentioned above, the total number of carbon emissions of various types of land use in the region and the aggregated

number of carbon in the regional terrestrial ecosystem can be calculated respectively, and finally the net carbon emissions from regional land use can be exited. The specific and detailed calculation method is that the total net carbon emission of each land use type is the total carbon emission of each land use type minus the carbon absorption, and the net carbon emission through regional land use carbon emission can be It is obtained by adding up the total net carbon emissions of each land use type. Then, based on the calculation results, an in-depth analysis of the research status pf "carbon source-carbon sink" of regional land use can be carried out.

### **Results and discussion**

Considering the different types of land use, in order to promote the measurement of carbon emissions under different types of land use, this article divides the land use structure of Wuhan into three parts, agricultural land, construction land and unused land. Among them, agricultural land is composed of five parts: the land of arable, the land of garden, the land of forest, grassland and unused land; construction land is composed of these parts urban and rural construction land, traffic water use land, scenic spot land and special land, which are calculated as a whole; unused land includes water area, wetland and other unused land three types of land. According to the above-mentioned regional land use carbon emission measurement method, combined with the actual situation of Wuhan. It can be calculated and summarized that the total carbon emissions of land use in Wuhan from 1996 to 2010 are shown in Table 4.

According to Figure 1, the total net carbon emissions of Wuhan can be divided into three stages: In the first stage, land use of the total net carbon emissions in Wuhan from 1996 to 2001 showed a slow growth trend, with an average annual growth rate of 0.18%.

In 2000, the total net carbon emissions reached the maximum value of 20.8228 million tons, and in 1999 the total net carbon emissions reached the lowest value of 18.6266 million tons. The total annual net carbon emission is 19.4509 million tons, which is relatively low at this stage. In the second stage, from 2002 to 2005, the total net carbon emissions of Wuhan's land use increased rapidly, with an average every year of growth rate of 10.10%. In 2002, the lowest value of total net carbon emissions at this stage was 19.9361 million tons, and in 2004 it was the highest value of total net carbon emissions at this stage of 26.7088 million tons.

### Table 4

Year	Arable	Garden	Forest	Grass	Other	Construc-	Water	Wet-	Unused	Net
	land	land	land	land	agricul-	tion	use	lands	land	carbon
					tural	land	land			emissions
					land					
1996	17.0088	-0.2000	-4.3830	-0.0145	6.3395	1890.7803	-2.3698	-0.6981	-0.0121	1906.4510
1997	16.9870	-0.1998	-4.3768	-0.0145	6.3462	1949.0266	-2.3706	-0.6935	-0.0121	1964.6925
1998	16.9504	-0.1999	-4.3741	-0.0145	6.3512	1914.8358	-2.3707	-0.6958	-0.0121	1930.4704
1999	16.8275	-0.2005	-4.3663	-0.0145	6.4126	1847.0809	-2.3713	-0.6945	-0.0120	1862.6618
2000	16.7329	-0.2080	-4.3715	-0.0145	6.4341	2066.7885	-2.3728	-0.6927	-0.0120	2082.2841
2001	16.6672	-0.2067	-4.3861	-0.0145	6.4344	1908.5241	-2.3693	-0.6845	-0.0117	1923.9529
2002	16.4225	-0.2153	-4.4074	-0.0145	6.5207	1978.3643	-2.3686	-0.6830	-0.0116	1993.6070
2003	15.9330	-0.2673	-4.9205	-0.0145	6.5022	2172.7808	-2.3681	-0.6817	-0.0111	2186.9528
2004	15.7646	-0.2628	-5.0081	-0.0145	6.4992	2656.9545	-2.3676	-0.6776	-0.0105	2670.8772
2005	14.5640	-0.2840	-5.6699	-0.0006	7.1760	2648.0482	-2.5482	-0.7282	-0.0080	2660.5494
2006	14.3756	-0.2839	-5.6732	-0.0006	7.1800	3073.2338	-2.5387	-0.7312	-0.0079	3085.5539
2007	14.2781	-0.2826	-5.6654	-0.0006	7.1173	3117.3908	-2.5368	-0.7303	-0.0079	3129.5627
2008	14.2781	-0.2826	-5.6654	-0.0006	7.1173	3141.1961	-2.5368	-0.7303	-0.0079	3153.3680
2009	13.5395	-0.1732	-6.3114	-0.0002	8.4317	3015.6883	-2.4149	-0.6962	-0.0024	3028.0616
2010	13.3964	-0.1713	-6.2824	-0.0002	8.3534	3257.6792	-2.4140	-0.6952	-0.0023	3269.8622

Calculation of net carbon emissions of land use in Wuhan from 1996 to 2010

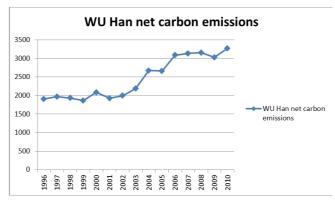


Figure 1. The net carbon emission amount of land use in Wuhan from 1996 to 2010

The total every year of average net carbon emission is 23.78 million tons, and the total net carbon emission in this stage has been greatly improved compared with the previous stage. In the third stage, from 2006 to 2010, the total amount of net land use of carbon emissions in Wuhan was stable and high, with an average

annual growth rate of 1.46%. In 2010, the highest value of total net carbon emissions at this stage was 32.6986 million tons, and in 2009 it was the lowest value of total net carbon emissions of 25.2518 million tons. The total annual average net carbon emission is 30.2806 million tons. At this stage, the total net carbon emission is a steady growth, and the total net carbon emission is relatively high. The average annual total net carbon emission is 31.3328 million tons.

### Conclusion

The basic purpose of the calculation and analysis of regional land use carbon emissions/carbon sinks is to initially grasp the basic situation of regional land use from the perspective of low-carbon economy. The research idea is to first measure the carbon emissions and carbon absorption of various types of land use in the different region. Then, the net of land use of carbon emissions in the region can be obtained; and then the relationship between regional land use carbon emissions and urban economic development can be discussed on this basis.

Through the empirical research and analysis of Wuhan City, it can be discovered that: First, the time series values of the all Wuhan City's of carbon emissions of land use in Wuhan City generally present a development trend of "slow growth-severe rise-slow growth", which shows that the economic growth change in each period. External factors such as development methods and policies have a greater impact on land use of low-carbon in the region, but the development trend is relatively stable before and after strong changes, indicating that land use also has a certain regulatory effect. In addition, this development trend also shows that carbon emissions of land use not only affect the external economic environment, but also the external environment has a huge interference effect on land use carbon emissions.

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# 现代教育过程中的 "教育技术" 概念 THE CONCEPT OF "PEDAGOGICAL TECHNOLOGY" IN THE MODERN EDUCATIONAL PROCESS

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抽象的。 文章讨论了教学技术概念的本质,及其定义的各种方法。 作者从学 习过程中的教学互动的角度系统地分析了这一现象。

得出的结论是,教学技术是一种算法,由一定顺序的相互关联的教学动作组成,需要执行这些动作才能解决设定的目标。

作者挑出并分析了教学技术的结构成分,对这一现象给出了一个概括性的定义。

关键词:教学技术、教学过程、教学互动、学习目标、学习内容、教学和学习方法、教学教具、学习组织形式、学习成果。

**Abstract.** The article discusses the essence of the concept of pedagogical technology, various approaches to its definition. The authors systematically analyze this phenomenon from the point of view of pedagogical interaction in the learning process.

It is concluded that pedagogical technology is an algorithm consisting of a certain sequence of interconnected didactic actions that need to be performed in order to solve the set goals and objectives.

The authors single out and analyze the structural components of pedagogical technology, give a generalized definition of this phenomenon.

*Keywords:* Pedagogical technology, pedagogical process, pedagogical interaction, learning objectives, learning content, teaching and learning methods, didactic teaching aids, forms of learning organization, learning outcomes.

The current stage of development of society is characterized by dynamic changes in all spheres of the economy and social life of people. This leads to the fact that a person during the period of active professional activity has to quite often change spheres of work, acquire professionally significant knowledge and skills, undergo training and retraining.

This requires certain symmetrical changes in the education system, optimization of both the teaching process and learning. Which should result in the following changes:

- improving the effectiveness of the process of formation of knowledge, skills and abilities;

- reducing the necessary time spent by teachers and students to achieve certain results;

- optimization of efforts aimed at achieving certain results;

- optimization of the means to achieve the required learning outcomes;

- development of cognitive abilities for self-education in students.

Ultimately, the result of the educational process should be a person adapted to continuously changing working conditions, possessing the mobility of knowledge, critical thinking, creativity and flexibility in professional activities, and the ability to self-educate.

Such an optimization of the educational process requires the development and widespread introduction into pedagogical practice of effective pedagogical technologies understandable to teachers, based on scientifically based algorithms, both in the learning process and in the learning process.

In recent decades, the problem of pedagogical technologies has been actively studied in pedagogical science. At the same time, different researchers define this phenomenon in different ways.

So B.T. Likhachev defines the term "pedagogical technology" as "a set of psychological and pedagogical attitudes that determine the special selection and arrangement of forms, methods, methods, techniques, educational tools (schemes, drawings, diagrams, maps)" [1, p.135].

He believes that the educational process organized in this way ensures the achievement of an effective result in the assimilation of knowledge, skills and abilities by students, development, their personal characteristics and moral qualities. Pedagogical technology is an organizational and methodological toolkit of the pedagogical process, associated with a general methodology, goals and content.

The author proves that pedagogical technology is implemented in technological processes, which are a system of technological units aimed at a specific pedagogical result. "In the theory of learning, technological processes are, for example, a system of forms and means of studying a certain topic of a training course, organizing practical classes to develop the skills and abilities of literate writing or problem solving" [1, p.135].

Similarly, pedagogical technology as a set of certain elements is defined by M.V. Klarin. He writes: "Pedagogical technology means a system set and the order of functioning of all personal, instrumental and methodological means used to achieve pedagogical goals" [2, p.118].

At the same time, the author considers the organizational and methodological side of the learning process in a pragmatic-instrumental way — "as a way to achieve the already set learning goals based on different sets of learning procedures" [2, p.118].

In the works of Bespalko V.P. "Pedagogical technology" is defined not as a set of some elements, but as a description or project of a process. He writes: "We understand this term as a description (project) of the process of formation of a student's personality. Standard technology should, on the one hand, ensure the unconditional realization of learning goals, and on the other hand, be feasible for implementation in any educational institution and any teacher" [3, p.96].

Monakhov V.M. defines pedagogical technology as a model of joint activity. In the work "Technological foundations for designing and constructing the educational process", he notes that "pedagogical technology is a model of joint pedagogical activity thought out in all details for designing, organizing and conducting the educational process with the unconditional provision of comfortable conditions for students and teachers. At the same time, the technological norms of permissible deviations from the designed educational process are necessarily set, within the boundaries of which the achievement of the planned results is guaranteed" [4, p.35].

Palchevsky B.V. and Friedman L. defined pedagogical technology as the algorithmization of "the activities of teachers and students based on the design of all learning situations" [5, p. 26].

If we turn to the works of philosophers, we can find the following definition of this phenomenon: "Technology (from Greek art, skill, ability and Greek study) is a set of methods and tools to achieve the desired result; the method of transforming the given into the necessary; mode of production" [7, p. 207]. Speaking about the structure of this phenomenon, they note that technology "includes methods, techniques, mode of operation, sequence of operations and procedures, it is closely related to the means used, equipment, tools, materials used" [7, p. 207].

Which of these definitions more accurately reflect this phenomenon at the present stage of development of education and pedagogical science. Comparing and analyzing these definitions, one can notice that they all reflect different types of regulation of the educational process, aimed at more or less guaranteed achievement of the planned pedagogical goals.

For a complete understanding of the concept of pedagogical technology in the modern educational process, it is necessary to systematically analyze this phenomenon from the point of view of pedagogical interaction in the learning process.

The pedagogical process is, first of all, a process of interaction. Therefore, it is possible to talk about pedagogical technology only in the inseparable unity of teaching and learning i.e. any pedagogical technology will be effective if it includes both the technology of teaching and the technology of learning in their dialectical unity. It should contribute to the creation of conditions for equal participation of the student and teacher in the organization and implementation of joint educational activities.

As mentioned earlier, technology represents various types of activity regulation, i.e. description of the procedure for performing actions, application of forms, ways, methods, didactic techniques and means. And this is nothing more than an algorithm. This means that pedagogical technology is an algorithm consisting of a certain sequence of interconnected didactic actions that need to be performed in order to solve the set goals and objectives.

Pedagogical technology is a system category. Based on this, it is extremely important to highlight its structural components. In our opinion they are:

- Learning objectives, which are more specific than educational, and are a symbiosis of teaching and learning objectives. Since learning is one of the ways to organize the educational process, and teaching and learning are two sides of this process. The difference between the goals of teaching and learning is objective, since these phenomena have different areas of focus:

teaching - is aimed at organizing the process of active assimilation of knowledge, skills, abilities and competencies;

study - is aimed at mastering the content, activities, skills, educational and professional competencies.

- The content of education, including the content of the teaching activity of the teacher and the cognitive and practical activities of the student. These two components must be pedagogically justified and logically built into the system set out in the curriculum (theories, laws, phenomena, concepts, factual material to be mastered by students). Studies have shown that "the algorithm for the implementation of teaching methods and technologies, aimed at the formation of a certain intellectual ability, must repeat the psychological logic of this process. Students, at the same time, in addition to the basic educational material in a particular subject, must also learn this psychological logic" [6, p. 195].

- Methods of teaching and learning. Their dialectical unity should put the student in the position of the subject of educational activity, create conditions for his self-learning and self-development, create a situation of pedagogical and personal interaction in the educational process. It is no coincidence that teaching methods in modern pedagogical science are defined as ways of interaction. Both teachers and students, interacting, must adjust the ways of their activities, reacting to each other's actions. At the same time, the learning technology should describe the algorithm for this adjustment. - Didactic teaching aids used by the teacher and students. Accordingly, including teaching aids (allowing you to manage the educational and cognitive activities of schoolchildren) and teaching aids (contributing to the assimilation of the content of the development of students). Describing the consistency of their use and application is an important component of learning technology. The efficiency of the entire technology depends on the level of algorithmization of this aspect.

- Forms of organization of learning, which are ways to streamline the interaction of teachers and students in the learning process. The choice and justification of the forms of training in the implementation of a certain technology is a multifactorial process that depends on the goals and content of training, methods and means, the composition of the participants in the educational process, the sequence of activities, etc.

- Learning outcomes (these are the knowledge, skills, experience of cognitive and creative activity that students have achieved in learning). In general, the result is called the final result of purposeful activity. Therefore, the result of training can be called the result of purposeful interaction between teachers and students in the educational process.

Since the goal **is** a conscious, planned result of activity, reflecting the model of the future product of activity (in our case, training, development and education). Therefore, the effectiveness of the pedagogical process is usually determined by a comparative analysis of its goals and results.

Thus, pedagogical technology is an algorithm of pedagogical interaction between a teacher and students, consisting of a certain sequence of interconnected didactic actions that need to be performed in order to solve the goals and objectives. At the same time, its structural components are: learning objectives, learning content, teaching and learning methods, didactic learning tools, forms of learning organization, learning outcomes.

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# 数字金融素养作为现代教育的新现象 DIGITAL FINANCIAL LITERACY AS A NEW PHENOMENON OF MODERN EDUCATION

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抽象的。 这篇文章致力于将数字金融素养作为一种新的教育现象。 数字技术和金融科技的快速发展带来了革命性的变化,这需要对传统金融知识进行修订,并将数字知识纳入数字金融服务工作。 文章在分析"数字金融素养"概念的基础上,提出了其结构模型。

关键词: 数字金融素养、金融素养、数字素养、金融行为、信息和通信技术。

**Abstract.** The article is devoted to digital financial literacy as a new phenomenon of education. The rapid development of digital technologies and fintech has led to revolutionary changes, which necessitated the revision of traditional financial literacy and the inclusion of digital literacy for working with digital financial services. Based on the analysis of the concept of "digital financial literacy", the article proposes its structural model.

*Keywords: digital financial literacy, financial literacy, digital literacy, financial behavior, information and communication technologies.* 

Globalization and digitalization of the last two decades have led, on the one hand, to an increase in individual and collective potential, and, on the other hand, have made the world more volatile, more complex and more uncertain.

If literacy in the 20th century was about extracting and processing information carefully selected for students, then in the 21st century it is about creating and testing knowledge. If earlier students had to look for information on paper and rely on it as accurate and reliable, now the Internet provides a huge amount of conflicting facts and answers.

Thus, in an infodemic that makes it difficult to determine the accuracy of information, the more knowledge technology allows us to search for and access various sources, the more important it is to develop deep understanding, the ability to read in a digital world, the ability to navigate ambiguity, triangulate points of view and find meaning in content [1, p.5,7].

According to the 2022 Facts and Figures report by The International Telecommunication Union (ITU), the UN's specialized agency for information and communications technology, nearly three-quarters of the world's population aged 10 and over now own a mobile phone; 75% of young people aged 15-24 can use the Internet (72% in 2021); mobile phones are the most common means of access [2].

At the same time, digital technologies and fintech have revolutionized the financial services industry. In 2018, Yan Shen, Wenxiu Hu and C. James Hueng note that the use of digital financial products mediates the relationship between financial literacy and financial inclusion. In the authors' study, which tested six hypotheses, five of them are confirmed: H1. Financial literacy is positively associated with financial inclusion; H2. There is a positive relationship between financial literacy and Internet use; H3. There is a positive relationship between financial literacy and the use of digital financial products; H5. The use of digital financial products is positively associated with the use of the Internet; H6. The use of digital financial products is positively associated with financial inclusion (the fourth hypothesis is not confirmed, H4. There is no relationship between Internet use and financial inclusion). [6, p.2-3].

In 2019, Peter J. Morgan, Bihong Huang, Long Q. Trinh note that digital financial literacy (DGL, digital financial literacy) is becoming an increasingly important aspect of education in the digital age and the gig economy, and propose four dimensions: 1) knowledge of digital financial products and services (electronic money, money transfer services, Internet banking, advisory robots, personal finance management, lending, etc.); 2) awareness of digital financial risks (online fraud, cybersecurity, etc.); 3) digital control of financial risks (computer programs, mobile applications, etc.); 4) consumer rights and indemnification procedures (rights in relation to their personal data, compensation for unauthorized use, etc.). [5, p.4-6];

In 2021, a study by Josephine Kass-Hanna, Angela C. Lyons, Fan Liu, Xi'an Jiaotong showed an urgent need to revise traditional financial literacy to include the digital literacy required to operate digital finance services (DFS) and is considered as the most effective mechanism for ensuring universal financial inclusion [3, p.2, p.21].

The results obtained by the authors show that digital literacy will play a crucial role in shaping sustainable financial behavior.

Continuing the above research, Angela C. Lyons and Josephine Kass-Hanna in the following paper present a multidimensional framework for organizing digital financial literacy along five main dimensions: basic knowledge and skills, awareness, practical know-how, decision making (attitudes and behaviors), self-defense [4, p.6]. According to the authors, the transition to digital technologies has led to the emergence of financial risks, which leads to the combination of financial literacy and digital literacy as a dual approach to financial security.

In Russia, the issue of digital financial literacy is discussed in the works of G.S. Oleinik, N.D. Yadov, G.Kh. Gimranova, G.V. Tsvetova, E.A. Sorokina and others (Table 1)

Table 1.

	Digital financial theracy in Russian research
G.Kh.Gimranova 2021	Digital financial literacy is the ability to make smart decisions about using digital financial services and managing digital financial assets
[7, p.101]	in the most sustainable and secure way.
G.V. Tsvetova 2021 [11, p.243]	Digital financial literacy is a tool for achieving personal financial well-being and financial stability based on flexible adaptation to the changing circumstances of the surrounding reality.
G.S. Oleinik, N.D. Yadova 2021 [9, p.93-94]	Digital financial literacy - the availability of knowledge, acquired skills and the development of the necessary habits when using digital devices for financial transactions. Among the components of digital financial literacy are: knowledge, behavior and attitudes. Knowledge of digital financial services represents a wide range of personally relevant financial topics. Behavior reflects the ability to manage digital financial technologies, describe cognitive activity, mental strategies in the field of finance. Attitudes are groups of situations from the field of financial literacy.
E.A. Sorokina 2021 [10, p.711]	Digital financial literacy is a new phenomenon in financial education. Digital financial literacy is understood as a sufficient level of knowledge and skills to use the information of the Internet network in the field of finance, which allows you to correctly assess the situation on the market and make effective decisions. Digital literacy consists of a number of elements: digital consumption (use of various kinds of Internet services), digital competencies (search for information, its adequate perception and interpretation) and digital security (protection of personal data)
NAFI 2023 [8, p.1]	Digital financial literacy implies knowledge of basic digital financial concepts, reflects the ability of a person to make informed decisions in dealing with financial products on the Internet, as well as his awareness of digital financial risks.

Digital financial literacy in Russian research

On February 1, 2023, the results of the first measurement of the digital financial literacy index of Russian residents, carried out by the National Agency for Financial Research, were published. Previously, NAFI explored certain aspects of digital financial literacy, but this is the first time that an integrated approach has been presented. The index of digital financial literacy was 5.63 points out of 10 possible [8, p.1]. The measurement involved evaluating digital financial knowledge, attitudes, and behaviors. The main trends are:

- *Digital financial knowledge*. Despite the fact that 66% are well aware of the principle of using personal data on the Internet, misconceptions about cryptocurrency are common among the inhabitants of our country. Thus, 38% of respondents believe that cryptocurrency can be used as legal tender. Most often, such an incorrect belief is shared by young people [8, p.2].

- *Digital financial settings*. Most Russians have the right attitudes about the possible risks of using online shopping sites, but awareness that it is not safe to make payments using public Wi-Fi is rather low among Russians. 31% of Russians are not aware of the risks of personal data leakage through public Wi-Fi networks and believe that it is absolutely safe to make Internet payments with such a connection [8, p.2].

- *Digital financial behavior*. The majority of Russians demonstrate the right behavior regarding the protection of their own personal data in the digital financial environment. At the same time, Russians quite often neglect to regularly change passwords on online shopping sites - only 34% of the study participants do this, and 38% of Russians almost never change them [8, p.3].

The study also showed that Russians tend to underestimate or overestimate their own level of digital financial literacy. The share of those who claim a high level of knowledge by 11sub-clause higher than the proportion of those who actually have a high level of digital financial literacy (28% and 17%, respectively). At the same time, the share of those who consider their knowledge to be low is 10 percentage points higher than the real one. (23% rate their competencies low and 13% have a low level in reality).

Based on the foregoing, we consider the multifaceted phenomenon of digital financial literacy as a set of knowledge, value orientations, skills and abilities, represented by cognitive, value and activity components aimed at the safe use of financial products and services provided in digital form and making sound financial decisions based on norms. and values established by society.

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# 俄罗斯奥林匹克运动的现代问题 MODERN PROBLEMS OF THE OLYMPIC MOVEMENT IN RUSSIA

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抽象的。 在这篇文章中,作者提出了俄罗斯在我们这个时代的国际奥林匹克运动起源中的作用问题,并考虑了目前俄罗斯奥林匹克运动中固有的当前问题。 国际奥委会和国际体育联合会对俄罗斯运动员的兴奋剂丑闻和制裁问题被提出。 作为撰写文章基础的材料是使用一种主要的理论研究方法获得的,该方法是对基于电子资源的信息源的逻辑分析分析。

关键词:奥林匹克运动、奥运会、体育政治化、制裁、兴奋剂丑闻、中立地位、俄罗斯运动员。

Abstract. In the presented article, the authors raise the issue of the role of Russia in the genesis of the international Olympic movement of our time, and also consider the current problems inherent in the Russian Olympic movement at the moment. The problems of doping scandals and sanctions imposed by the IOC and international sports federations against Russian athletes are raised. The materials that served as the basis for writing the article were obtained using one of the main theoretical research methods, which is a logical-analytical analysis of electronic resource-based information sources.

*Keywords:* Olympic Movement, Olympic Games, politicization of sports, sanctions, doping scandal, neutral status, Russian athletes.

# INTRODUCTION

Sport is one of the most important components of human social life, affecting the interests of a huge number of people in different countries. Sport plays an important role in the life of any state, having become an entire industry of sports and entertainment events, which has become an important sector of the economy of many countries, including Russia. With the help of sports, the development of intercultural dialogue between countries is achieved, partnerships and friendships are created, integration processes are being built up. At the same time, throughout the history of the existence of this social institution, its gradual politicization took place, and at the present time, sport is increasingly acting as an instrument of political struggle [5]. This is especially true for Olympic sports, in which the confrontation of athletes from different countries constantly and continuously occurs, the result of which, among other things, is a demonstration of the advantages of the state-national system, which is represented by the winners, and at the same time, very often, the existence of an existing confrontation from the political sphere. transferred to sports arenas.

Turning to distant history, it can be noted that the revival of the Olympic Games directly pursued precisely political goals. Firstly, this was due to the results of the Franco-Prussian War of 1870-1871, in which the French were defeated. One of the reasons for this was the weak physical preparation of the soldiers, which was planned to be improved through the system of preparation for sports competitions. Secondly, the initiators believed that the revival of the Olympic Games would help reduce the number of wars, since aggressiveness and fighting self-expression could be fully demonstrated during competitions in wrestling, athletics, shooting, etc. It is also gratifying that it was then that the Olympic Charter was adopted, according to which one of its fundamental principles is the incompatibility of the Olympic movement with any form of discrimination against countries and individuals on racial, religious, political, sexual or other grounds [2]. This document began to define a clear transnational legal order, which falls only under the jurisdiction of the IOC [10]. But today this document is not always interpreted unambiguously by representatives of individual states and a number of actors in the international sports movement.

Olympism, being a form of social outlook based on the noble principles of human rivalry taking place in sports arenas, occupies a significant place in the social life of modern society as a whole and in its cultural space. The revival of Olympism after centuries of oblivion was largely facilitated by the excavations carried out in ancient Olympia, which for a number of years (1875-1881) were led by the German historian of antiquity and archaeologist Ernst Curtius. It was thanks to this event that exceptionally significant data on the ancient Olympic Games were obtained, which served as a powerful impetus for the emergence and promotion of the "Coubertin" idea of their revival [8]. However, the originally set vector of the holy and humane principles of Olympism laid down by Pierre de Coubertin has long since changed its direction in the opposite direction, creating many problems for athletes, especially Russian ones. In the last decade, pressure on domestic sports from the IOC and other international sports organizations has been increasing. Increasingly and especially impressively, doping scandals are being discussed with our athletes, followed by bans on individual athletes from participating in international competitions, including the Olympic and Paralympic Games. The epilogue to all this was the ban on almost all Russian athletes from participating in international competitions in view of the entry of Russian troops into Ukraine on February 24, 2022 (special military operation).

The like-minded people of Pierre de Coubertin did not dream of such a development of the international sports movement when they revived such a unique phenomenon as the Olympic Games and created the IOC as the main "manager" for the development of sports throughout the world, sitting at a congress in Paris on June 23, 1894. Unfortunately, most people today associate the Olympic Games not so much with moral, ethical and actually humanistic ideals, but with show business, doping, trade and corruption. Many people regret and cannot accept the decline of sports in the context of commerce, corruption and show business [1].

MAIN CONTENT OF THE ARTICLE

Russia was a direct participant in the revival and development of the modern international Olympic movement. Later, after the founding congress on the revival of the Olympic Games, Pierre de Coubertin (1863-1937) noted the significant role of Russia, and first of all, Lieutenant General of the Russian Army Alexei Dmitrievich Butovsky, in supporting the ideas of Olympism and in preparing the historical congress [9]. Being an authoritative military specialist, a deep analyst, a highly educated person, a talented publicist and a fairly well-known teacher (he devoted his whole life to the physical education of youth in educational institutions of Russia and the training of teachers of bodily exercises) who shares the ideas of Pierre de Coubertin, with whom he was personally acquainted, A.D. Butovsky (1833-1917) quite naturally was elected to the IOC and was the first representative of Russia in this organization. Activities of A.D. Butovsky on the preparation of the Athletic Congress, which decided to create the IOC and hold the I Olympic Games of our time, was awarded one of the highest awards in Greece of that time - the Commander's Cross of the Greek Order of the Savior. Of the other members of the IOC, only Pierre de Coubertin himself received such an award. However, despite the fact that Russia stood at the origins of neo-Olympism, and its representative was a member of the IOC, the government of tsarist Russia initially did not provide any support for the implementation of Olympic ideas in the country. Subsequently, feeling behind him the vacuum of indifference of high-ranking

compatriots A.D. Butovsky, in protest, resigned from his post as a member of the IOC (in 1900).

The first Olympiad for Russians who did not participate in the games of 1896, 1900, 1904 was the IV Olympiad in London in 1908. The Olympic debut of the team of Russian athletes was extremely successful. Of the five Russians participating in the games, three returned home with awards. The first Russian Olympic champion was Nikolai Alexandrovich Panin-Kolomenkin, who won in figure skating. Silver medals were won by classical style wrestlers Nikolay Orlov and Andrey Petrov. The success of the athletes attracted the attention of the Russian public and the tsarist government to the Olympic Games. In March 1911, the National Olympic Committee of Russia was formed. The subsequent Olympic failure (1912) required more active preparation for the games. That is why the All-Russian Olympiads (1913, 1914) were held in the country. World War I interrupted the series of Olympic competitions for the first time. Immediately after the 1917 revolution in Russia, the reactionary leadership of the IOC and other international organizations introduced a policy of isolating Soviet athletes.

After the formation of the USSR in 1922, the country's authorities repeatedly tried to get their athletes to participate in international competitions, first of all, there was a struggle for the admission of Soviet athletes to the Olympic Games. Back in 1920, the main department of Vsevobuch of the RSFSR sent a petition to the IOC for the participation of 8 athletes from Soviet Russia in the games in Antwerp. However, this organization refused to invite Russian athletes, considering at that time a full member of the IOC committee from the country, a representative of the previous political regime, Prince (knyaz) Lev Urusov, who emigrated during the Civil War.

In 1924, the USSR received an invitation to the games in Paris, but not directly through the organizing committee of the competition, but through the mediation of the French Workers' Sports and Gymnastics Union. Considering such a gesture unacceptable, the Soviet Union refused to participate in the Olympics. After the end of World War II, the USSR began to actively integrate into the world sports community and in 1950 received an invitation from the IOC to participate in the 1952 Summer Olympics. Having answered with consent, the USSR set about creating the NOC, which was created in 1951. Within the framework of the 46th session of the IOC (held in Oslo from February 12 to 26, 1952), the USSR was admitted to this international organization.

The following year, 295 Soviet athletes arrived in Helsinki and competed in 16 sports. According to the results of this sports forum, the USSR national team took 2nd place in the unofficial team standings, having won 22 gold, 30 silver and 19 bronze awards. Thus began the inclusion of our country in the Olympic movement, in which we participate, and to this day, with varying degrees of success and overcoming the emerging collisions.

The following facts can testify to a certain weight of Russia in the international sports movement. Now the members of the IOC are the Russians Isinbayeva E.G. and Tarpischev Sh.A., and honorary members of the IOC Popov A.V. and Smirnov V.G. Members of the European Olympic Committee (EOC) are 5 Russians. International sports federations are headed by 5 of our compatriots: Dvorkovich A.V. is the President of the International Chess Federation (FIDE); Skrynnik B.I. – Federation of International Bandy (FIB); Kremlev U.N. – International Boxing Federation (AIBA); Lisin V.S. – International Shooting Sport Federation (ISSF); Usmanov A.B. - International Fencing Federation (FEI), which on February 28, 2022, will itself suspend its activities as president until justice is restored after the imposed sanctions.

If we talk about the most urgent modern problems facing the Russian Olympic Movement, then first of all, we should talk about the following. Since 2012, the United States and EU countries have been implementing political and economic restrictions against Russia, as well as individuals and organizations. True, at first they did not particularly affect the field of sports. The restrictions were first adopted in connection with the "Magnitsky case" (a British investment fund lawyer who was found guilty of tax evasion), then extended and expanded after the annexation of Crimea (the West calls it annexation) and the situation in Ukraine in 2014, and in 2016, in response to reports that Russia was allegedly supplying nuclear weapons to North Korea, Syria, and Iran. In 2017 and 2018, anti-Russian restrictions were gradually extended and expanded, including due to alleged Russian interference in the US elections. In August 2019, a second package of sanctions was introduced related to the «Skripal case». The newest unprecedented sanctions followed in response to the Russian-led special military operation to protect Donbass. These recent sanctions also directly affected the sports sector, which had previously been involved in sanctions problems in connection with doping scandals.

Doping scandals in the Russian Olympic movement

These scandals began on a particularly large scale in December 2014, when the revelations of Russian runner Yulia Stepanova were set out in a letter addressed to the World Anti-Doping Agency (WADA), which detailed her personal experience with doping and the activities of Russian sports officials who covered her actions for many years. Yu. Stepanova's message attracted the attention of the press and WADA launched an investigation. In November 2015, the head of the Moscow anti-doping laboratory, Grigory Rodchenkov, was accused by an independent WADA commission of deliberately destroying (in September 2015) more than a thousand samples in order to conceal the use of doping by Russian athletes, although he initially denied this. The report of the independent WADA commission also claimed that G. Rodchenkov was part of a scheme to extort money from athletes for hiding positive samples. Another violation (identified by an independent

commission) was that the principle of independence was violated in the Moscow anti-doping laboratory, since it actually turned out to be dependent on RUSADA and the Ministry of Sports, and in addition, state security agencies could interfere in its work. As a result of the scandal, G. Rodchenkov resigned, which was accepted on November 11, 2015. Subsequently, the activities of RUSADA were suspended, and the accreditation of the Moscow anti-doping laboratory in WADA was withdrawn. Fearing for his safety (after the publication of the report of the independent commission of WADA), in January 2016, G. Rodchenkov fled to the United States. There, he was given an interview with American journalists, after which, on May 12, 2016, the American newspaper The New York Times published an article based on an interview with G. Rodchenkov with the title "Russian insider says Olympic gold is saturated with state doping." According to this insider, there is a state doping program in Russia. As part of this program, he participated in the substitution of about 100 urine samples with the "B" index (sample for reanalysis) of Russian athletes during the 2014 Winter Olympics in Sochi. This Olympics was a victory for us. We won 13 gold, 11 silver and 9 bronze medals. True, later the Russian team lost several medals after doping trials. In his interview, G. Rodchenkov also said that he had developed a cocktail of three anabolic steroids (axondrolone, methenolone, trenbolone), which, on his recommendation, were taken by many Russian athletes, including those who participated in the 2012 Olympics in London and the 2014 Olympics in Sochi. A mixture of anabolics was taken together with alcohol, which facilitates absorption: men with whiskey, women with vermouth. The cocktail was not swallowed, assimilation occurred through the oral mucosa.

Canadian professor of international sports law Richard McLaren, invited by WADA as an independent expert, on July 18 and December 9, 2016, published at the beginning the first and then the second part of the report on the results of the investigation regarding possible cases of doping by Russian athletes at the Sochi Olympics. The report said that the accusations against the state doping support system, put forward by G. Rodchenkov, were confirmed. Thus, according to the opinion of the foreign public, G. Rodchenkov became a reliable and truthful source of information about doping in Russia. After, on September 13, 2018, in a letter to WADA, Russian Minister of Sports Pavel Kolobkov was forced to acknowledge the conclusions of the McLaren report. In July 2020, the book «The Rodchenkov Affair: How I Brought Down Putin's Secret Doping Empire." was published. It won the William Hill Literary Award for Best Sports Book of the Year. G. Rodchenkov, who currently lives in the United States, is a member of the US federal witness protection program, his appearance has been changed, his place of residence is classified, and his activities to denigrate Russian sports continue.

# Sanctions policy of the International Olympic Committee

Returning to somewhat earlier times, we will mention the time when the question arose of not allowing the Russian team to participate in the 2018 Winter Olympics. However, we performed there, however, under the Olympic flag. Only «clean» Russian athletes, selected by a special commission of the IOC, were invited to the games. At this Olympics, where a number of the country's leading athletes did not receive admission, the Russians won 2 gold medals, 9 silver and 9 bronze medals and took 13th place in the medal standings of the Games. At the same time, the IOC during the Games announced in advance the possibility of lifting the disqualification from the ROC and the passage of Russian athletes during the closing ceremony through the stadium under their own flag, subject to respect for the current decisions of the IOC. However, due to two doping cases that occurred with Olympians from Russia (curling player Alexander Krutelnitsky and bobsledder Nadezhda Sergeeva), the IOC session that took place decided "not to return the flag to the Russians".

After this Olympics held in South Korea, the situation seems to have begun to settle down, but at the end of 2019, after almost 9 months of studying the database of the Moscow anti-doping laboratory by the WADA commission, the crisis erupted again. Russia received a 4-year ban, and was left without the right to play under its name, flag and anthem at the Summer and Winter Olympic Games in Tokyo (2020) and Beijing (2022), as well as other major international top-level tournaments.

At the beginning of 2020, the case between Russia and WADA was submitted to the Court of Arbitration for Sport. The verdict was delivered by the end of the year, the sentence was reduced to 2 years, the new sanctions were to end their ban on December 16, 2022. But in February, and then in the spring and summer of 2022, another wave of sanctions against Russian sports followed due to the situation with Ukraine (on February 24, 2022, Russia launched a special military operation to liberate Donbass). Immediately after the start of these events, the IOC recommended that Russian and Belarusian athletes be suspended from participating in international competitions.

In the early spring of 2022, the most memorable anti-Russian decision was the suspension of Russian athletes from the Paralympics starts in China. At first (March 2), they were allowed to participate in the Games in a neutral status, and a day later (March 3), when the Games were supposed to open, it was decided to refuse the athletes of Russia and Belarus to participate in the Paralympics 2022. This happened due to the fact that several participating teams threatened not to participate in these competitions, which put the Games in jeopardy. In response to such actions, Russia held an alternative Paralympic Games in Khanty-Mansiysk from 13 to 21 March 2022 under the motto "We are together. Sport", where representatives of Belarus also participated.

# Scientific research of the SCO countries: synergy and integration

With the start of the special operation in Ukraine, Russian sports found themselves in global isolation: suspension, bans, and an unclear future - these are the main topics of conversation that have been going on all this time among our athletes and their fans. Russia's membership was «frozen» in certain sports organizations: the International Biathlon Union (IBU), the International Federation of Sport Climbing (IFSC), the International Bobsleigh and Skeleton Federation (IBSF). The International Swimming Federation (FINA) suspended the teams of Russians and Belarusians from competitions held under its auspices. The World Aquatics Championships in June 2022 took place without their participation. Initially, the ban on playing in national teams affected our tennis players, boxers, mixed martial arts fighters and chess players. For them, performances were possible only in a neutral status. Foreigners refuse to take part in competitions in Russia. The Finnish hockey club «Jokerit» withdrew from the KHL draw, Riga «Dynamo» announced its withdrawal from the league. The Estonian «Kaleb» and the Polish «Zielona Gora» left the basketball unified league. The legionnaires left the hockey and basketball clubs of Russia.

Thus, since the beginning of the special operation in Ukraine, many of our athletes have lost the opportunity to participate in international competitions. In addition to the above, we note that the sanctions list includes Russian football and basketball clubs, gymnasts, and athletes. In addition, Russia was deprived of the right to host the Ice Hockey World Championship and Formula 1 Grand Prix. UEFA severed relations with Gazprom. Tennis players were banned from playing at «Wimbledon».

Purely sporting sanctions due to the military special operation in Ukraine also affected the leader of Russia. V.V. Putin was recalled the gold Olympic order of the IOC - the highest award of the Olympic movement. The International Swimming Federation also withdrew from him the Order of Honor, awarded in 2014. The International Judo Federation suspended his powers as honorary president of the federation. In addition, the relevant international federations stripped him of his 9th dan taekwondo and 8th dan judo.

Today, the only good news is that individual Russian athletes are not deprived of the right to compete in a number of international tournaments in a neutral status. This applies to representatives of tennis, auto racing and swimming, there are concessions and some other sports Not all international federations heeded the recommendations of the IOC executive committee to ban our athletes from competing abroad. However, Olympic officials continue to admonish that their stance of non-admission is "not directed against Russian athletes", but is caused by the need to ensure the fairness and honesty of sports competitions and the safety of all participants. True, these assurances look somewhat strange, since in a number of sports security issues, it turns out, were ignored, allowing the Russians to play in a neutral status.

Let us touch on the disclosure of the concept of "neutral status" in more detail. In fact, this is a disciplinary measure that was invented and first applied in connection with anti-doping sanctions by the International Association of Athletics Federations (IAAF) in 2017. This phenomenon can be viewed in two ways. On the one hand, such a status is intended to hurt patriotic feelings, and on the other hand, to avoid collective punishment and allow athletes who are not personally seen in any violations to compete. The essence of a neutral status is that a "clean" athlete at international competitions does not represent his country, but some kind of sports structure (national or international federation). As noted earlier, with this status, these athletes from our country cannot compete under the flag of the Russian Federation, the Russian anthem does not sound during their awards, the anthem of the international federation sounds, or a specially selected work, their uniforms should not have the designation «Russia».

Unfortunately, as the doping scandal developed, neutral status began to be practiced far beyond athletics. It was actually applied to the Russian team at the 2018 Winter Olympics in Pyeongchang, 2022 in Beijing and at the Summer Olympics in Tokyo in 2021. WADA sanctions regarding the participation of Russian athletes in the World Championships and Olympic Games to date are still "working", and new restrictions of a different nature due to a special operation apply, possibly indefinitely, to all competitions outside of Russia. Of course, all these suspensions are announced as temporary, but there is almost never a specific time frame for their validity. In a number of situations, the Russian national teams are voluntarily removed from the competition, citing logistical and other organizational problems, some federations and clubs are going to challenge the sanctions in arbitration. This is not a quick matter, and the fact that Russian athletes were banned from participating in international competitions led to the fact that a number of them decided to change their citizenship, although this phenomenon may have other reasons. Many are faced with a dilemma: either end their career or change their passport.

The first performance of athletes at the Games under the Olympic flag or the flag of the NOC took place in Moscow in 1980, then more than 50 countries boycotted the Olympic Games due to the entry of Soviet troops into Afghanistan in 1979. At the Olympics in Albertville (France) in 1992, Russia, Armenia, Uzbekistan, Ukraine and Belarus performed as a united team under the Olympic flag. In the Olympic summer of 1992 in Barcelona, 12 former Soviet republics competed as a single team under the Olympic flag. What is happening now with Russian sports is not the only case in world history. South African athletes were marginalized to varying degrees from world sport from the early 1960s until the fall of apartheid in 1991. Three decades of international isolation has certainly put a damper on South African sports. After the lifting of sanctions, local athletes found themselves in the role of catching up. And only at the 2016 Olympics in Rio de Janeiro, athletes from South Africa reached the level of 10 medals for the Games, which is how many they won before the ban on participation in them.

It makes sense to go into more detail about how the IOC is trying to explain the imposition of sanctions on Russian sports and, consequently, the Olympic Movement in Russia. Speaking on May 20, 2022 at the IOC session in Lausanne, Thomas Bach, for the first time since the start of Russia's military operation in Ukraine, explained the reasons and meaning of the imposition of sanctions, which actually isolated domestic sports. At the same time, the IOC president, at least formally, nevertheless spoke out against the extension of punishments to the entire "Olympic community" of the country, making it clear that, in his opinion, they should be applied only to those who publicly support the special operation. At this session of the IOC, Thomas Bach gave a speech that has become one of the main ones for all nine years that he has occupied a key position in the world sports movement. It was a speech dedicated to the central topic of the session - the Ukrainian crisis and the position of the IOC towards Russia. In Lausanne, Thomas Bach tried to explain the reasons for the inevitability of sanctions. He did this in response to the question of why the IOC reacted to the events in Ukraine at the end of February in a different way than «to other wars around the world.» The first reason he gave was the fact that Russia violated the principle of the so-called Olympic Truce with its "special military operation". It forbids since ancient times to initiate military conflicts during the Olympic Games, including within 7 days before their opening and within the same time after their end. The closing of the Beijing 2022 Olympics took place on February 20, and a special military operation began 4 days later. At the same time, Thomas Bach pointed out that even during the opening ceremony of the Olympic Games he called for avoiding violation of the «Olympic Truce», which, as it turned out, he personally is extremely reverent.

The second reason is "the far-reaching political, social and economic consequences of the conflict". Among such consequences, one should probably include complaints received by the IOC on the same day from the head of the organizing committee of the Paris 2024 Olympics, Tony Esting, that the Ukrainian events complicate preparations for it. As of this writing, the organizers of the 2024 Summer Olympics in Paris say they will accept any final decision by the IOC.

The complexity of the relations of the international sports structure with Russia had drastically worsened even before the February military event. According to the "chief Olympic official", this was facilitated not only by the "doping crisis", but also by "cyber attacks", and even "personal threats" to representatives of the IOC and the Olympic movement. At the same time, Mr. Bach did not decipher,

that is, he was unfounded, what these threats were, but he explained that the factors he listed together make it difficult for him to dialogue with the "Russian leaders". In that speech of Thomas Bach, one can see that he did not seem to formally deny that Russia would have chances to compete in international competitions. The sanctions are «limited to the circle of the government and the ban on the use of national symbols and do not apply to the entire Russian Olympic community.» Subsequently, the IOC President also emphasized that sanctions, in accordance with international law, can only apply to those who are "responsible for something", and the operation in Ukraine was launched "not by Russian athletes, not by ROC and not by members of the IOC from Russia" (by the way, both IOC members from our country, Elena Isinbayeva and Shamil Tarpishchev, were not banned from participating in this session). That is, it turns out that even after the February events, Thomas Bach did not seem to mind bringing the Russians back to the top competitions. True, he also did not refute this assumption, specifying that the IOC «closely monitors those who support the special military operation with statements or actions.» He then flattered the International Gymnastics Federation (IGF) for disqualifying gymnast Ivan Kulyak (for the image of the letter «Z» on the form) and the International Swimming Federation (FINA) which «banned» swimmer Yevgeny Rylov (for attending a concert in honor of the anniversary annexation of Crimea).

However, literally recently, positive shifts for us are outlined. The United States Olympic Committee (USOPC) in December 2022 said that it was not opposed to Russian athletes participating in the 2024 Olympic Games in Paris. This was announced by the head of the organization Suzanne Lyons. The head of the USOPC also stated that sanctions on the flag, anthem, and any symbols of Russia should be stricter than at the Olympic Games in 2022 [7]. Following the United States, the National Olympic Committees of Germany, France, Norway and China advocated the return of Russian and Belarusian athletes to international competitions as neutral athletes. The International Judo Federation (IJF) advocated the return of Russian athletes to international competitions, noting that judoists have never participated in political or party propaganda [3].

On January 25, 2023, the IOC announced the possibility of considering the participation of Russian and Belarusian athletes in international competitions in a neutral status, subject to strict restrictions. In particular, athletes who did not oppose the IOC peacekeeping mission, did not actively support the special operation in Ukraine, as well as those who fully comply with the World Anti-Doping Code, can be allowed to compete. It is noted that all declared athletes will have to undergo an individual check. In case of violation of the above conditions by athletes, they may be suspended again. In addition, the IOC release notes that the vast majority of participants in the consultations on the return of athletes declared

their commitment to the unifying mission of the Olympic Movement, and that no athlete should be prevented from participating in competitions only because of his passport. In this connection, it is necessary to further study the possibility of athletes participating in competitions under strict conditions [6].

The UN also supported the IOC on the issue of the possible admission of Russian athletes to competitions, emphasizing that the IOC and the Olympic community as a whole are obliged to comply with the Olympic Charter and international human rights standards prohibiting discrimination [4]. Indeed, not everything is so rosy. After the IOC announced the possibility of considering the participation of Russians and Belarusians in the 2024 Olympics in a neutral status, several countries (Ukraine and the Baltic countries) announced a possible boycott of this Olympics. And Thomas Bach's compatriot, German journalist Hajo Seppelt, pointed out that the admission of Russian and Belarusian athletes to the 2024 Olympic Games would be the biggest defeat of the head of the IOC in his post. As you can see, there is no certainty in this matter. Time will tell where we end up. CONCLUSION

The Summer Olympic Games in Paris will be held from July 26 to August 11, 2024, and I would like to believe that in the near future Russian athletes will be allowed to qualify for international competitions for the main starts of the fouryear period. We hope that some time will pass and the Olympic ideas laid down by Pierre de Coubertin will triumph in the heads of the first persons of the opposing states of the world and the leaders of the international sports movement. And maybe the time will come when all strife and confrontation will be resolved only in sports arenas under the sacred Olympic symbols, meaning the unity and equality of all parts of the world and all continents, representatives of all races, peoples and countries in the face of his majesty of sports.

Talks about the admission of Russian and Belarusian athletes to starts in international arenas are getting more active every day. The IOC and Thomas Bach himself have obviously overestimated the situation and seem ready to take decisive action. The latest statement of the International Olympic Committee most likely speaks of the return of Russian athletes to the Olympic, albeit not quite friendly today, family as a fait accompli. Apparently, it won't be long before the final decision is made. True, according to the assurance of the Minister of Sports and Tourism of Poland on February 10, 2023, at a meeting of sports ministers from almost 40 countries, a decision will most likely be made not to allow Russian and Belarusian athletes to participate in the 2024 Olympics. Well, let's wait and see how strong true ideals of Olympism.

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## 农村青年个人自主权的理论特征 THEORETICAL FEATURES OF PERSONAL SELF-DETERMINATION OF RURAL YOUTH

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抽象的。 在本研究中,我们考虑了个人自决的理论特征和农村青年个人自决的 心理问题。 最新的历史基于俄罗斯联邦全新的人文关系。 在这项工作中,我们 具体化了定义:"个人自决是在现在和未来社会中建立人际互动的过程,取决于自 我意识的发展,对存在的感官情感感知中的肿瘤 以及要求重新思考自己"我"形 象的社会现象。"确定了农村青年个人自决的主要组成部分。 我们确定了提高 农村青年个人自决能力发展过程效率的主要方法。

关键词:个人自决、自决、个人发展、职业兴趣、农村青年。

Abstract. In this study, we consider the theoretical features of personal selfdetermination and the psychological problems of personal self-determination of rural youth. The latest history is based on completely new humanistic relations in the Russian Federation. In this work, we concretized the definition: "Personal self-determination is the process of building interpersonal interaction in society both in the present and in the future, depending on the development of selfawareness, neoplasm in the sensual-emotional perception of being and social phenomena that dictate the rethinking of one's own" image of Me. "Identified the main components of personal self-determination of rural youth. We identified the main ways to improve the efficiency of the process of developing personal selfdetermination of rural youth.

*Keywords: personal self-determination, self-determination, personal development, professional interest, rural youth.* 

The future of Russia directly depends on the creative concept of education today, on an effective personnel policy, on the moral core of the younger generation, which are created by simple teachers. We are preparing future astronauts, actors, directors, politicians, military, doctors, agricultural specialists, we know that it is most significant for rural youth to see their clear life prospects, make plans, dream, choose their professional path, and these aspects imply the provision of favorable socio-economic and socio-psychological conditions. The level of functioning of the state as a whole depends on the level of well-being of the modern village, since the political situation in the world is unstable and sanctions make us dependent on various levels, and therefore we need to maintain energy, economic independence.

The new Law of the Russian Federation "On Education" says that "education should provide an adequate global level of the general and professional culture of society: the formation of an adequate modern level of knowledge and the level of the educational program of the picture of the world among rural youth; integrating the individual into national and world culture; the formation of a person and a citizen integrated into his modern society and aimed at improving this society. "

In general, the problem of personal self-determination is of socio-philosophical importance, that is, the influence of social mechanisms on the development of the individual, hence the problems of life self-determination, moral self-determination, self-awareness, interaction with others, and a decrease in the level of value orientations arise. In our study, we focus on the influence of psychological and pedagogical conditions on the process of developing personal self-determination of rural youth, respectively, we significantly expand both the problem of research and the boundaries of research, which cover sociology, philosophy, psychology, pedagogy.

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Thus, considering the problem of the influence of psychological and pedagogical conditions on the process of developing personal self-determination of rural youth, we, unfortunately, observe insufficient knowledge in this direction. The scientific literature still lacks a holistic idea of the nature of the interaction of the educational space with the personality of rural youth, especially how this interaction affects career guidance activities.

Modern European states build completely new relations both in foreign policy and in domestic, and therefore the tendency of humanistic interaction is a transformative mechanism of mankind. In the Russian Federation, civil society mechanisms regulate political, economic and educational processes, this vision is necessary to maximize individual rights. To build a highly developed democratic humane society, it is necessary to create conditions that would reveal the highest feelings in the modern individual. This individual will be able to reveal himself as much as possible in the professional sphere, family life and make a huge contribution to the development of Russia. Therefore, career guidance work in school should be based on humanistic principles, since the personal self-determination of rural youth directly depends on the worldview, individual abilities, on understanding the future professional path, on the desire for prosperity of their homeland, on the level of personal and intellectual development.

Personal self-determination of rural youth is one of the aspects of personal development, so we consider it very important for our research to maximize all the conditions, mechanisms of neoplasm development. Early youth differs from all age periods in its lightning speed of the formation of neoplasm, which are subsequently fundamental in choosing a life path, profession, and work activity. Self-awareness, intellectual development, psychological readiness to choose a profession are one of the few factors that determine the effectiveness of the process of developing personal self-determination of rural youth.

Foreign scientists define the process of personal self-determination as the process of identity development, as well as determine the levels and state of personal self-determination. Levels of identity development - conditionality, diffusion, achievement of identity, which are determined by the following factors: making independent decisions, and choosing professional activities.

According to E. Erickson, the process of developing personal self-determination is an unconscious process that depends on the levels of development of consciousness. A huge contribution to psychological science is made by the development of a holistic perception of "identity," as a process of constant self-improvement of the "personal accepted image of one's own self." The path of development of a self-sufficient personality is the achievement of identity, which will serve as a sensual-emotional component of the growing up of the personality and more successful professional self-realization. Many foreign scholars consider "identity" as personal self-determination [12].

In the scientific works of A. Adler, one can trace the study of personal self-determination from the standpoint of individual-personal development and, therefore, the fundamental unit of efficiency of the process of development of personal self-determination A. Adler distinguished "creative power," "willpower," "self-realization," which are concentrated in the personality itself and are the basis of self-determination of the life path [1].

The concept of "self-determination" is found in the works of S. Buehler. She believed that self-determination and the desire for self-realization were both innate

properties of consciousness and drivers of individual development. The completeness and degree of self-realization, according to S. Buehler, depend on self-determination, which means both the ability of an individual "to set such goals that are most adequate to his inner essence" [14], and in general "target structures of the individual." In her opinion, it is the presence of life goals that leads to the integration of the person and is a condition for maintaining her mental health, and their absence causes neuroses. Sh. Buehler concluded that target structures or self-determination underlie the development of life phases and the transition from one phase to another.

For our study, the vision of A. Maslow is very interesting, which defines personal self-determination as a set of personal characteristics, individual preferences, desires and their transformation into a choice of profession. In our study, we combine the components of "personality-individual abilities" and "individual-character characteristics." A. Maslow's opinion "Self-determination is the process of determining their personal characteristics, preferences and implementation in professional choice" we consider key for our work [15].

C. Rogers considers the "self-determination" of the individual as a process of unlocking one's own possibilities, mental and intellectual potential, that is, a tendency to self-realization, actualization. There is a constant desire of the individual to avoid any external control, therefore, personal self-determination occurs throughout the entire period of active life [10].

Considering the problems of building human life, E. Bern distinguishes life scenarios as programs of progressive development, developed in early childhood under the influence of parents and determining the behavior of an individual in important aspects of his life; scenarios cover a person's entire life in detail, and strategies are seen as general ideas about human life. He identified the following main types of scenarios: "never do"; "I always do"; "has never done before"; "I will not do, I will do later"; "I do it again and again"; "will do as long as it is no longer possible to do." Based on the isolation of these scenarios, the following three types of people were identified: winners, non-winners and losers [13].

Thus, we believe that personal self-determination is a multifaceted process that proceeds throughout life and can not only be limited to the search for the acquisition of identity, but also the constant search for the meaning of life, the realization of the professional and life path.

The problem of the development of personal self-determination of high school students was considered by L.I. Bozhovich, L.I. Bershedova, M.R. Ginzburg, I.V. Dubrovina, I.S. Cohn, T.V. Snegireva, D.I. Feldstein and others. The need for self-determination arises in high school age, and the need for this need arises due to the logic of social and personal development.

By the social situation of development L.S. Vygotsky understood "a completely peculiar, specific for a given age, exceptional, unique and unique attitude between the child and the reality surrounding him, primarily social, which is the initial moment for all dynamic changes taking place in development during this period" [7].

Thus, we adhere to this opinion in the design of the educational space of the modern village and in the program of the parental support school "Tuya," the main emphasis is on the internal mechanisms of personal self-determination of rural youth, since internal experiences significantly affect the positive assessment or future choice of professional activity.

Therefore, we fully support the opinion of L.I. Bozovic "on the unity of environmental and personal moments that create a certain interweaving of external and internal conditions," and also argued that, "Behind the experience lies the world of the child's needs - his aspirations, desires, intentions in their complex interweaving with each other and in their relation with the possibilities of their satisfaction. "To understand the nature of the influence of external circumstances on the mental development of the child, the entire complex system of connections, the whole world of the child's needs and aspirations must be deciphered [6].

For our study, the opinion of A.G. Asmolov is significant. The axis of the historical time of the personality's lifestyle in this society, in his opinion, makes it possible to distinguish the objective social regime that the personality is set - the historically determined length of childhood in this culture. Another axis of the lifestyle is the social space in which various social institutions exist at a given interval of historical time, participating in the process of introducing individuals through the joint activities of social and historical experience [2].

Domestic academic teachers, psychologists consider personal self-determination depending on the conditions of "external" and "internal," that is, organizational and pedagogical measures are aimed at completely different components of personal self-determination. In our study, we consider internal conditions as a process interrelated with the development of the personality of a rural student (individual abilities, internal desires, genetic prerequisites, life position, intellectual abilities, psychophysiological features, etc.), and we consider external conditions within the framework of the organizational and pedagogical process and the influence of the educational space of a modern village (designing the educational environment of a rural school, pedagogizing the educational space of a modern village, organizational and pedagogical measures, etc.).

The basis of the classical approach is the principle of determinism of S.L. Rubinstein, which assumes that "external conditions do not directly and directly determine the final result, but refracted through the action of internal conditions, the proper structure of a given body or phenomenon" [11]. According to S.L. Rubinstein, external determination involves the transformation and activation of internal processes, which subsequently characterize the motives for choosing a profession and life path.

Thus, the concept of "personal self-determination" includes individual prerequisites for professional choice, internal motives, vital position, activity and freedom of the individual, which in principle are the basis of a developed person.

Also interesting for our study is the opinion of M.R. Ginsburg. In our opinion, the vision and understanding of personal self-determination of M.R. Ginzburg is more complete and reflects the most scientific research of foreign and Russian researchers [8]. So, for example, M.R. Ginzburg considered personal self-determination both as a "process" and a "phenomenon," thereby expanding the framework of research by teachers and psychologists, and also determined the static and dynamic aspects and proposed structural components as a psychological present, psychological past and psychological future, which have value-meaning and spatio-temporal aspects. In this case, personal self-determination appears as the acquisition by a person of value-meaning unity and self-realization [8].

N.S. Pryazhnikova understands personal self-determination to mean finding an original "image of me," constant self-development of the person and this "image of me" and self-realization in society [9].

Thus, in domestic theory and practice, the problem of personal self-determination includes internal and external processes and arises at the intersection of interaction between personality and society. In our scientific works, personal and professional self-determination is considered, where the main emphasis is on the external process, but on the basis of the analytical study carried out, it can be argued that as a result of any external influence internal neoplasms arise, which can absolutely determine the choice of the life path [3]. In rural areas, it is impossible not to consider external conditions, since the young person perceives the richest socio-cultural experience without even fully realizing the significance of events, holidays, competitions in the development of his self-awareness and life position in professional and life choices [4; 5].

Based on the above, we can specify the definition: "Personal self-determination is the process of building interpersonal interaction in society, both in the present and in the future, depending on the development of self-awareness, neoplasms in the sensual-emotional perception of being and social phenomena dictating the rethinking of one's own" image of Self. "

Thus, we believe that the process of personal self-determination proceeds throughout a person's life and is basic for all types of self-determination. Affects the adoption of life decisions, changes in the field of professional activity depending on the socio-economic conditions in the state. In our opinion, it is not enough to consider personal self-determination only at the level of youth, since the trends of our time constantly dictate self-improvement both in professional activity and in the general intellectual development of the person. Also, for our study, it is important to expand the concept of "personal self-determination," since we consider its consideration as a "process" and "phenomenon" in the aggregate will lead to the concretization of the constituent components.

Thus, we consider the components defined by us: personal-individual abilities, individual-character characteristics, design of the educational environment, organizational and pedagogical measures and the concept of "personal self-determination" specified by us allow us to consider the dynamics of personal development, assess the effectiveness of the educational process, organizational and pedagogical measures, self-awareness of the "image of me," the development of life position.

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## 克服一般语言发育不全的低年级学业失败问题 ON THE ISSUE OF OVERCOMING ACADEMIC FAILURE IN YOUNGER SCHOOLCHILDREN WITH GENERAL SPEECH UNDERDEVELOPMENT

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抽象的。 这篇文章反映了多年的言语治疗工作在预防学业失败方面的结果, 这些学业失败与二年级普遍言语发育不全的最常见类型的阅读障碍的风险相关。 矫正和发展影响系统旨在形成拼写活动的图形基础、其心理和语言成分以及图形 概括。 通过理论和方法论证以及对此类儿童同化拼写有效性的长期监测,确保 了所开发方法的高效性。

关键词:算法、关联、错字法、图形概括、拼写活动、拼写规则和原则、预防、术语、语言概括。

Abstract. The article reflects the results of many years of speech therapy work on the prevention of academic failure associated with the risk of one of the most common types of dysorphography in second-graders with general underdevelopment of speech. The system of correctional and developmental influence is aimed at forming the graphic basis of spelling activity, its psychological and linguistic components, and graphic generalizations. The high effectiveness of the developed methodology is ensured by the theoretical and methodological substantiation and long-term monitoring of the effectiveness of the assimilation of spelling by children of this category.

**Keywords:** algorithm, associations, dysorphography, graphic generalizations, spelling activity, spelling rules and principles, prevention, terminology, language generalizations.

Prevention in second-graders with general speech underdevelopment (GSU) of dysorphography associated with shortcomings in the graphic basis of spelling activity is relevant due to the prevalence of this type of writing impairment among schoolchildren of this category [1, 7, 9, 10, 11, 13] and is interdisciplinary in nature [10, 11]. The poor performance of children in this category in the second grade arises due to the difficulties in mastering graphic generalizations, with the inability to apply the spelling rules of the traditional principle and the rules of graphics. In the third and fourth grades, as well as at the next levels of education at school without specially organized speech therapy work, systematic, persistent and numerous errors are noted when writing vowels i, a, u after hissing (zhi, shi, cha, scha, chu, shu), vocabulary and borrowed words. Primary school students do not learn such spellings that are included in written work. In this case, the corresponding rules are studied later [8]. In such cases, in the lesson, the teacher writes the words of the last group on the blackboard before the dictation. Children remember their graphic image, pronounce. The record is then removed. Students return to this record after completing the verification work and compare these options.

The risk mechanisms for the occurrence of this type of writing disorder are the difficulties in the formation of operations of identification, selection and differentiation of the named spellings, as well as the destructiveness of assimilation of the graphic image of combinations of letters or whole words. Children do not master the rules-instructions (*for example, "Chu, shu write with U"*). They do not know how to apply a portrait analogy, therefore they do not remember how foreign and Old Slavic words are written (*pencil, coat, clothes*).

On a practical level, students do not learn the so-called law of linguistic sign symmetry. Children do not establish a clear and stable association between the allophones of sounds and the corresponding graphic images of combinations of letters (*-chn-, -chk-*) or whole words when it comes to words from the dictionary. In this case, it means updating the spellings during the dictation.

Qualitative and quantitative results of the study of this issue from 2006 to 2022 in a number of secondary schools in St. Petersburg showed a fairly high efficiency of the developed system for the prevention of dysorphography in 480 second-graders with GSU. The obtained indicators of the formation of the psychological and linguistic components of the graphic basis of spelling activity were compared using the Scheffe criterion. The statistical significance of the difference between the average values of the performance of all the proposed tasks by students was revealed (at  $p \le 0.05$ ).

Speech therapy work to prevent this type of dysorphography is built taking into account the methods of teaching spelling in elementary school [8, 12], existing ideas about the risk of its occurrence dysorphography [1, 9, 10, 13], the causes

of school failure [3], as well as on based on the analysis and generalization of the results of a long-term study of the spelling activity of younger schoolchildren with GSU [11].

The theoretical basis for conducting speech therapy classes is a system-activity approach to the assimilation of spelling [5], grammar [6] and linguistics [2, 4] by younger students. The work on clarifying and consolidating knowledge and ideas about the spelling and its spelling field, about spelling patterns and terms allows children to form a "microsystem" of knowledge and skills within the same spelling topic, for example, in grade 1 ("Vowels after hissing in combinations ZhI, SHI (in the position under stress "), CHA, SCHA, CHU, SCHU). This theme is repeated and reinforced in the classroom with a speech therapist teacher in the second grade. The "macrosystem" is formed within the framework of several topics covered, which reveal the patterns of assimilation and other principles of spelling (for example, how and why graphically similar words are written exactly this way: *xoroshiy* (good), *shirokiy* (wide), *shina* (tire)).

All components of spelling activity are formed: need-motivational, tentative-content, operational-executive and control-evaluative. The components of spelling activity are formed according to the stages and algorithms of their assimilation. In fact, children master one spelling rule algorithm, namely: you need to remember how combinations of individual letters or the alphabetic composition of words are written. This achieves a certain level of language proficiency as a complex semiotic system, where a certain spelling becomes a linguistic sign.

Knowledge of the wording and algorithm of most rules-instructions is specified in the textbook (for example: *Remember: the combinations chn, chk are written without a soft sign*). For this, reference graphic material is widely used in speech therapy work.

First, spelling actions and algorithms for these actions are formed in a materialized form. For example, with the use of chips, ordinal phonemic analysis is carried out. Further, a certain combination of sounds is distinguished in the word. It is compared with the graphic image of the letter combination. Oral commentary is carried out, when almost all components of the spelling field are listed: letter combinations, double consonants, other words from the dictionary, words similar in graphic appearance, graphic conditional images, memo data, tables, models. To update the spelling field of each spelling, the corresponding scheme of the indicative basis of spelling actions is introduced and further improved. When performing exercises, algorithmic operations with such units are "folded" and transferred to the mental plane.

It is known that the psychological and linguistic components of spelling activity are interrelated and interdependent [5]. In this regard, in order to form a stable motivation for spelling and correct writing and the need for it, the optimal stimulus material and didactic means are selected. The leading strategic orientation of the assimilation of spelling and the indicative basis of spelling actions are formed on the basis of visual perception, attention, memory. Associations are fixed between spelling (spelling in the form of a whole word) and the idea of the subject.

A holistic style of coding and processing, first of non-speech, and then of linguistic information, is predominantly developing. So, children learn to holistically recognize and highlight the right spellings. Further spelling actions are carried out on the basis of an analytical style, when schoolchildren are taught to distribute and classify graphic images, printed syllables, letter combinations, and also words, taking into account given features (for example, *-oro-*, *-olo-*). Later, such tasks are given orally. Children are invited to listen and find sound combinations in the speech material that correspond to graphic counterparts. Students are happy to select their own examples for certain sounding or graphic patterns, they also argue their choice on the basis of simultaneous-successive operations.

In the classroom, a reflexive, later - a quick and accurate type of response to stimulus material develops. This allows you to systematically and purposefully compare, contrast graphic and speech units. So, in the game "Lost", students are invited to insert the missing letters and read the words printed on the cards (*krot* (mole), risunok (drawing), dom (house), mesyats (month), kapusta (cabbage), petux (rooster), tort (cake)). Next, students are asked to name only words from the dictionary and justify their choice. Such tasks reinforce ideas about spelling and non-spelling. Thus, such properties of voluntary and post-voluntary attention are brought up as: stability, concentration, switchability, distribution, volume. All types of attention are involved in spelling activity: motor, sensory, emotional and intellectual.

To increase the productivity of visual memory operations, a combination of handwritten lowercase and uppercase letters, a grouping of words of different parts of speech, sayings and proverbs that include spellings that have not been covered in the class are used. Particular attention is paid to the development of short-term speech-auditory memory. Children are taught to listen carefully and memorize a few words; determine, reproduce their syllabic and sound composition of words; reasonably find, name and classify "mistakeable places" (*russkiy (Russian), skuch-no (boring), subbota (Saturday), tochka (point), klass (class)*).

Gradually, the formation of a generalized idea of spelling occurs due to the processes of analysis, comparison, synthesis, classification operations (for example, perceived letter combinations). On the basis of schematization, students learn the visual image and the principle of reproducing spelling data in a letter. Children learn to purposefully fix and update the visual image / use a motor stereotype / pronounce the word out loud in syllables spelling.

A significant place is given to work on general and particular features of orthograms of the traditional spelling principle. Such words are united by their reference to a certain class of words, to dictionary words or to words that contain certain letter combinations. On a practical level, children also get acquainted with particular features. So, second-graders are introduced to certain features of foreign words. In the sound-letter analysis of a word from the pencil dictionary, children are taught to find and highlight A-sounds, which are characteristic of the phonetics of the Turkic group of languages. Consolidation of general and particular signs of spelling allows you to correct the impulsiveness of children, develop their reflexivity (then - the speed, accuracy of completing tasks) and the ability to formulate meaningful answers. Schoolchildren are taught to rely on different types of modeling, on commenting, and in the future - on automated skills.

Much attention is paid to the differentiation of spellings of different spelling principles, for example, the traditional and morphological principle (*mashina* (*car*), *shirokiy* (*wide*), *rizhik* (*camelina*), *shirina* (*width*)). Skills are formed on a practical level. For this purpose, they turn to the formulations of the relevant rules, to the spelling field of each spelling, to different schemes of indicative operations, to different rule algorithms. Already at the stage of work on the spelling fields of spellings, the graphic and semantic-morphemic foundations of spelling actions, different styles of encoding information about spellings, as well as different ways of checking spellings, are distinguished. Thus, logical connections are established in all linguistic material. Schemes, models, graphic images, table data are used.

To consolidate these skills, it is proposed to analyze by ear several words with "weak positions" (spellings) and distribute (differentiate) taking into account the corresponding principle of writing unstressed vowels in the root of the word and double consonants in the composition of words from the dictionary (*russkiy (Russian), zhila (lived), subbota (Saturday), polya (fields)* ). Further, in the process of sign-symbolic activity (in modeling), in different types of writing, children consolidate the ability to arbitrarily use different styles of coding language material, solve cognitive problems.

On the basis of commenting, the ability to choose an algorithm for solving a grammar and spelling problem is consolidated. This prevents a wide generalization of syllables, when the vowel i is written not only in those cases where it is required by the rule, but also in place of the unstressed /e/(ye) (for example, in the word *shelestit* (rustles)). Isolation, distinction and justification of the morpheme and grapheme basis of spellings also prevents reverse generalization, when in place of an unstressed vowel instead of i is written e.

Performing single-component and multi-component exercises, schoolchildren are taught to detect, differentiate and predict orthograms. At the indicative stage of the spelling operation, the identification of the visual image of the spelling (writing *zhi*, *shi*) and the prediction of a possible (other) spelling take place. The reproduction of the spelling and its differentiation with "conflict spellings" (for example, in words zhivyot-zhelezo (lives - iron)) is accompanied by the actualization of graphic and morphological generalizations, commenting and argumentation of grammatical and spelling operations, spelling pronunciation. This helps prevent false associations.

These tasks allow children to remember, supplement, clarify and systematize the so-called "old" knowledge and skills. For example, knowledge about sounds and letters is used in the course of both phonetic analysis and sound-letter analysis. When commenting, schoolchildren are taught to use terms, as well as to use knowledge from the field of phonology, phonetics, morphemics, morphology. They are taught to distinguish and analyze the sound and letter composition of words (language), individual morphemes (*uchitel* (teacher), *uchitelnitsa*). Moreover, morphemic analysis, although at a practical level, is carried out on a semantic-grammatical basis. Putting grammatical questions to adjectives allows you to form ideas about the composition of words from the dictionary (*rabochiy* (working), *xoroshiy* (good)). The use of terms in the answers of children under the supervision of a speech therapist allows the development of the so-called terminological system within the framework of terminological activity.

The lexico-semantic side of the language is also being formed, the ability to determine the lexical meaning of a significant word (for example, "korzina" (basket)), and at subsequent stages of learning to arbitrarily allocate units of a "lower level": morphemes and phonemes. Assimilation of the nominative function of a word allows second-graders to conduct an etymological analysis of a word, even consisting of two roots ((*medveditsa*)bear).

Writing from memory, visual and auditory dictations are aimed at the formation of polymodal images of these spellings. The combination of methods of language analysis and synthesis, memorization and / or memorization of a graphic/ kinesthetic image of a spelling and solving grammar and spelling tasks allows students with GSU to arbitrarily single out the universal stages of spelling actions: setting a spelling task, solving it, self-testing.

Self-testing combines parallel syllable-by-syllable spelling, dividing words into syllables (using subscripts), highlighting word stress with a superscript.

Self-checking is provided by preliminary, current and indirect self-checking. On its basis, a child of this category learns to prevent mistakes.

During speech therapy work, each student develops the ability to evaluate their knowledge. It is important that the student can explain the essence of their own spelling difficulties. This allows you to conduct your own monitoring of knowledge and skills, determine the scope of "what I know" and "what needs to be trained, and what to repeat or learn." For example, difficulties may be associated with deficiencies in concentration, distribution, stability of visual or auditory attention and memory, with difficulties in using the "portrait analogy" as a way to check spelling.

The student's self-assessment is reasonably compared with the speech therapist's assessment of the work performed. The qualitative and quantitative characteristics of the child's activity are taken into account.

The combination of tasks developed by us with tasks from the textbook ensures the optimality of the teaching load. Theoretical information (for example, the etymology of words from the dictionary: (*medveditsa*) (bear)) is combined with the solution of educational problems (memorize, select and write down a certain number of words, for example, with the combination -oro-: gorod (city), vorobey (sparrow), vorona (crow), korova (cow), skoro (soon), sorok (forty), xoroshiy (good),xorosho (good)).

Thus, the system of speech therapy work developed by us is aimed at the formation of all components of spelling activity in second-graders with the risk of this type of dysorphography. Each child learns to apply linguistic knowledge and skills in writing, the student masters the ability to arbitrarily control his grammar and spelling activities.

Thanks to a specially developed system of speech therapy work on the formation of the linguistic and psychological components of the graphic basis of spelling activity in second graders, the ability to set goals for writing without errors, the development of educational and cognitive interest in spelling, awareness of the need to write spelling correctly turns into an internal need to be literate. General and intellectual activity is brought up, which is aimed at overcoming the existing difficulties and failure in general.

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## 学习技术作为教育政策的基础 LEARNING TECHNOLOGIES AS A BASIS FOR EDUCATIONAL POLICY

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文章认为教育技术是复杂的多维对象,因此不仅应从其结构的完整 抽象的。 性的角度考虑它们,还应考虑其成员的活动,这是其在途中发挥作用、动态发展 的先决条件 到计划的结果。 技术学习的结果不仅是掌握学科内容中包含的部 分信息,而且还包括活动方式、人的价值、关系。 教育技术与教育学系统思维方 式的实施、培训系统的开发以及系统完全可控性思想的实施有关,尤其是其核心 要素--教育过程。 教学技术开发了这样的教育过程,保证了计划结果的实现。 这种学习成果保证的最重要因素是明确定义的目标、良好的治理和快速反馈。 学习技术的开发和实施基于对教育技术的基本组成部分和特征、其运行原理和规 不管是什么过程成为技术,科学、生产、教育等不同领域的技术都有 律的了解。 他们的识别有助于社会哲学的、系统的和全面的分析。 共同的特点。 哲学家分 析公共和工业过程,认为技术是社会结构、文化和意识形态变化的一个因素,受到 社会经济发展和科技进步的影响。 本文介绍了作者描述的高等教育中创新教育 技术的介绍。

关键词:教育技术,教学技术,社会的社会经济发展。

Abstract. The article considers educational technologies are complex and multidimensional objects, and therefore they should be considered not only from the standpoint of the integrity of its structure, but also the activities of their members, which is a prerequisite for their functioning, dynamic development on the way to the planned results. The result of technological learning is not only a mastering some part of the information contained in the content of subject, but also ways of activity, human values, relationships. Pedagogical technology is associated with the implementation of systematic way of thinking in pedagogy, the development of training systems and the implementation of the idea of the complete controllability of the system and especially its core element - the educational process. Pedagogical technology develops such educational process that guarantees the achievement of planned results. The most important factors of such guarantees for learning outcomes are clearly defined objectives, good governance and rapid feedback. Development and implementation of new learning technologies are based on the knowledge of the essential components and characteristics of educational technology, principles and regularities of its functioning. No matter what process is made as technological, technologies in different fields of science, production and education have common features. Their identification contribute to the sociophilosophical, systematic and comprehensive analysis. Analyzing public and industrial processes, philosophers consider technology as a factor of changes in the social structure of society, its culture and ideology, coming under the influence of socio-economic development of society and its scientific and technological progress. This article deals with the introduction of innovative educational technologies in higher education described by the author.

*Keywords*: educational technologies, pedagogical technology, socio-economic development of society.

In his Address "Kazakhstan 2050" the President of Kazakhstan N. A. Nazarbaev says that nowadays an intensive development of science and technology takes place in the system of higher education; new approaches are opened; social and political changes influence the people's way of living and make them adapt to new conditions. The system of higher education in Kazakhstan has an influence on the development of state service in all spheres of national economy. Cultural sphere is a constituent of intellectual and economical bases. Higher education is one of the spheres that is responsible for culture preserving and its transfer to future generations. Innovative educational technologies in higher education posses an important part in future specialists' training [1].

Within thirteen years of independence the conditions have been formed in Kazakhstan that allow to create a new, appropriate to a modern Kazakhstani society, innovative educational technologies inhigher education. The most important aim is to study valuable ideas of students teaching, the conceptions of educators and researchers of the past, to analyze these conceptions according to modern requirements of educational system and to use them in practice. Studying this problem we analyzed scientific literature in History, Psychology, and Pedagogy and came to the following conclusion: Firstly, the advanced concepts of educators and researchers of the past made their contribution in the development of the personal psychology study, cognitive activity, and thinking. These concepts are scientific basis for further development of innovative educational technologies in higher education. Secondly, Kazakhstan, being an independent state, pays a great attention to a world integration of intellectual potential [1].

Thirdly, the future specialists training model in higher education must correspond to modern market conditions of the society. Modern teaching approaches in higher education are; - a continuous unity renewal in philosophical, psychological, and pedagogical aspects of different sciences; - the correspondence of higher educationinnovative educational technologies to world interests; - an effective substantiation of the state standard according to the specificity of future specialty; - the educational informatization and the creation of new techniques and new teaching forms.

These four approaches promote the development of higher education according to social changes and they are motive forces of the actions that will stimulate the self-development of a teacher and a student. That is why; let's pay the attention to a cultural wealth in our research work as it is a necessary condition of a teaching development in higher education according to modern requirements. As a result, in our research work we firstly, emphasized the History of General Innovative educational technologies, the research of its methodological and philosophical fundamentals; secondly, analyzed historical and philosophical genesis of innovative educational technologies and cover turning points of its development; thirdly, distinguished the peculiarities and the place of innovative educational technologies in the system of modern higher education; fourthly, constructed pedagogical techniques that would help to develop a student as an independent personality [2, p. 203].

To decide the problems stated above we studied the scientific and pedagogical innovative educational technologies fundamentals as a whole system. Analyzing historical development of innovative educational technologies, it's turned out that its origins are in a world space. We study the development of higher educationinnovative educational technologies from the scientific and pedagogical point of view, having divided its historical development into three periods.

The first period (XVII c. – the first part of XIX c.). At this period, a person who wanted to get an education was a passive listener of a teaching process. A reproductive type of a teaching and cognitive activity was generally used at this period. We found out in our research work that there was no harmonic outlook in historical and philosophical genesis of general innovative educational technologies corresponding to a world level. The subjects of inquiry were inner components of a cognitive activity, thinking, an ability to make philosophical conclusions, that is why this period was characterized as a period when innovative educational technologies became a separate science. The second period (the second part of XIX c – 80-s of XX c.). At this period, a learner was formed as an executer of any activity. It was fulfilled with heuristic methods. The control of the teaching process was centralized and the problems of its development became the themes of scientific research in 60-70-s.

At the first period of the innovative educational technologies development we could not say a scientists' name, in 80-s of XX c. such names as Vygotskiy L. S.,

Gal'perin Ts., Zankov L., Davydov V., Amonashvili Sh., Goncharova T., Turbovskoy Ya. S., Skatkin M. N., Lerner I. Ya., Shamova T., Menchinskaya N. A., Rubinshtein S. L. and othersbecame well-known. They formed heuristic methods of teaching in their works. Thus, the scientific worl of these scientists made a contribution into innovative educational technologies development:

the theory of a stepwise skills forming (Gal'perin P. A.); - the methods of problem teaching (Skatkin M. L., Lerner I. Ya.); - the methods of a cognitive activity activation (Shamova T.).

Moreover, in any sphere of science, innovative educational technologies does not separate scientific and teaching aspects from an educational one. Didactic aims join teaching and educational aims [3, p. 25].

At this period a great attention is paid to the creation of the humane educational model in the teaching process. The third period (1991-2005). A future specialist is not an executor but a creator. A new educational paradigm is changing according to the requirements of a modern society. There are natural ties between education and upbringing. These ties consist of double qualitative indexes: teaching process and developing process. In accordance with it we distinguish the following heuristic levels that help to obtain a creative teaching.

The first level is a product of a reproductive, empirical period. The second level – at this level a student's will-power is involved in an educational and cognitive activity. A student works with diligence, tries to do the task completely, but when he meets with difficulties he can leave the task unfinished. During the term he works systematically but usually he shows an initiative only at the end of the term. The third level – a student's will-power in heuristic level participates in all forms of educational and cognitive activity during the whole lesson, during the whole term. The task is always finished.

At the period of an intensive society, science and technology development the process of teaching and learning is changing. This thought was expressed by Lotar Klinberg. If we evolve this thought we can come to the following conclusion: - it is impossible to decide didactic problems in a "pure" type; - there is a necessity to study innovative educational technologies on the interrelationship basis with other science fundamentals. It assists to widen innovative educational technologies horizons and make its contents deeper. Analyzing the educational; process we noticed that to meet new requirements of higher education we have to get rid of usual, traditional, one-side teaching.

L. Clinberg considers that innovative educational technologies is an important constituent of the teaching process in any sphere of science and that is why it must guarantee the teaching process as the whole one. The notion "genesis" in philosophical dictionary has the following meaning (Greek – "GENEZIZ") – origin. This term was used for the first time in Greek mythology and later in Philosophy

by Fales, Heraklit, Kant, Gegel and others. As a condition of appearing something new but on the basis of something old.

We understand the term "genesis" in innovative educational technologies as an appearing of something new, an activity that determines the process of development. The main goal in researching the genesis of innovative educational technologies development is to divide the innovative educational technologies development into stages, the reasons of its scientific and pedagogical development, searches and discoveries of scientists and educators.

To prove the idea that "the teaching process of a person must be held in integrity" we analyzed the works of scientists and educators and found the necessity to study innovative educational technologies genesis. Analyzing scientific and pedagogical development of school innovative educational technologies we can see that the transfer from reproductive to empirical period was holding for a long period of time. No matter, how a student gets knowledge, what innovative educational technologies objects are used, his outlook is formed as an integral system. During the seminars and practical lessons a student has an opportunity to choose a problem on his own and find alternative ways of its decision. While the student is acquiring such a system of education he acquires the skills of combinatory actions. Knowledge acquiring on a creative level stimulates the acquiring of encyclopedic knowledge.

The basis of innovative educational technologies is the contents of education. Teaching is an activity natural for a person, and the fundamentals of innovative educational technologies is a sum of teaching theories and education theories. To form the system of innovative educational technologies' fundamentals we proved a theoretical methodology in activating a teaching and cognitive activity of the student. Thus, the main principle of the law of education is the teacher's aspiration to join the teaching theory and the education theory and determine the motives and the necessities of learning.

Technologization of the learning process is a process of transformation and implementation of specific innovative methods, tools, forms and their elements in a real system of training. Education in higher education is subordinated to a cognitive interaction between the teachers and their students. The teacher writes a program including the requirements of the typical program and the characteristics of the specialty. Didactic objects of the curriculum are concreterized, divided into blocks, modules, all available text-books to put this program in practice.

U. Kunisevich and V. Okon' analyzed some methods of the education contents and its system [4]. At first knowledge is planned as a line method. The whole material is taken as in a integral system. This method is fulfilled thanks to the connection of separate parts of a course into a single entity.

*The second method* is a concentrated method. A problem in the material is viewed from different points of view, consequently, the student, repeating the ma-

terial from different aspects, deepens his knowledge during the cognitive process. The contents of education deepens, the student get an opportunity to reach new, high goals as well as new opinions and thoughts.

*The third method* is an *anfractuous method*. The problem is chosen and defined more exactly; each student and each teacher repeats the problem that needs a decision again and again. The student in the process of cognitive activity is in a constant search and males different types of researches.

*The fourth method* is a *module method*. This methods joints small elements of any theme of one problem, creating in this way the system of innovative educational technologies fundamentals that consists of the following approaches; predictive, methodological (world outlook,), contrastive and elucidative, operation and active, controlling. Different types of teaching exist in world national educational practice. They are full-time and part-time, home education, distance education by means of Internet and etc. types of lessons in the educational process [5, p.64-67].

Lecture (90-180 minutes with or without break) according to the contents of higher education system. Seminar is a practical lesson for working groups. Laboratory work is characterized by the use of technical devices, running experiments of different kinds. The lesson of non-standards forms (excursion, travel and etc.). Credit is a controlling lesson to check the quality of a learnt program in any subject.

The system of education in republic of Kazakhstan allows foreign students to apply to Kazakhstani universities. The following characteristics can be pointed out of continuous education realization: - the effectiveness of educational system is based on the strategy of the society development; - the system of education is directed to the future; - the goals, the contents of education, pedagogical technologies, the forms of organization, controlling mechanisms are in a constant development.

The main goal of the educational system is the solution of traditional problems and the formation of a wider world outlook, the outlook of a planetary scale, and such common to all mankind values as ecological, economical, materialistic notions, the ability to protect nature. The function of learning theory is the development of intellectual, social, moral features. The lines of modern educational system development are humanization, humanitarization, standardization, computerization, informatization, individualization, multi-variance, multi-level education and continuity of education.

Humanization of education is a formation of professional qualities by means of humane contents of the discipline that is taught on a definite didactic basis. Humanitarization of education is the awareness of the importance and the meaning of people's life, to teach to decide social problems and get on with other people well, to know a native language perfectly, to speak a foreign language fluently, to learn the problems of economics and law well. Standardization is the creation of educational documents, compulsory programmes, text-books and course readers that determine the hour quantity for higher education.

Individualization is when the teaching process is realized according to individual programmes. Continuity is the connection and succession of the whole educational system. Depending on social and economical conditions, moral and vital values, a person has a necessity to continue his education, and also he gains some skills of self-development and self-teaching. The controlling mechanism of the educational system is guaranteed by state official documents. According to the Republican Kazakhstani law "On Education" only institutes, academies, universities as well as undergraduate courses, post-graduate courses, courses for Doctor's degree have the status of higher education. Such institute can carry out researches in any sphere of science.

Educational Law. There are internal and external mechanisms of the educational system. Teaching theory is subordinated to social requirements and is fulfilled by means of social, economical, political, cultural, social demands and government order. The second mechanism of educational theory is goals and objectives of innovative educational technologies, means and methods of teaching, the forms of organization, the relationships of the teacher and the student, the meaning and the contents of the teaching material.

All these will be the basis of scientific and educational teacher's work. External mechanisms of the educational theory are; - the presence of a purposeful block; - the selection of the educational contents, the choice of educational means and methods; - the integrity of education and upbringing; - the integrity and interinfluence of educational theory and environment.

External mechanisms of the teaching theory are; - the students' ability to find the solution of internal contradictions of the educational and cognitive activity, the students' abilities, skills and habits, memory level, thinking, efficiency; - the teaching effectiveness; - the relationships of the teacher and the student; - the submission of teaching results to a cognitive activity of the student and the control; - the transitive process from lack of knowledge to knowledge, and vice versa, a one-sided knowledge acquiring. The teaching principles are the cognitive activity of the student for a conscious knowledge learning; an effective teaching organization; the system of a learnt knowledge, step-by-step knowledge learning; the connection with practice; the activity submission to theoretical conceptions and bases [6, p. 40].

Different teaching types, styles, methods and technologies were formulated as a result of theory and practice development in history. Each teaching type possesses as general features as its peculiar ones. The first general characteristic is that any type of teaching has the system of principles. These principles consist of separate controlling goals of didactic basis and determine the size and the rules of the educational and cognitive activities. All these, together with the activity of the student and the teacher form a teaching process. General principles of didactic objects are shown in the following classification: - the visual methods that are used to connect concrete and abstract notions; - the formation of the submission system to the scientific and educational goals; - the activation of cognitive activity; the development of the students' independent search, the study of the students' controlling system that is subordinate towards the teacher as an authoritarian and bureaucratic one; the application; the admitting of collaborative Pedagogy; - the interaction of the theory and the practice; the search for more effective teaching technology that will assist in getting teaching results; - to foresee didactic objects to solve possible problems that can appear at the acquiring the educational material during the teaching process; the creation of the conditions for independent knowledge learning by the student; to prepare innovative educational technologies tasks and instructions to solve problems; - to direct the students' development to acquire cultural heritage of scientists and wise men using the fundamentals of didactic theory, philolinguistic word craft, historic material, culture.

The second general characteristic is the repetition of stated processes. To specify the goal constantly, to analyze and use the means, actions, methods, technologies that will help to reach the result. On one hand the teacher specifies educational goals and objectives, on the other hand he designs the students' activity, forms the plan to develop the educational level. If the teacher uses diagnostics to control the student's knowledge, such didactic objects in the structure of the educational contents as "composition", "style", "method", "image" and other terms will be classified, synthesized and form an integral didactic system [6, p. 223].

The second general characteristic of the teaching theory is when the teacher predicts the structure of the educational activity that assists to get educational goals; when the most effective teaching technologies are chosen. Their usage in practice forms a subjective style of the student's and the teacher's action. Teaching methods ate the ways and forms of a lesson teaching. The process of the teaching methods classification is already formed:

The first - lexical method – is verbal: conversation, interview, discussion, lecture. The second is the practical method: excursion, tasks, laboratory work, experiment. The third is the checking method: tests, term paper, credit, exam, project. Lectures and seminars have some peculiarities. Lecture is prepared in a way that large informational system is directed to organize an independent activity of 70% (90-180 minutes).

Seminars are for knowledge systematization, too deepen and to widen the theoretical knowledge. The cognitive activity is organized by the teacher. The

didactic basis of teaching is the development of students' independent searching abilities. A training work is a form to organize a cognitive activity of the students. (the members of the group can be constantly changed) [7; 8].

The rhythm, lessons ate held using the same textbooks and programmes according to the time table. An academic year consists of two terms, exam period and holidays. The results are summed up at credits and exams. The whole teaching process is finished with a state exam or a degree work. The description of the teaching process has a special meaning. First, the fact that innovative educational technologies is the branch of Pedagogy is taken into consideration. The basis of teaching process organization includes technologies, methods, strategies, new principles and searches. The categories of innovative educational technologies are teaching, learning, education, teaching principles and requirements (the system of elements, tasks, the contents of education, forms, methods and means).

To learn technologically is not to teach on the basis of knowledgereproduction. It means extensive use of creative processes, and to developreproductive and creative activity of students, to achieveplanned result (standard formation) in combination withassimilation of creative excellence and valuable relationships.

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## 游戏法对6-7岁儿童艺术体操认知过程的发展 THE DEVELOPMENT OF COGNITIVE PROCESSES IN CHILDREN 6-7 YEARS OLD ENGAGED IN RHYTHMIC GYMNASTICS BY MEANS OF THE GAME METHOD

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注解。目前,大龄学龄前儿童体育教育过程中的主要任务之一,不仅是保持健康、优化身体素质,还要促进身体的和谐发展[4]。随着孩子的身体发育,认知过程(知觉)的发展密切相关。记忆力、思维力、想象力、注意力等)。学龄前儿童认知过程的发展问题是学前教育理论和实践中最相关的问题之一,因为它们是形成儿童心理素质、独立性和主动性的必要条件[5]。

关键词:认知过程,身体素质,学龄前儿童体育,艺术体操。

Annotation. Currently, one of the main tasks in the process of physical education of older preschool children is not only the preservation of health, optimal development of physical qualities, but also harmonious physical development [4]. Along with the physical development of the child, the development of cognitive processes (perception) is carried out in close connection. memory, thinking, imagination, attention, etc.). The problem of the development of cognitive processes of preschool children is one of the most relevant in the theory and practice of preschool education, since they are a necessary condition for the formation of children's mental qualities, independence, and initiative [5].

*Keywords:* cognitive processes, physical qualities, physical education of preschool children, rhythmic gymnastics.

**Relevance.** Rhythmic gymnastics is an acyclic, complexly coordinated sport. Its specificity requires the athlete to develop and improve flexibility in all its manifestations, fine coordination of movements, a sense of rhythm, musicality and artistry, the performance of complex body movements in combination with object manipulations (rope, hoop, ball, maces, ribbon) to music. In turn, the complexity of the structure of motor actions makes it necessary to memorize a large volume of relatively independent movements. This imposes requirements on memory, orientation in space, attention, as well as on such qualities as diligence, clarity, completeness of visual representations and accuracy of movement reproduction [1].

The most important stage in the system of training gymnasts is the stage of initial training. It is at this stage of training that the mechanisms for developing the physical qualities and cognitive abilities of female athletes are improved, which is the most important condition for ensuring the further growth of their results in many years of competitive practice.

Also, the complex of exercises must be based on play activities, which are fundamental for childhood.

In our opinion, this indicates that today a more qualitative approach to physical and psychological preparation in childhood is required.

In this regard, it becomes obvious that the search for modern approaches to the organization of the training process at the initial stage of training in rhythmic gymnastics is relevant.

The purpose of the study: to develop a methodology for applying the game method in the training process of female athletes at the stage of initial training.

**Hypothesis:** we assumed that classes using the game method would effectively develop cognitive processes in children aged 6–7 years.

### Research methods and organization.

The pedagogical experiment is carried out on the basis of a sports club for rhythmic gymnastics in the Lyuberetsky district, r. Malakhovka village: S.K. "MGAFK".

The main purpose of the pedagogical experiment was to test the effectiveness of the developed methodology for applying the game method in the training process of children involved in rhythmic gymnastics.

The experiment involved 20 young gymnasts of the primary training group of the 1st year of study (6–7 years old). To conduct this experiment, two groups were formed - control and experimental, 10 people in each group.

Before the main pedagogical experiment, a stating experiment was carried out in order to identify the initial level of physical fitness and cognitive processes.

At the end of the experiment, repeated psychological testing and control tests were carried out.

### Discussion of the results.

In the training process of each group of gymnasts, 90-minute classes were held 3 times a week. The control group was trained according to the generally accepted methods of training young gymnasts, corresponding to the requirements of the Youth Sports School program. The experimental group studied according to the methodology developed by us, based on the game method. This technique includes psychotechnical, sports, outdoor games, and relay races, aimed directly at the development of cognitive processes in children aged 6–7 years old who go in for rhythmic gymnastics.

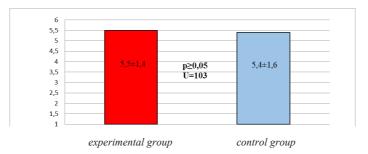
To identify the level of cognitive processes in children aged 6–7 years, psychological tests were carried out [3]. Taking into account the peculiarities of our study, we selected 6 tests that evaluate such cognitive processes as attention, memory, thinking, perception, and imagination. Indicators of psychological testing are presented in Table 1.

## Table 1

Indicators of cognitive processes in children aged 6–7 years before the experiment

Test name	experimental group x±δ	Control Group x±δ	Reliability
«Find and delete»	$1,5\pm0,5$	1,6±0,5	U=100; p≥0,05
«memorize the numbers»	1,2±0,9	1,0±0,9	U=96; p≥0,05
«memorize drawings»	$0,7{\pm}0,8$	0,8±0,7	U=101; p≥0,05
«Outline»	1,6±0,6	$1,4{\pm}0,8$	U=99; p≥0,05
«nonsense»	$0,5{\pm}0,7$	0,6±0,6	U=100,5; p≥0,05
«draw something unusual»	$0,6{\pm}0,7$	0,8±0,7	U=96; p≥0,05

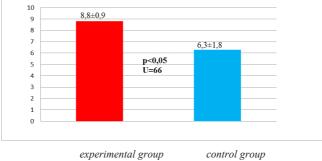
The average indicator of psychological testing (general assessment of the level of development of cognitive processes in children) in the experimental group is 5.5 points, and in the control group 5.4 points. This indicates an "average level" of development of cognitive processes in both groups (Fig. 1).



*Figure 1.* The level of development of cognitive processes in children 6–7 years old before the experiment

The highest score in all tests is equal to two points. In the psychological tests "Find and cross out" (attention), "Remember the numbers" (memory), "Trace the outline" (perception), children in both groups showed on average from 1.0 to 1.6 points, which is a fairly good result. The children did not do very well with the psychological test "Nonsense". The average score for this test in the experimental group is 0.7 points, and in the control group 0.6 points. The children showed the worst results in the "Draw something unusual" test: the average score in the experimental group was 0.6 points, and in the control group - 0.8 points. There were no significant differences between the indicators of the experimental and control groups for all psychological tests (p>0.05) (Table 1).

Repeated psychological testing revealed that the children of the experimental group, studying according to our methodology, showed better results in comparison with the control group. In the experimental group, the greatest increase in indicators was observed in such cognitive processes as memory, thinking and imagination.



*Figure 2.* The level of development of cognitive processes in children 6 - 7 years after the experiment

Based on the results of psychological testing, a general assessment of the level of development of cognitive processes in children was derived. As can be seen from fig. 3, this indicator in the experimental group is 8.8 points, which indicates a "high level" of development of cognitive processes. The indicator in the control group is 6.3 points. It corresponds to the "average level".

**Conclusion.** Our study confirms our hypothesis that classes with the use of the game method allow more effective development of cognitive processes in children aged 6–7 years in comparison with the usual program for children and youth sports.

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## 荣誉与尊严作为中国古代哲学中的伦理价值 HONOR AND DIGNITY AS ETHICAL VALUES IN THE PHILOSOPHY OF ANCIENT CHINA

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抽象的。 这篇文章提出了一个人的"荣誉"和"尊严"的伦理概念,在现代世界中,无论是作为个人与他人的复杂关系,还是在社区之间的关系中,它们都获得了新的价值意义。 以灵魂和良心的高贵为特征的荣誉概念与人的尊严、个人和社会方面的自尊密切相关。 了解中国古代哲学教义中荣誉和尊严概念的起源尤为重要。 由于社会关系中荣誉和尊严概念的演变,现代国家的法律制度,这项研究的重要性正在增加。 对此,本文旨在理解人的尊严的社会地位。 论文得出结论,人的尊严的社会地位由研究过程中确定的三个组成部分组成,起源于中国古代基于美德的哲学,并且作为一个现代概念似乎具有相关性。

关于本文主题的进一步工作可以在考虑荣誉和尊严方面进行,这与确定多极世界中的中华民国在道德和法律方面的人的尊严的社会地位有关。

关键词:荣誉、尊严、作为价值的人、伦理、高贵的人、慈善事业、美德、社会地位。

Abstract. The article presents the ethical concepts of «honor» and «dignity» of a person, which in the modern world of complex relations both as an individual with other people, and in the relations of communities among themselves, acquire a new value meaning. The concept of honor, characterized by the nobility of the soul and conscience, is in close connection with human dignity, self-esteem in the personal and social aspects. It is especially important to understand the origins of the concepts of honor and dignity in the teachings of the philosophical teachings of Ancient China. The significance of this study is increasing due to the evolutionary change in the concepts of honor and dignity in social relationships, the legal systems of modern states. In this regard, this article aims to comprehend the social status of human dignity. The paper concludes that the social status of human dignity consists of three components identified in the process of research, has the origins of ancient Chinese philosophy based on virtues, and seems to be relevant as a modern concept.

Further work on the topic of the article can take place in the aspect of considering honor and dignity, in relation to determining the social status of human dignity in the ethical and legal aspect in the People's Republic of China in a multipolar world.

*Keywords:* honor, dignity, man as a value, ethics, noble man, philanthropy, virtues, social status.

In this study, we turn to the philosophy of Ancient China, which clearly shows the common ethical and social origins of the philosophy of Ancient China and the concept of dignity and honor of a person at the present time.

In ancient China, there were concepts similar in meaning to the concepts of dignity and honor, which we defined as vectors for our study - these are philan-thropy, virtues, «noble husband», the golden rule of morality.

Considering the social status of human dignity, one can single out, according to the hypostases of human being, the directions of the concept of human dignity that are important for research: subjective-personal and social.

The subjective-personal direction of a person as a person primarily determines his inner world: moral, spiritual, intellectual content. Each person is filled with that inner content, which is understood as dignity, forms self-respect and implies respect for oneself as a person of society, moreover, belonging to humanity.

A.P. Skripnik writes: "dignity is the intrinsic value of a person, determined not by his belonging to a certain social group, estate and status, but by his connection with humanity in general, with the species Homo sapiens" and believes that honor is the basis of dignity. [5, p. 279] V. Dahl in the explanatory dictionary defines the concept of honor "as the inner, moral dignity of a person" [1, p. 476] and implies class differences, a hierarchy in society, which is typical of the teachings of ancient Chinese philosophers. Confucius says: "I don't know if it's possible for a person to have no honor. It's like a big cart has no end of drawbar......Will they be able to move?" [4, c.71]. Let's note that the concept of «honor» has a subjective side and is characterized as a personal experience of one's dignity, honor, and an objective one, when society evaluates a person's actions according to the concepts of honor and dignity.

Under the unity of the human race, we see the relationship between people, which is the basis of human dignity, based on usefulness to others, which involves the process of self-improvement, which combines the connection of social and moral.

Considering the social direction of a person's dignity, a socio-cultural essence is determined that identifies his national, cultural identity as a citizen of his state, part of the community. Let's note that G.G. Kolomiets, considering sociogenesis in this direction, concludes that a person as a person «grows» in society, surround-ed by other people [3, p.158].

It is important for the study to study the subjective-personal and social foundations of the concepts of honor and dignity of a person, which were laid down in the philosophical views of thinkers in Ancient China in relation to the ruler of the state, as an extra-class value, and at present are the basis that determines the status of a citizen, guaranteed state.

It should be noted that in the ancient Chinese philosophical teachings, the relationship between the two directions of understanding the dignity of a person as social and subjective-personal is most clearly visible, which gives us the opportunity to consider, in a combination of ethical foundations, expressed in subjective-personal and social relations, which, in our opinion, has been developed. in the legal acts of the People's Republic of China.

Turning to the philosophical teachings of Ancient China, we follow M. Mamardashvili, who wrote that the texts of philosophical teachings should be perceived as an opportunity to get closer to human reality, to living reality, and not as to ancient monuments.

In the historical notes of Sima Qian during the reign of Emperor Shan, the reasoning of the senior judge Gao-yao is given, who, examining the affairs of the people, says: , but respectful, domineering, but polite, pliable, but firm, direct, but kind, simple, but restrained, adamant, but truthful, powerful, but fair, and these qualities are manifested constantly - this is wonderful! [6, p.159]. Further, he divides the benefits according to the combination of the virtues of each person, while distinguishing three categories:

- if a person combines three virtues, then he deserves to have a house, a family;

- if six virtues and constantly kept with dignity, then worthy to have possession;

- if there are nine virtues, while correctly understanding and adhering to them in life, then he is worthy of the position. It should be noted that in the paired combination of virtues one can see the inner awareness and acceptance of them, moderation in actions and the constancy of the way of thinking and activity. A person who, throughout his life path, has all the virtues, is presented as a moral ideal and has the status of a "noble husband". In the text "Lun Yu", Confucius says: a noble man "transforms words into deeds, and then follows them" and further – "a noble man unites [people] without being biased; a small person is biased and incapable of uniting" [6, p.60-61 Confucius], which primarily sees the social orientation of the concept of a noble husband (worthy person).

Such reasoning gives us the opportunity to come to the conclusion that the understanding of the subjective-personal dignity of the person himself directly depends on the combination of virtues in his inner self-awareness, as well as the approval of actions and upbringing by society, which allows him to take his place in society and receive recognition of his virtues.

Actualizing our research, we come to the conclusion that endowing a person with value is expressed in different ways, both verbal encouragement and recognition of his merits in assigning him a position. Recognition of the value of the individual increases and often determines his self-esteem. It is important to note that Skripnik A.P. believes that it is precisely this relationship with society that determines the formation of such self-esteem, which "manifests itself in two main forms: in feelings of honor and dignity" [5, p. 273].

So, the emperor of Shan says to his close dignitaries: "You are my legs and arms, eyes and ears. I want to help my people in everything, and you help me in this." [6, p.160] and further - "If the virtues of the ruler really spread, then the slander against [my] beloved dignitaries will become obvious" [6, p. 161]. For our socio-philosophical research, where subjective-personal and social dignity correlates, it is important to read these statements about the relationship between the emperor and dignitaries, the basis of which is trust. In other words, trust in the context under consideration is inextricably linked both as an internal dignity of a person and its recognition in the social aspect when deciding to govern the state. Speaking about the government, we highlight several basic principles that a ruler should have: self-improvement, respect for the wise, love for loved ones, care for the people, attention to dignitaries. "A noble person feeds himself by ruling the country; ordinary people feed using [their] strength" [2, p. 23]. Let's note that the duty to take care of the people involves the establishment of reasonable laws, and the duty of the people is to serve the authorities, observing due and obeying orders, which in combination is defined as moral unity. The dignitary is obliged to fulfill his duties, guided by the law, helping the people, otherwise the actions of the dignitary provoke disorder in the government, which undermines the dignity of the ruler.

Considering the concept of dignity in the ethical aspect, the teachings of Confucius, which is aimed at the relationship between man and society, seem especially valuable. One of the main components of the teachings of Confucius is the concept of Ren (humanity), which through the ritual forms five types of social relations: ruler - subject, father - son, husband - wife, superior and inferior, senior friend - junior friend. As we can see, the social status of each person will be a construction based on social order and hierarchy, which determines the place of a person in society. The social status of a person's dignity is, in our opinion, a combination of the requirements of ritual and humanity (ren) in relation to each person. This concept, following Confucius, includes, among other things, the dignity of a person.

To the questions of the students, Confucius answered that philanthropy consists of:

1) in the ability of the person himself to realize his weaknesses and return to the right words and actions that correspond to the Rules of Conduct (etiquette),

and therefore, these actions are in the power of the person himself, who makes the decision himself/herself. Especially important for us is the comment of L.S. Perelomov, who explains the words of the philosopher that «every member of society from birth to death had to be guided by etiquette in everyday life» [7, p. 391], therefore, the combination of ethical and "philanthropy" is the basis of social and state relations based on common values. Such reasoning gives us the opportunity to come to the conclusion that human dignity has common ethical sources of development with society and the state;

2) the "no" rule, from which we single out the following:

- the golden rule that requires: do not do to another person what you do not wish for yourself. Let's note that a person who has virtue both in his family and outside his home respects others, otherwise this quality is not characteristic of him. The golden rule offers options for making the right decision, as an option, to evaluate the morality of the act, looking through the eyes of other people, whether it will be positively evaluated by society, and then weigh your personal responsibility, but not to establish standards of behavior for other people, but as support for accepting your own decisions;

- to prevent hostility both in the state and in the family. Let us conclude that Confucius defines a single concept of philanthropy, and, consequently, common values embedded in individual morality, as well as public morality, both at the family level and at the state level.

Summarizing, we can identify three meanings of the concept of dignity in the philosophical teachings of Ancient China:

- subjective-personal dignity of each person separately;

- the dignity of the ruler, dignitaries, denounced by the authorities;

- the dignity of the state itself, which is characterized by its attitude towards its people as a whole, towards each person separately.

Thus, we came to the conclusion that the social status of human dignity consists of three components, identified by us in the process of research, has the origins of ancient Chinese philosophy based on virtues, and seems to be relevant as a modern concept.

Summing up, it should be emphasized that the significance of the study is determined in the continuation of research work in relation to determining the social status of human dignity in the ethical and legal aspect in China in a multipolar world.

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# 道德意识的社会理论水平 SOCIO-THEORETICAL LEVELS OF MORAL CONSCIOUSNESS

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抽象的。 在这篇文章中,作者考虑了道德意识的社会理论层面的问题,作者 还说道德意识有两个主要原则:情感和智力。 情感的开始是以世界观和世界观的 形式表达的——这些是表达个人对生活各个方面的态度的道德感受。 知识的开 端是以道德规范、原则、理想、世界观、需求、善恶、正义、良心等知识的形式给出 的。 这些原则在道德意识中的关系和相互关系在不同的历史时期和人们的世界 观中是不同的。 道德意识对其实时做出反应。

关键词: 道德意识、社会、道德、价值取向、元素、生命意义、美、多尔博、邪恶、教养。

Abstract. In this article, the author considers the problems of socio-theoretical levels of moral consciousness, and the author also says that there are two main principles in moral consciousness: emotional and intellectual. The emotional beginning is expressed in the form of a worldview and worldview - these are moral feelings that express a personal attitude to various aspects of life. The intellectual beginning is given in the form of knowledge of moral norms, principles, ideals, the concept of the world, needs, good and evil, justice, conscience. The relationship and correlation of these principles in the moral consciousness can be different in different historical periods and in the worldview of people. Moral consciousness responds to its real time.

*Keywords:* moral consciousness, society, morality, value orientations, element, meaning of life, beauty, dorbo, evil, upbringing.

As everyone knows, moral consciousness today has many definitions. Therefore, according to one of the definitions, it means a person's awareness of moral norms, relations in society, ideas, ideals that operate in society; the totality of ethical knowledge, moral views, beliefs, feelings and needs. According to another definition, moral consciousness is a set of principles, norms, moral actions and rules of conduct that regulate people's relations with each other and society. Moral consciousness is conscience, shame, sin, good and evil, love and fidelity, etc.

Moral consciousness is one of the forms of social consciousness, like its other forms, is a reflection of social life. It contains historically changing moral relations, which are the subjective side of morality. The category of morality is the basis of moral consciousness.

In moral consciousness, two main principles can be distinguished: emotional and intellectual. The emotional beginning is expressed in the form of a worldview and worldview - these are moral feelings that express a personal attitude to various aspects of life. The intellectual beginning is given in the form of knowledge of moral norms, principles, ideals, the concept of the world, needs, good and evil, justice, conscience. The relationship and correlation of these principles in the moral consciousness can be different in different historical periods and in the worldview of people. Moral consciousness responds to its real time.

In the structure of moral consciousness, two levels can be distinguished: ordinary and theoretical, which are unjustifiably opposed, since a person who has risen to the level of theoretical consciousness does not leave his feelings on the threshold, they also rise to a new level and change in the indicated movement. The significance of everyday moral consciousness in people's lives is also confirmed by the fact that the moral life of the overwhelming majority of people throughout history was limited by the level of everyday consciousness" [1, p. 164].

However, the socio-theoretical levels of moral consciousness are interconnected and have their own differences, one of which is the depth of reflection of moral phenomena. At the everyday level, people deal mainly with empirically obtained information and cannot understand the depth and essence of certain phenomena of social life.

The ordinary level of moral consciousness can be defined as a way of mastering the world, presented in the form of moral norms, values and customs, reflecting the daily recurring relationships between people.

Theoretical - is considered as a way of mastering the world, presented in the form of a moral concept that reflects global moral problems. An analysis of modern scientific literature shows that today there is no consensus on the structure of moral consciousness.

Firstly, the available works on this issue study only its individual elements; secondly, there is no scientific rigor in attributing these elements to the ordinary or

theoretical level of moral consciousness; thirdly, the allocation of certain elements in the structure of moral consciousness is common.

All of the above does not give a sufficiently complete description of the entire moral consciousness, its structure, which was noted by A.I. Titarenko: "The structure of moral consciousness is not only a system of levels, it is a whole in which everything is interconnected and each element matters only in special connection with other elements" [2, p.227].

Adhering to the above point of view, as well as proceeding from a concrete historical approach to the study of moral consciousness, the analysis of this complex phenomenon should begin from the everyday level. The ordinary level of moral consciousness can be represented by such structural components as traditions, customs, norms and values.

Custom is a stable element of everyday moral consciousness, reflecting reality in the form of a system of repetitive actions, regulating social relations from the development of good and evil in a non-productive environment, based on the power of public opinion, closely connected with rituals.

Tradition is a historically established normal moral consciousness, closely connected with the emotional side of its activity, directing human behavior towards the development and strengthening of humane moral relations between people, actively reflecting social life in its various spheres.

A moral norm is a type of permissible and mandatory options for human behavior, a structural element of moral consciousness, on the basis of which the actions and relations of individuals are regulated from the point of view of the development of good and evil.

Moral assessment is a structural element of moral consciousness, with the help of which the conformity or incorrectness of a person's behavior with moral norms is determined.

All of the listed structural elements are closely related to each other, but the basis of this level is moral norms, because with their help they help to coordinate the interests of people, organize the process of communication, preserve and recreate that minimum of humanity in relationships, without which the interaction of subjects of communication is unimaginable.

A high level of abstraction is characteristic of theoretical moral consciousness, which G.G. Akmambetov describes as "a system of necessity, ideal, meaning of life" [3, p.74]. In our opinion, this definition is incomplete, since in this definition the author shows the structural composition of theoretical moral consciousness, its main components - the principle that unites values and value orientations, transforms other elements of moral consciousness into a whole and expresses its components are not identified.

As a central element of the moral consciousness of I.I. Titarenko believes that they most adequately reflect the essence of this phenomenon, and gives them the following definition: "Value orientations are stable, invariant, in a certain way coordinated formations of moral consciousness ("units") - its main ideas, concepts, value blocks of a person reflect the essence moral meaning of existence, indirectly - the most general cultural and historical conditions and the future" [2, p. 291].

The legitimacy of distinguishing values and value orientations as the main elements of moral consciousness is explained, first of all, by the fact that they express the general evaluative-imperative desire of people's consciousness to achieve certain goals. According to T.I. Porokhovskaya, "value orientations are elements of the structure of human consciousness that characterize the content aspect of its orientation. The value in the form of orientations, the most important, significant for a person is determined as a result of the assimilation of values in the process of socialization" [4, p. 10].

There are people in history who subordinated all their thoughts, hopes and feelings to one lofty goal. This clearly speaks of the purpose of the whole life of people, the moral values that enter into their spiritual world. This goal can be considered as the higher, subordinate will and feelings of these individuals, which have become the direction of value.

Secondly, values and value orientations incorporate the system of personal meanings of the world reflected by the subject, which is confirmed by the concept of "human value-semantic environment" used in psychology, as well as the results of psychological research and development in the field of semantics [5, p. 38].

Values reflect all meanings that are important for a person, but the most global of them is the meaning of life, its essence lies in a person's attitude towards himself and society, understanding his place in society and understanding the social significance of his activity. This or that understanding of the meaning of life determines the whole line of human behavior, and his moral attitude is a "shackled" moral core. The "meaning of life" is commonly understood as the main content of all types of activities (past, present, future) that determine the place and significance of people in the life of society.

A person must be convinced that personal life is necessary for him, for people, for society. A correct understanding of the meaning of life by a person gives him such moral strength and helps him overcome life's difficulties. For a person, not only the result of his activity is interesting, but also the activity itself, the need for it.

The question of the meaning of life does not immediately arise before a person. The formation of this concept is the process of the moral formation of a person. As a person develops and grows, he reconsiders his idea of the meaning of life and human values. The decisive factor influencing such a rethinking is a person's life, experience and other people's examples, one of such striking examples is reflected in the work "Confession" by L. N. Tolstoy. "I understood," he wrote, "that in order to understand the meaning of life, first of all, life itself should not be meaningless and evil, and then, in order to understand it, reason is needed ... If I want to understand life and its meaning, I need to live not parasite, but real life" [6, p.147].

Today, according to sociological research data, many people see the meaning of life in interesting work, raising children, decent living, humanizing social relations, building a real democratic state, whose activities are aimed at creating conditions for the harmonious development of man. [7, p. 72].

We can say that the life of every person has an objective meaning, because he strives for something, but this is not always realized by a person.

Thirdly, values and value orientations are the link between moral consciousness and human behavior. Value orientations, according to I.A. Titarenko, are elements of moral consciousness that are actually reproduced and objectified in actions and relationships [2, p.83]. They are closely related to the needs and interests of a person, the emotional-volitional mechanisms of his/her psyche. So, D.N. Uznadze [8, p. 77], although the concept of "value orientation" is not used in the theory of attitude, the content of this concept can be explained as a holistic dynamic state of the theory, a certain psychological readiness of a person's ability to evaluate objects and phenomena of reality, i.e. social value leads a person to the active mastery of these phenomena in the process of work.

V.A. Zlotnikov, a researcher of the relationship between value orientations and needs, writes: "Value orientations can be considered as one of the manifestations and expressions of needs... The system of human needs can be assessed by value orientations" [9, p. 61-62].

Speaking about the psychological aspects of values and value orientations, it should be noted that these structural elements of moral consciousness are organically included in the composition of motives and incentives for all types and forms of activity of subjects that determine its direction.

According to V.A. Yadov, the inclusion of value orientations in the structure of moral consciousness "allows us to obtain the most general social determinants of behavioral motivation, the origins of which should be sought in the socio-economic nature of society and the environment in which a person is formed and goes through the daily life of a person [10, c.16]. By mastering the values of his/her environment and turning them into value orientations that motivate the forces of his behavior, a person becomes an active subject of social activity.

Values and value orientations are closely related to each other, which, for example, B.G. Ananiev reported [11, p.301]. This definition emphasizes two very important properties of value orientations: first, their relation to the world of human values; and, secondly, that which pertains not only to the consciousness, but also to the behavior of individuals, i.e., to their truly effective character. Consider the concept of "value".

Value is usually understood as an object, a phenomenon of material or spiritual culture, which has an enduring value for a person, since it serves or could serve as a means of satisfying his needs, achieving his main goals [12, p.63]. A brief but very exhaustive definition of this phenomenon was given by J. Gudecek: "Values are a part of the consciousness of an individual, and at the same time a part of it, in which the individual does not exist" [13, p. 83].

We have defined the concept of "value", but we are interested in "moral value" in our study of "moral value", which exists and is interpreted in two ways. First of all, these are objective moral norms, principles, ideals, ideas about good and evil, justice and happiness, formed by the specific historical and social experience of mankind. Secondly, moral value as a personal phenomenon, a person's attitude to social moral values, which is expressed in personality, their acceptance, rejection, etc. [14, p. 72].

But what is the criterion for such an assessment? V.A. Blumkin, for example, suggests taking into account the structure of human needs and interests when constructing a hierarchy of values. "Undoubtedly," he writes, "the highest values are those values that meet the highest, most important human needs, without which it is impossible for a person to be happy and live." The main characteristics of a person are expressed in his higher needs for work, creativity, communication, knowledge, beauty and goodness. These higher needs correspond to higher values: the goodness of man and humanity, justice, altruism, selflessness, gratitude, honor, conscience. All other values (material and spiritual wealth) can be considered as means and conditions for achieving higher values" [15, p. 54-57].

What is "moral value"? By this phenomenon, we mean the holistic formation of moral consciousness, which is closely related to the motives and needs of the individual, ensures the orientation of his consciousness to achieve high moral goals, includes moral norms, values, concepts, principles, ideals, that good evaluates and regulates human behavior, based on evil.

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## 古斯塔夫・纪尧姆(Gustav Guillaume)和心理力学理论:导论 GUSTAV GUILLAUME AND THE THEORY OF PSYCHOMECHANICS: AN INTRODUCTION

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抽象的。 古斯塔夫•纪尧姆(Gustave Guillaume)在他的心理力学理论中将 语言本质上视为一种心理现象,这是对法语语言学影响最大的人之一,在英语世界 中相对鲜为人知。 Guillaume 的理论的前提是词是一个语言单位,它将语言作为 一种纯粹的存在现象与语言作为真实的话语联系起来,其意义是说话者即时体验 的函数,因此决定了词在语言中的使用方式。 话语。 作者试图向读者概述纪尧 姆作品的定义元素,尤其是他的心理力学理论。

关键词:心理力学、结构主义、形而上学、功能语言学、对立、声门生成、话语、假释、矢量语言学。

**Abstract.** One of the biggest influences on French linguistics, Gustave Guillaume's view of language as essentially a mental phenomenon in his theory of psychomechanics is relatively unknown in the English-speaking world. Guillaume's theory is premised on the word being a linguistic unit which serves to link language as a purely existential phenomenon and language as true-tolife discourse with meaning as a function of the speaker's instant experience and as such determining how the word is used in discourse. The author attempts to give the reader a general overview of the defining elements Guillaume's work especially his theory of psychomechanics.

*Keywords: psychomechanics, structuralism, metaphysics, functional linguistics, oppositions, glottogenesis, discours, parole, vector linguistics.* 

In modern anglophone linguistics, Gustav Guillaume's scholarly output, including but not limited to his concept of psychomechanics, is neither totally understood nor is entirely accepted. While the extent of his influence on modern linguistics remains a subject of scientific discourse, his status as a foremost researcher has never been under question. Guillaume's scholarship identified and issued an informed critique of the metaphysical conceptual proposition put forward by F. de Saussure and his structuralist ideas. Guillaume, in a syncretic approach, fused elements of psychology and linguistics, developing in the process a vector method which depicts how the thought process worked in what was the adoption of the mentalist tradition and systemic view of language. Although regarded as unconventional, Guillaume's ideas were original and drew heavily on scholarly ideas from Antiquity and the Middle Ages, in a broader, cross-disciplinary intersection with other sciences such as mathematics, physics and geology.

Guillaume is best known for his work on the theory of *value*, which he used to analyze linguistic structures and the use of language. According to him, words and phrases have a unique value within the language system, which he defined as the "integration of linguistic signs and the processes of integration" [Hewson, pp. 169]. Guillaume coined the term *functional relationships* and used it to describe his view that words and phrases could be analyzed in terms of their relationships one to another in what evolved into one of his most important contributions to modern linguistics as *functional linguistics*. This theory drew from the idea that language was a dynamic system within which words and phrases were constantly changing in response to changes in society and culture. Guillaume's position was that language was a self-regulating system with words and phrases being created, used, and discarded based on their functional relationships with other words and phrases within the language system.

In his works, Guillaume's emphasized the importance of context relative to language use. According to him, language was not simply a set of words and phrases, but a system shaped by the context in which it was used. He believed that understanding the context of use was crucial to understanding the semantic value of words and phrases. This meant that Guillaume's work on linguistic structures and language usage had significant implications for Structuralism, a theoretical approach that was popular in the mid-twentieth century which was based on the idea that all cultural forms, including language, could be analyzed as structures that were made up of smaller elements that were related to one another in a specific way. Guillaume's work on the theory of value and functional linguistics provided the theoretical foundation for Structuralism and helped to shape the direction of the field. Furthermore, his work was influential in establishing linguistic description as a scientific discipline, as he favored the emphasis on the structure of language as opposed to the content of speech in linguistic description. He refuted the idea that language is a reflection of the external realities, arguing instead that language creates its own reality. Guillaume proposed the concept of linguistic oppositions, a universal system in consonance with his theory that linguistic meaning is achieved via the opposition of two contrasting elements, pointing out that this system operates at all levels of language, from phonetic to semantic. Guillaume further drew several parallels such as generalization vs particularization, discrete vs non-discrete, part vs whole etc. These ideas about the structure of language

and the system of linguistic oppositions continue to be relevant today, not only in linguistics but also in anthropology and semiotics.

For Guillaume, language was a mental process innate to the individual and unbound by variables such as time. According to him, language acquisition is not a conscious process but a phenomenon inherent to man. Unlike F. de Saussure, who proposed the synchrony and diachrony opposition in mechanistical or impersonal terms, Guillaume believed that each synchronous system is a result of a previous complete system, even if dissimilar to it. Hence, he draws the conclusion that diachrony is the history of systems, or in other words, the diachrony of synchrony. Guillaume notes that in language, systematic organization acts together in a disorganized manner, a trait which is subsequently inherited by language [Guillaume, pp. 51-54]. Here, the dialectical nature of this connection is rather clear. In his deconstruction of F. de Saussure's theory that a verbal act is an aggregate of language and speech, Guillaume introduced the factor of time, noting that a verbal act, as an integral, is a sequence in which language, in its permanence inherent to the speaker regardless of time transits into speech, an attribute exclusive only to the speaker and only at the specific moment of utterance (operational time). It follows from this that the transition from the permanence of language to the temporariness of speech in real time, is achieved by the virtual psycho-mechanic processes which exist within the language. Guillaume's also distinguished between discours, the manifestation of language premised on societal influences as a whole and parole which he defines respectively as the manifestation of language depending on individual agency. By including concepts such as proposition, speaker's intention and speech context in his theoretical approach, Guillaume greatly improved the preexisting framework for structuralism. Overall, Guillaume's idea of language is strictly ontological, given his belief that it is language that facilitates our grasp of the surrounding world, a fundamental language antinomy realized in few, uncomplicated mental operations that remain constant in nature.

Guillaume introduced the concept of *operational* time, which he describes as in dialectical unity with *cosmic* time. Operational time represents an immeasurable instant inherent to moments preceding the actualization of any word introduced into speech. Operational time involves the entire process of word formation during glottogenesis and may therefore be described not only as operational, but also as glottogenetic in nature, given that it is as a result of this process that a word becomes part of speech. According to Guillaume, *substance* and *form* are crucial in contrasting expression and content according. This thesis will be repeated later by B. Pothier in his theory about speech as a form of mental representations. As mentioned earlier, Guillaume's theoretical concept is heavily premised on the philosophical writings of antiquity, Middle Ages and modern thinkers. Indeed, in citing and fusing ideas from Aristotle to Bergson, Pascal to Leibniz and Descartes to Delacroix, Guillaume is able to draw conclusions about what he describes as the extraordinary power of cognition and self-consciousness to the subconscious force that is language.

The fact that Guillaume's theory centered on the hominizing function of language makes it possible to define it in anthropocentric terms. More so, the argument could be made that in Guillaume and his theories, a new linguistic school of thought was born as his major ideas of *vector linguistics* or *psychosystematics* have served as a basis for explaining individual subsystems of different languages including the English language with respect to the noun and article, as well as the verb. Apart from his syncretic approach, one other factor which lends credence to Guillaume's theoretical offerings is that he drew on materials from different languages from different language families and remains a reference point for many linguists involved in modern research.

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## 多语言网络资源的开发,用于比较和对比表示火灾科学术语 DEVELOPMENT OF MULTILINGUAL NETWORK RESOURCE FOR COMPARATIVE AND CONTRASTIVE REPRESENTATION OF FIRE SCIENCE TERMINOLOGY

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抽象的。 本文考虑了针对科学家、术语学家、翻译/口译员和学生的专业多语 言网络的发展。 该资源的主要目标是为现有术语的本地化和全球化提供方法,并 为各种专家安排一个全球空间进行互动。

关键词:多语言资源、科学术语、火灾科学、词汇/术语网络。

**Abstract.** The paper considers the development of a specialized multilingual network aimed at scientists, terminologists, translators / interpreters, and students. The main goal of this resource is to provide ways for both localization and globalization of the existing terminolgies and arranging a global space for various specialists to interact.

*Keywords:* multilingual resource, scietific terminology, fire science, lexical/ terminological networks.

# 1. Background

Fire science is a relatively young field linked with forestry, ecology, geography, soil science, climatology, meteorology, chemistry, engineering, etc. Different countries have developed their own national terminologies. Still there are no comparative and contrastive reference materials disclosing the specific national features of fire science terminology. In addition to this, the Russian fire science has no official glossaries / dictionaries. The quality of state standards is low. Forestry reference books and translation dictionaries are often misleading in terms of fire science. There have been attempts to coordinate and harmonize the terminology by the Food and Agricultural Organization together with the Global Fire Monitoring Center, by the Saint Petersburg Research Institute of Forestry in collaboration with Canadian forestry scientists, and by European scientists as well. This led to appearance of translationese dictionaries and reference materials with a number of gaps / terminological lacunes.

In 2007, US Missoula Fire Lab scientists tried to systematize and clarify 300 fire science terms. Unfortunately, the work was terminated for financial reasons, and about 25% of the terms were not provided with glossary entries. However, the results of this work were published on the website (<u>http://firewords.net</u>).

There is an urgent need to start creating a multilingual resource model for comparative and contrastive representation of scientific terminology (on the example of Fire Science). Since the project requires international team efforts for its launching and further development, joint efforts of scientists, terminologists and translators are indispensible. The author of this article (being both a terminologist and a fire scientist) would like to become a uniting, organizing and conceptual link in promotion of the fire science module as a part of the global terminological network similar to one being developed at the ATILF CNRS Lab [Polgére, 2014]. The groundwork for this project is the monograph *Lexicographical modeling of Russian and English fire science terminology* [Sofronova, Felde, 2017] and the electronic prototype of a comparative and contrastive bilingual fire science glossary [Sofronova, 2012].

### 2. Objective

The objective for the current project is to lay the foundation for a multilingual network resource which would: 1) combine features of translation, explanatory, encyclopedic, ideographic and virtual dictionaries; 2) help to treat each national terminology with care preserving the uniqueness of each system of knowledge; 3) enable comparison and contrasting of different countries' scientific terminologies for their harmonization; 4) suggest joint ways of solving translation issues by terminologists, translators and scientists; 5) reflect diachronic development of a scientific notion behind a term and existing approaches to its comprehension; 6) be open for updating and editing; 7) provide potential involvement of terminologies from different languages and countries to this project.

## 3. Methodology & Discussion

Methodologically, one way to make the project more or less independent from substantial funding is to develop it on a similar informational and technological but more rigorous scientific principles as *Wikipedia* or *Everipedia*. Both conceptual and semantic approaches should be applied to its creation via comparable schemes and visualized semantical relations in the modeled terminological systems.

The general idea of the terminological network resource model is as follows. It encompasses all specific lexical systems and keeps them linked through interdisciplinary specific lexical units. In the view of the contemporary integrated researches (when several disciplines and scientists from different disciplines and countries are involved), the special terms used in their studies tend to be integrated or synthesized in their meanings as well. The time has come when the opposite process to localization of the scientific knowledge has started – its interdisciplinary integration. It does not mean that sciences are in the process to be merged, it means that some terms are acquiring multi-disciplinary functioning and require to be defined from multiple aspects (from different disciplines). However, for this integration (or globalization) to successfully happen, the process of localization of the scientific knowledge, its synthesis and updating by countries should take place. The idea of the multilingual network resource model could help realize it, being organized as a *Specialized Everipedia* with similar incentives and recognition for the input.

Here is a closer look on how the network could be arranged. First, you are supposed to choose the interface language, discipline(s) and country(ies). Then you either search a specific term in an index or perform a conceptual search for a specific topic. The simple index search could be illustrated the following way:

CHOOSE INTERFACE LANGUAGE : English, French, German, Russian, Spain, etc .

CHOOSE DISCIPLINE(S) (one or more): General Language (the content is not subject for translation, only some metadata), Fire Science, Forestry, **Biology**, **Chemistry**, **Physics**, etc.

CHOOSE COUNTRIES (one or more): Canada, France, Germany, Russia, USA, etc.

BIOLOGY	CHEMISTRY	PHYSICS
Search Index	Search Index	Search Index
Option plasma	Option plasma	Option plasma
Countries chosen :	Countries chosen :	Countries chosen :
CANADA	CANADA	CANADA
FRANCE	FRANCE	FRANCE
RUSSIA	RUSSIA	RUSSIA

#### SIMPLE INDEX SEARCH :

For the conceptual search, the following steps could be undertaken:

**CONCEPTUAL SEARCH** (here shown on the example of Fire Science):

CHOOSE INTERFACE LANGUAGE : English

CHOOSE DISCIPLINE(S) (one or more): Fire Science

CHOOSE COUNTRIES (one or more): Russia, USA

CHOOSE TOPIC FROM THE GENERAL STRUCTURE / TOPICS (better for it to be unified among countries but it can also vary by countries) : **Fire classification** 

CHOOSE SUBTOPIC (if available) IN EACH COUNTRY : US – General scheme / info; Russia – General scheme / info

USA		RUSSIA	
_	<u>General scheme / info</u>	_	<u>General scheme / info</u>
-	General terms	_	General terms
-	Objects of burning	_	Objects of burning
-	Desirability	_	Desirability
-	Types of fires	_	Kinds of fires
-	Vegetation as object of burning	_	Types of fires
-	Fire intensity/severity	_	Fire intensity
-	Special kinds of fires	_	Special kinds of fires
	Misleading terms	_	Misleading terms

CHOOSE SUBTOPIC (if available) IN EACH COUNTRY : **US** – **Types of fires ; Russia** – **Types of fires** [*Turns out to be incomparable though the wording coincides*]

USA / Types of fires	Russia / Types of fires		
– Surface	<ul> <li>Steppe fire / Grass fire</li> </ul>		
– Crown	<ul> <li>Meadow fire</li> </ul>		
– Ground	<ul> <li>Bush fire</li> </ul>		
<ul> <li>Shrub-canopy</li> </ul>	<ul> <li>Sapling-shrub fire</li> </ul>		
	<ul> <li>Forest-steppe fire</li> </ul>		
	<ul> <li>Forest fire</li> </ul>		
	<ul> <li>Tundra fire</li> </ul>		
	<ul> <li>Fire in wetlands</li> </ul>		
	<ul> <li>Fire in grass wetlands</li> </ul>		
	<ul> <li>Fire in moss wetlands</li> </ul>		
	<ul> <li>Fire in forest wetlands</li> </ul>		
	<ul> <li>Open-forest fire</li> </ul>		
	<ul> <li>Fire in burns and dead forests</li> </ul>		
	<ul> <li>Fire in cuttings</li> </ul>		

CHOOSE SUBTOPIC (if available) IN EACH COUNTRY : US – Types of fires ; Russia – Kinds of fires

USA / Types of fires	Russia / Kinds of fires
<ul> <li>Surface fires</li> </ul>	<ul> <li>Surface fires</li> </ul>
<ul> <li>Crown fires</li> </ul>	<ul> <li>Crown fires</li> </ul>
<ul> <li>Ground fires</li> </ul>	<ul> <li>Ground fires</li> </ul>
<ul> <li>Shrub-canopy fires</li> </ul>	

CHOOSE SUBTOPIC (if available) IN EACH COUNTRY : US – Types of fires / Surface fires ; Russia – Kinds of fires / Surface fires

USA / Types of fires / Surface fires	Russia / Kinds of fires / Surface fires
<ul> <li>Conditional surface fire</li> </ul>	<ul> <li>On-ground fire</li> <li>Running-surface fire</li> <li>Steady surface fire</li> <li>Understory-shrub fire</li> <li>Bole fire</li> <li>Slash fire</li> </ul>

# CHOOSE SUBTOPIC (if available) IN EACH COUNTRY : US – Types of fires / Crown fires ; Russia – Kinds of fires / Crown fires

USA / Types of fires / Crown fires	Russia / Kinds of fires / Crown fires
<ul> <li>Dependent crown fire</li> <li>Independent crown fire</li> <li>Continuous crown fire</li> <li>Running crown fire</li> <li>Active crown fire</li> <li>Passive crown fire</li> <li>Intermittent crown fire</li> <li>Conditional crown fire</li> </ul>	<ul> <li>Top crown fire</li> <li>Overall crown fire</li> <li>Running crown fire</li> <li>Steady crown fire</li> <li>Unsteady crown fire</li> </ul>

The general structure of a discipline can be unified among countries or can also vary by countries. After the topic of Fire Classification is chosen, a comparable list of subtopics revealing the notion of fire classification is given including a comparable general scheme in each country. Besides, the list contains both metalanguage and terms proper (like types of fires and kinds of fires). If we choose "Types of fires", we find out that topics under coinciding titles may actually refer to different classifications. Therefore, in the glossary prototype, "Types of Fires" in the US terminology are aligned with "Kinds of Fires" in the Russian terminology. If we choose "Surface Fires", we see that Russia has a more developed classification of them. If we choose crown fires, we will get quite a different picture.

The proposed title term article structure retains the main features that were developed for the bilingual prototype and has a few additional ones to realize its multilingual function. For instance, the title term is supposed to have special markers if applicable such as indicating professional jargon, archaic forms or not recommended to be used in scientific texts for their ambiguity or misleading motivation. The see link is provided to refer to another recommended term or a synonym, e.g.:

STEADY CROWN FIRE [устойчивый верховой пожар], *jargon, not re*commended, see OVERALL CROWN FIRE [повальный верховой пожар]

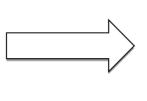
The definition is cited from available literature or is synthesized from the discussion section, e.g.:

A crown fire that spreads over all storeys of forest vegetation – from forest floor to crowns [Encyclopedia of Forestry, 2006].

A new section of VISUALIZATION suggests that both handmade hierarchical schemes (if available and applicable) and automatized spider-like schemes of semantically related terms in the nearest surrounding of the title term should be available, e.g.:

# VISUALIZATION

See <u>General scheme</u> [Общая схема] in <u>Fire Classification</u> [Классификация пожаров]





A new lexical graph editor, which is being developed in the ATILF CNRS Lab, could provide a nice visualization option through creating spider-like graphs of semantically related terms based on formal network structures called lexical systems [Polguére, 2014; Ingrosso, Polgére, 2015]. A lexical system is a non-hierarchical graph whose vertices are lexical units, which are in semantic and combinatorial relations encoded by means of Meaning-Text lexical functions [Melcuk, 2007; Polguére, 2007]. Such lexical systems could help treat complex terminological systems, which cannot fit any strict hierarchical schemes, and feature both directly and indirectly connected terms as small-world networks [Watts and Strogatz, 1998].

The DISCUSSION section presents a more or less unbiased view on the scientific notion through a comprehensive analysis of the published literature with relevant references. Hyperlinks are attached to other fire science terms used in the discussion section and lead to the corresponding term articles in the Fire Science network. Specific Forestry terms borrowed from the Fire Science are colored green and provide a quick pop-up definition taken from relevant forestry reference materials.

## DISCUSSION

N. P. Kurbatsky (1962) writes that in practice <u>crown fires</u> are divided not into <u>top</u> and <u>overall</u> fires but into <u>running</u> and steady crown fires. A steady crown fire, as well as an overall crown fire, burns tree crowns as the edge of the <u>surface fire</u> advances. No independent crown combustion is observed (Kurbatsky, 1970).

N. P. Kurbatsky (1972) considers this term non-scientific and does not include it in the list of basic fire science terms. M. A. Sofronov (1971) thinks that the term "steady crown fire" is better not to use to avoid terminological confusion with "steady surface fires".

Forestry terminological dictionary (2002) defines this term this way: "... a fire that spreads over the whole tree stand - from duff to crowns". A tree stand is a complex of trees, the main component of a forest stand (Forest encyclopedia, 1985), therefore **duff** . **forest floor .**, **understory .** are not included in the notion of a tree stand, although they burn as well at this kind of a fire.

The Encyclopedia of forestry (2006) gives a good definition: "A steady crown fire spreads over all storeys (**storey**) of forest vegetation - from the forest floor to crowns". Its spread rate is not high - approximately 0.3 km/hour, sometimes 4-5 km/hour.

The next definition is difficult to agree with entirely: "... a crown fire enveloping all components of a forest **biogeocenosis**. It burns duff, understory, saplings (**sapling**), completely burns needles, large branches, quite often tree boles as well" (Terebnev et al., 2007). Boles of live trees cannot burn completely even in a high-intensity crown fire, they can only get charred.

The SEE ALSO section gives the title term itself and conceptually related terms or simply those terms which were used in the discussion section and provides links to the related terms (if present) in terminological systems of other participating countries. Moreover, links to interdisciplinary terms coinciding in their form but not necessarily in all aspects of their meaning with the title term are also provided to realize links with other disciplines.

SEE ALSO (The section opens up when pressed)

Russia	US/ Canada/ Australia	France	Germany	Other countries
- fire 1 <ogon'> - fire 2 <pozhar></pozhar></ogon'>		- feu - incendie	- Feuer - Brand	

## See also

#### Russian fire science terminology

- kind of fire
- surface fire
- <u>crown fire</u>
- top crown fire
- overall crown fire
- running crown fire
- running surface fire
- steady surface fire

#### US fire science terminology

- type of fire, not kind of fire
- <u>surface fire</u>
- <u>crown fire</u>
- independent crown fire
- <u>active</u>/ <u>continuous crown fire</u>
- <u>running crown fire</u>
- •

## - INTERDISCIPLINARY TERMS, e.g :

FIRE and CROWN FIRE in <u>Forestry</u> (the link will lead you to the index Forestry page where results of a quick search for different countries are displayed)

FIRE in Chemistry

FIRE in **Biology** 

etc .

In the REFERENCES section, it would be nice to provide hyperlinks to full texts or to the relevant scientific corpora attached to the specific networks.

Envisioning some issues with translating the original title term articles into other languages, translators are provided with additional space to indicate problems they have encountered while translating plus to show the range of typical erroneous translations of a given title term and its combinability with other words in translated texts, e.g.:

## TRANSLATION / ORIGINAL (The section opens up when pressed)

- Original (if applicable), e.g : Русский оригинал /Russian original

- Translations (to the languages of participating countries), e.g. : <u>Translated</u> to other languages

# TRANSLATOR'S COMMENTS (The section opens up when pressed)

In the US terminology, there are several analogues for this kind of a fire: active (dependent) or continuous crown fire (Glossary ..., 1996; Scott and Reinhardt, 2007).

FYI: Below there is translation of the discussed term found in Forestry Russian-English dictionaries:

1. Russian-English Forestry and Wood Dictionary (1966) / Compiled by Williams Linnard. Commonwealth Agricultural Bureaux, Farnham Royal, Bucks., England, 107 p.

устойчивый пожар - slow-moving intense fire

2. English-Russian and Russian-English Dictionary of Forestry and Forest Industries / Compiled by D.V. Mozhaev, B.N. Novikov, D.M. Rybakov. - Moscow: Russo, 1998. - 857 p.

## устойчивый верховой пожар - independent crown(ing) fire

The NOTES section includes entries for authors and translators of the entry and date the entry was added or last edited, e.g.:

**NOTES** (*The section opens up when pressed*)

- Author(s) and Affiliation(s)
- Translator(s) and Affiliation(s)
- Last update

The title term article finishes with one more new section called COMMENTS. It is essential for feedback and invites the authors and translators for further discussion.

## 4. Conclusion

The proposed global network resource should help disclose the variability in understanding of terms by different scientists and scientific schools, in different languages and countries. It should help correct or logically synthesize definitions, leaving users the right to draw their own conclusions from the analysis of the terminological entry. The resource can be addressed to scientists, terminologists, translators/interpreters, and students majoring in sciences. The new lexical graph editor which is being developed in the ATILF Lab could help model terminological systems as specific modules attached to the global lexical networks and that could be handled autonomously as well. The future prospect is science without borders if scientists, terminologists and translators unite their efforts through cooperation and joint work.

## References

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# 乌拉尔学生的未来: 恐惧、希望和未来的形象 THE URAL STUDENTS ON THEIR FUTURE: FEARS, HOPES AND THE IMAGE OF THE FUTURE

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抽象的。 分析社会学研究的结果本文侧重于学生对未来的看法。我们使用的数据来自对乌拉尔大学学生的观点和价值取向的多年社会学研究。 本文的目的是通过区分"理想"和"预期"未来来研究学生的未来形象。调查采用整群抽样和配额抽样。 本研究的一个重要积极结果是,大多数受访者确实为未来计划了生活,尽管主要是在不久的将来。 我们的调查结果还表明,年轻人对自己的个人潜力给予了相当高的评价。

关键词:未来形象,多年社会学研究,调查,整群和配额抽样,监测,受访者,社会人口参数,个人潜力。

Abstract. Analyzing the results of the sociological study this paper focuses on the students' perceptions of their future. We use data from the multi-year sociological study of the opinions and value orientations of the students of the Ural Universities. The purpose of this paper is to study the image of the future of the students with the distinction made between "desirable" and "expected" future.. The cluster and quota sampling was used in the survey. An important positive result of the present research is that the majority of the respondents do plan their life for the future even though it is mainly near future. Our findings also indicate that young people give a fairly high assessment of their personal potential.

**Keywords:** image of the future, multi-year sociological study, survey, cluster and quota sampling, monitoring, respondents, socio-demographic parameters, personal potential.

This article provides a summaryof the results of stage VIII of the multi-year sociological study of the opinions, evaluations, and value paradigms of the university students in the Middle Urals. Summarizing the results of monitoring the

dynamics of sociocultural development of the Ural student population (1995 - 2016), we noted that this is "the most interesting subject for further sociological study." The first seven phases were conducted over the period of 1995-2016, and the eighth phase was conducted in  $2020^1$ . And today we can say that our unique 25year long research has been successfully completed.

It was done, despite the most difficult conditions for the organization of the survey due to the COVID-19 pandemic. The above-mentioned survey was conducted entirely online. In 2020 universities in Yekaterinburg (as well as in many other regions of the country) were transferred to distance learning. And this led (though somewhatunexpectedly for the organizers) to a kind of "computer overload", which impededfull-scale sampling by universities, training profiles and especially by gender. Within the framework of the monitoring nature of the research (stage VIII of the multi-year study)it was decided to investigate the problem of the COVID-19 influence on students' sociocultural attitudes and practices<sup>2</sup> and to emphasize their temporal attitudes.

Today, the Russian society and the world community as a whole have become oversaturated with social, economic and political threatsand within these traditional research boundaries, we see a completely new formulation of the problem. Taking into account the noted trends, thesampling frame was determined. Hereby, it was important to ensure the continuity of the study, because it was not an independent, autonomous survey, but stage VIII of themulti-year monitoring.

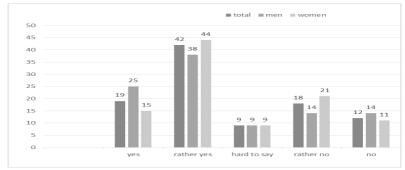
The cluster and quota nature of the sampling was preserved in this study. Specific universities of the Sverdlovsk region, whose students participated in the previous stages of the monitoring were identified as clusters. It was important to adhere to the main principle of sampling - survey of the third-year full-time students (correlated with their median position that is being already adapted in the university, but already thinking about after graduation period). Within the framework of stage VIII of the study of the student body it was supposed to interview 2,000 students. The quotas were determined by the following socio-demographic

<sup>&</sup>lt;sup>1</sup> Student 1995-2016: Dynamics of Socio-Cultural Development of Students in the Middle Urals: Monograph / L.N. Bannikova L.N. [et al.]; ed. by Vishnevsky Yu.R.. Yekaterinburg: UrFU, 2017. 904 p. P.900

<sup>&</sup>lt;sup>2</sup> The sociocultural approach is now becoming defining in Russian general sociology as well as in sectoral sociologies (in particular, in sociology of youth). As the authors of one of the most profound and interesting textbooks on the sociology of youth rightly write, "in modern sociology the phenomenon of age is most often revealed through its sociocultural meaning" (Zubok Y.A., Chuprov V.I. Sociology of Youth. Textbook. M.: MIT, 2009. - 322 p. P.10)profound and interesting textbooks on the sociology the phenomenon of the age is most often revealed through its sociocultural meaning" (Zubok Y.A., Chuprov V.I. Sociology of youth write, "in modern sociology the phenomenon of the age is most often revealed through its sociocultural meaning" (Zubok Y.A., Chuprov V.I. Sociology of Youth. Textbook. M.: MIT, 2009. - 322 p. P.10).

parameters: gender and profile of respondents' training - humanities, engineering, socio-economic and natural sciences.<sup>3</sup>

What is the image of the future for the students participating in phase VIII of the monitoring? The most important characteristic of students' attitude towards their future is the degree of confidence or uncertainty in it. As part of the study, we differentiated the future into closer ("tomorrow") and more distant future. What did we find out when comparing the answers? (Fig.1,2).



*Figure 1.* Do you feel confident about the future? (% of the number of respondents in the groups)

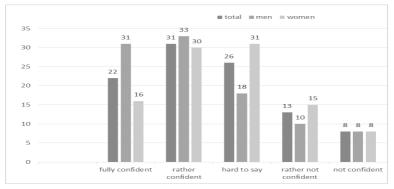


Figure 2. How confident about your future are you today? (% of the group answers)

<sup>&</sup>lt;sup>3</sup> Form N VPO-1 "Information about the organization carrying out educational activities under the educational programs of higher education - bachelor's programs, specialist's programs, master's programs". Information for 2019 // Portal of the Ministry of Science and Higher Education of the Russian Federation [Electronic resource]. URL: https://www.minobrnauki.gov.ru/action/stat/highed/

The main difference lies not only in the greater number of those who feel confident about "tomorrow" (three respondents out of five). Confidence in the future also prevails (every second respondent). The ratio of the "confident" to "not confident" respondents 2:1with regard to "tomorrow" and 2,5 : 1with regard to the more distant future. The fact that the number of those not uncertain about tomorrow was 1.5 times more than of those uncertain about the future might be connected with the pandemic.

Not only the overall picture presents a great interest, but also the details. It is noticeable that young men are more confident about the near future than the girls are .They have a higher correlation of those who are confident combining the answers "fully confident" and "rather confident" and those who are unconfident combining answers "rather not confident" and "not confident" about the distant future, that is 2.3 : 1 for the young menand 1.8 : 1 for the girls. As for the more distant future the correlation is 3.6 :1 and 2 :1 respectively.

Gender differences are dominant and in many ways they determine other differences. But it would be wrong to underestimate these "others". The most confident in the future were the respondents studying the social sciences, the most uncertain were the students of the natural sciences (their share among confident students was 1.5 times lower than the average for the array, and 1.6 times higher among unconfident students). The situation is similar with regard to confidence in the distant future (the share of the unconfident social sciences students is 1.3 times lower than the average for the array, and the share of the unconfident students of natural sciences is 1.4 times higher. The influence of marital status on confidence in the near future and more distant future is almost nonexistent.

In many respects it is the problems of life planning and development of life strategies that lie behind the confidence/uncertainty in the near and distant future (Fig.3).

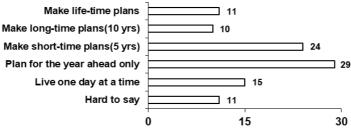


Figure 3. How far ahead do you plan your life?

An important positive result of the present research in comparison with the previous stages is that the majority of respondents (3 out of 4) plan their life for

the future even though it is mainly near future (next year at the most). One more positive point is that even though the share of those whose life orientation is "live now" is rather high (every seventh) but it is currentlyon the decline. It would be probably wrong to fully support the position of those respondents (1 out of 9) whose life is already fully planned todaybecause we live in a "risk society", the uncertainty of trends and prospects of which is constantly growing.

Assessing what prevents young people from planning their future, 3 out of 5 respondents (61%) noted an objective difficulty - "considerable uncertainty and volatility of the situation". Moreover, as Yanitsky O.N correctly noted in one of his recent articles, "the modern world is developing nonlinearly, and it abounds in unexpected twists and turns and qualitativeleaps (bifurcations).<sup>4</sup>

In the opinion of one in seven (14%) of the respondents young people are impeded from planning the future by the "negative, tragic" coloring of possible future scenarios that dominates in the media and public opinion. Only 6% believe that nothing impedes the development of long-term life plans and strategies but this is even less than the number of those who make such plans.

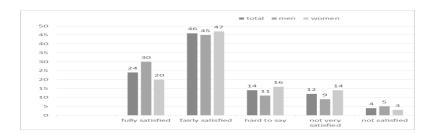
Attitude towards the future is an important, but not the only setting in the system of temporal (from Latin tempora "times", the interrelation of moments of time and temporal characteristics) settings. Confidence in the future is most often based on satisfaction with the present and a positive assessment of its development prospects. The answers of the respondents to the relevant questions are of particular interest in this respect (Fig.4).

The majority (7 out of every 10) respondents are satisfied with their life. They are 4.4 times more than unsatisfied respondents. There are not many respondents (1 out of 7) who could not define themselves more precisely. Once again, it is noticeable that girls are less satisfied than boys.

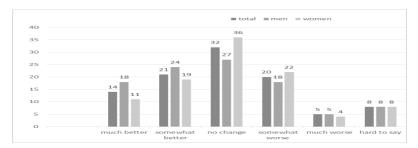
A remarkable opinion was expressed by the respondents regarding their life and the life of their (mostly parental) family in comparison with the previous (2019!?) year (Fig. 5).

<sup>&</sup>lt;sup>4</sup> Yanitskii O. N. Volunteering in emergency situations: theoretical and methodological problems // Sociology and society: traditions and innovations in the social development of regions [Electronic resource]: Collection of reports of the VI All-Russian Sociological Congress (Tyumen, 14-16 October 2020) / Ed. by V.A. Mansurov V.A. ; Ed. by IvanovE.Yu. - Moscow: ROS; FNISC RAS, 2020. Pp. 5448-5462. P.5453.

# Scientific research of the SCO countries: synergy and integration



*Figure 4.* How satisfied are you with your life in general? (% of the number of respondents)



*Figure 5.* Are you and your family doing better or worse in comparison with the previous year? (% of the number of respondents)

As we can see, in the pandemic year, nothing changed in the life of every third person (according to self-assessments).Girls noted it 1.3 times more often. The other third noted even some improvement (two out of every five young men). Only one out of four respondents stated thatlife had become a little worse or a lot worse. Modern youth, despite the existing difficulties in the present and the problems expected in the near future, still somewhere deep in heart believe that they will be able to realize personal potential. But today's students are characterized by a fairly high level of differentiation (Table 1)

Table 1

The index of social well-being and its components in the context of different socio-demographic groups of students\*

		LSI	HSI	OI	IΣ
Gender	Male	0,72	0,61	0,66	0,67
	Female	0,67	0,55	0,61	0,62

Marital status	Married	0,73	0,63	0,66	0,67
	Single	0,68	0,57	0,62	0,64
	Common-law marriage	0,72	0,57	0,65	0,66
Academic profile	Humanities	0,66	0,51	0,59	0,60
	Social-economic	0,72	0,63	0,66	0,68
	Mathematics, Natural Sciences, Medicine	0,64	0,51	0,57	0,59
	Engineering	0,69	0,58	0,64	0,64
Satisfaction with	Rather yes	0,72	0,60	0,65	0,66
the university*	Rather no	0,55	0,46	0,53	0,52
Satisfaction with	Rather yes	0,72	0,60	0,65	0,66
the profession*	Rather no	0,56	0,48	0,54	0,54
Your tuition*	Government-funded	0,68	0,56	0,62	0,63
	Employer-sponsored	0,76	0,66	0,73	0,73
	Contract	0,69	0,58	0,61	0,63
Where did you live	Yekaterinburg (other large city)	0,70	0,59	0,65	0,66
before you entered	Other large city (> 100k people)	0,71	0,58	0,63	0,65
university?*	Small or medium-sized city (up to 100k)	0,66	0,54	0,59	0,60
	Village (urban-type settlement)	0,68	0,61	0,64	0,65
Current place of	With my parents	0,69	0,59	0,64	0,65
residence?*	Dormitory	0,69	0,56	0,61	0,63

\* There are statistically significant differences between the groups

The attitude towards the future was concretized by identifying "images of the future" in the students' perceptions. At the same time a distinction was made between "desirable" and "expected" (likely) future. It turned out that these images differ significantly. The picture of the near (3 years ahead) future is painted in gloomy "black and gray" colors (Table 2). Positive changes were mentioned much less frequently. Moreover, in their assessments both young men and women are very close in their assessments. The only significant differences can be seen in the greater confidence of the former in the intensification of authoritarianism (1.5 times) and the greater concern of the girls about a possible deterioration of the environmental situation.

# Table 2

From your point of view, what events are most likely to occur in the next three years? (a multiple choice question with the choice limited to three parameters, positive answers for each parameter are taken into account)

Events	Very likely
Price increases, inflation, decline in living standards	66
Environmental accidents, deterioration of the environment	57
Political unrest, protests, rallies in the country	48
Conflicts, deterioration of relations with other countries	41
The onset of authoritarian or totalitarian regime in the country	20
Development of knowledge-intensive industries and innovation	19
Growing informational openness and freedom in society	17
Rise in bureaucracy and formalism	16
Adoption of laws and programs contributing to business and entrepreneurship	12
Successful economic and social reforms	4

The assessment of the desirable future was different in tone and character (Table 3).

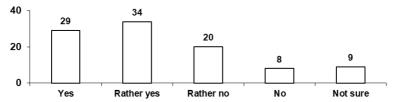
# Table 3

In your opinion, what should our country strive for in the future? (a multiple choice question with, the choice limited to three parameters, positive answers for each parameter are taken into account)

Events	Yes
Towards a high standard of living, economic well-being	75
Towards respect for human rights, democratic society	58
Towards justice and equality	45
Towards an effective market economy	37
Towards tolerance, respect of minorities rights	27
Towards a significant development of high technologies and IT	27
Towards a society which is respected by other countries	20
Towards a strong state authority	15
Towards the humanistic values	15
Towards a society, where traditions and generations experience are highly valued	12

Our respondents would like to live in a society, with the high economic well-being and a high (decent) standard of living (3 out of 4); where human rights will be observed. These young people grew up in the conditions of the emerging market relations and they do not see any alternative to the market. But they would prefer a faster transition to an efficient market economy. Even after the patriotic upsurge in 2014 - "Crimea is ours!" and in 2020 - "Thank you grandfather for the Victory"), only 1 out of 5 of them would like Russia to return to the role of a great power. <sup>5</sup>.

We would like to finish the general analysis of Ural students' perceptions of the future with their assessment of the possible influence of youth on the development of our society (Fig. 6).



*Figure 6.* Do young people today have the opportunity to influence the development of our society, to make changes for the better?

As we can see, this assessment is quite high. Young people give a high assessment of their potential. And it is important for the society to provide conditions for young people to become a real driver of social development.

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# 青年作为知识流动的特殊群体 THE YOUTH AS THE SPECIAL GROUP OF INTELLECTUAL MIGRATION

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抽象的。 这篇文章探讨了现代亚美尼亚社会中的知识分子迁移问题,以及与 人口、经济发展和国家总体安全方面正在出现的风险相关的问题。 亚美尼亚青年 出国留学的移民流出是在目前正在朝着形成新的多极世界秩序发展的区域和全球 进程的背景下进行研究的。

关键词:亚美尼亚青年、移民、劳动力资源、人才流失。

**Abstract.** The article deals with the problems of intellectual migration in modern Armenian society in connection with the emerging risks for demography, economic development and the general security of the country. The migration outflow of Armenian youth to study abroad is studied in the context of regional and global processes that are currently developing towards the formation of a new multipolar world order.

Keywords: Armenian youth, migration, labor resources, brain drain.

In the conditions of innovative development of the economy, one of the key factors determining the competitive advantages of countries in the world markets is intellectual resources.

At the turn of the millennium, the aggravation of the shortage of national scientific and technical personnel, noted in almost all developed countries, and the intensification of their struggle for foreign minds and talents, extremely actualized the problem of intellectual migration, the flows of which involve scientists, university professors, experts from international organizations, employees of the scientific and technological complex and various categories of highly qualified specialists, interns, students. The catalyst for intellectual migration is globalization processes, primarily in the labor market, business, R&D, education, information and communication technologies<sup>1</sup>.

Today, intellectual migration in most cases is associated with the international market of highly skilled labor in the context of globalization. Currently, the dominant motive for intellectual migration remains economic. It prevails over all other motives - political, professional, etc.

World experience shows that intellectual migration is part of the problem associated, on the one hand, with the level of socio-economic development of the country, and, on the other hand, with the conditions for the functioning of the research and development sphere in the national economic complex.

The American scientist P. Drucker notes: "the real capital of a developed economy ... is knowledge, and knowledge workers have become a group that determines the values and norms of society"<sup>2</sup>.

Intellectual migration as a factor of global socio-economic development is a natural movement of "human capital" in the world market, contributing to the exchange of knowledge and experience.

Armenia, like most countries of the world, connects its modern development with the formation of an economy based on innovation. The strategic goal of this is to create an innovative economy that will be competitive, knowledge-intensive, resource-efficient, environmentally protective and, most importantly, socially oriented, ensuring the sustainable development of the country and improving the quality of life of the people. A special role in the fulfillment of these tasks belongs to science. An economy based on knowledge, highly qualified personnel, and accumulated human capital are of particular importance. In the context of globalization and instability, among the potentially adverse factors influencing international migration, the emigration of highly qualified personnel and knowledge workers is of particular concern in Armenia.

The well-known Armenian sociologist Gevorg Poghosyan, noting that Armenia has become an exporting country of labor and skilled personnel, believes that the main reasons for the export of labor resources and the outflow of the economically active population are as follows: "This is a sharp reduction in jobs, an economic crisis and a drop in living standards"<sup>3</sup>. At the same time, migration, including labor, from Armenia is a multidimensional phenomenon, and should not be

<sup>&</sup>lt;sup>1</sup> See, for example: Tsapenko IP International migration of specialists and students / Economic Issues. 2005, No. 7, p. 66-81. Yurevich A. V., Tsapenko I. P. Globalization processes in modern Russian science / Russian Chemical Journal. 2007, T. LI N3, p. 91-98.

<sup>&</sup>lt;sup>2</sup> Cit. by Khrutsky V. Abstract of the article by P. Drucker "Labor and management in the modern world and an afterword to it / Ros. economy journal, 1993, N5, p. 67.

<sup>&</sup>lt;sup>3</sup> Pogosyan.G. "Analysis of migration flows in Armenia". Transit migration and transit countries: theory, practice and regulation policy / ed. I.Molodikova, F.Duvel. M: University book, 2009, p.197.

simplified and reduced to a few obvious reasons, since along with economic there are also cultural-historical, political-historical, psychological and other factors.<sup>4</sup>

If only intellectual migrants are singled out in the general structure of migration flows, then in this case Armenia is included in the processes of international migration, mainly as a donor country of qualified personnel. Based on this, the problems associated with intellectual migration are extremely relevant. "Armenia is among the countries that export labor resources, qualified specialists, intellectual workers. For a small country, spending money on training specialists and then spontaneously exporting them abroad is very disastrous. Through the "brain drain" Armenia is losing the intellectual and spiritual wealth of the country, which has been developing for decades and is among the hard-to-renew resources. Migration processes affect the demographic situation in the country. There is a deformation of the age and sex structure due to "the departure of the most healthy, young, professionally trained citizens from its composition".<sup>5</sup> It is no secret that intelligence is practically the only serious resource "that Armenia still possesses, and its loss is not only economically, politically, socially and culturally counterproductive, but also poses a threat to the national security, economic development and political stability of Armenia, reduces the level of the country's competitiveness reduces the range of opportunities and prospects for the republic".<sup>6</sup> It is the departure of these people that constitutes basically the "brain drain". At the same time, many representatives of these professions leave immediately after graduation from universities. The consequences of the ever-increasing outflow of intellectual personnel abroad are obvious, and the Armenian economy already feels a shortage of these specialists.

Some emigrants are forced to change their field of professional activity when leaving, and in this case, Armenia loses a scientist, and the host country receives a potential worker with a lower qualification, or maybe an unemployed one. "In other words, by preparing specialists and then giving them to other countries practically free of charge, Armenia subsidizes the "production" of human capital in these countries, especially developed ones, to the detriment of itself".<sup>7</sup>

A serious problem is the deterioration of the age structure of R&D personnel. In the 90s of the last century, a mass exodus of personnel occurred in Armenian

<sup>&</sup>lt;sup>4</sup> Poghosyan,G. "Out – migration from Armenia" Transboundary Migration in the Post-Soviet Space. Three Comparative Studies. Ed. By Nikolai Genov and Tessa Savvidis, Frankfurt am Main, etc.:Peter Lang, 2011, pp 44-46.

<sup>&</sup>lt;sup>5</sup> Pogosyan G.A. Migration flows in Armenia. Migration bridges in Eurasia. Sat. mat. VI international scientific-practical conference "The role of migration in the socio-economic and demographic development of the sending and receiving countries of Eurasia: regions of Eastern Europe and Central Asia". Moscow, Yerevan, 2014, p.364

<sup>&</sup>lt;sup>6</sup> V. G. Osipov. "Intellectual migration: global experience and realities of Armenia". Հասարակագիտական միտքը արդի ժամանակաշրջանում. Երևան, 2012, с. 138. <sup>7</sup> Ibid.

science, mainly due to the most active and efficient generation belonging to the age group of 30-50 years. Since the end of the 1990s, it has become obvious that the age of emigrating specialists has dropped significantly. The largest emigration among young intellectuals aged 25-35 years. Today, the most alarming for the country is the emigration mood among a significant part of the youth, including the most educated part of it. Thus, the data of a sociological survey indicate that almost 40% of the respondents aged 18 to 30, who have a higher or secondary specialized education, would like to leave Armenia forever. <sup>8</sup> For comparison, we present the data of a study conducted in Armenia among students in 1996 by the Friedrich Ebert Foundation. According to the study, 42.3% of young people answered that they would like to get an education abroad if possible, 27.4% - partly in Armenia and partly abroad, and only 30.3% - in Armenia.<sup>9</sup>

In any country, educated youth is the basis for the formation of a new generation of specialists in all fields, which represent the intellectual and professional potential of the country's future development. However, in Armenia, the trend towards an increase in the irrevocable departure abroad of young professionals, university graduates and even senior students is becoming more and more pronounced. The desire and aspiration to find a better life is popular among a large part of the Armenian youth. Compared to middle-aged and older scientists, the migration potential of young scientists is quite high. A higher percentage of those willing to go abroad to work among young scientists and graduate students determines a fairly obvious change in values in science. Scientific youth quite successfully masters the mentality of Western culture, overcomes the language barrier and gradually enters the foreign market of intellectual labor.

According to the sociological survey<sup>10</sup> "Young Armenia. The First Fruits of Independence", conducted by the Armenian Sociological Association in October 2011 under the leadership of G. Poghosyan, the migration potential of young people aged 15-25 presents the following picture: 22% of respondents have a desire to go abroad. 15.4% stated that they not only want to leave, but have specific plans. Moreover, among male respondents, the desire to go abroad is present in 20%, and among women - in 11.2%. The main reasons for young people to leave are as follows: 8% to get an education abroad, 15.8% are looking for work, another 9.8% have an economic reason. Comparing these data with the 2018 study, "it can be stated that although there is no tangible difference in the migration moods of young people, there is still a positive "shift" towards the desire to stay in their

<sup>&</sup>lt;sup>8</sup> National Report "Youth of Armenia" Part I. Yerevan: Ministry of Sports and Youth Affairs of the Republic of Armenia, 2011, p. 77, (in Armenian).

<sup>9</sup> URL3: http://arka.am/ru/ (Date of access: 10/11/2022).

<sup>&</sup>lt;sup>10</sup> See G.A. Poghosyan "Young Armenia", report at the conference dedicated to "Value orientations of youth and issues that concern them" - Yerevan, 2012, p. 8 (in Armenian).

homeland"<sup>11</sup>. (p.53.) So, out of all the respondents, 26% declared their desire to go abroad, and 48% decided to stay in their homeland<sup>12</sup>. According to sociological research, the most common reason for youth migration is more attractive living conditions abroad. And the second most important reason is distrust in the domestic education system. Thus, the trends speak not only of the "brain drain" among the Armenian youth, but also of the decline in the prestige of domestic higher education.

Another problem that requires deep study is the Armenian students abroad. The number of domestic students studying abroad is increasing from year to year. The popularity of academic migration is associated with the spread of scholarship programs in Armenia, which make it easier to get higher education in foreign universities and open up employment prospects. Currently, more than 30 interstate programs and bilateral agreements with a number of countries are operating, within the framework of which scholarship programs are being implemented. These states provide Armenia with quotas for various levels of education - bachelor's, master's, postgraduate, doctoral studies. Today, such programs are already operating with China, Russia, Georgia, Poland, Bulgaria, Romania, Iran, Egypt, the Czech Republic and Slovenia. Scholarship programs provide free tuition. The "Luys" Armenian Foundation helps students who independently enroll in the ten most prestigious universities in the world. It pays scholarships to the best students, updating their list every year.

At the same time, it should be noted that marketization is also manifested in the field of higher education. According to Armenian experts, today the country's universities are "focused on business", and "the level of education is proportional to the system of value orientations of modern young people".<sup>13</sup> There is a kind of devaluation of education, and at the same time hyper-qualification of the workforce.

Recently, the phenomenon of creating foreign universities located on the territory of the country has become more widespread. "This is also a projection of the influence and prestige of the higher education system of the donor country. In the aspect that interests us, this phenomenon can also be considered as a kind of academic mobility, which we propose to call "virtual mobility". Virtual migration is also accompanied by a phenomenon that can be called "electronic mobility", when a student studies at a foreign university through online courses and programs without leaving their country".<sup>14</sup>

14 "Philosophy in the Modern World". Book IV. Yerevan, 2014, p. 115 (in Armenian)

<sup>&</sup>lt;sup>11</sup> Modern youth of Armenia and Russia: socio-demographic and ethno-cultural orientations: a collective monograph. Institute of Ethnology and Anthropology RAS, Institute of Archeology and Ethnography NAS RA. M.: IEA RAN, 2020. p.53.

<sup>12</sup> Ibid.

 $<sup>^{13}</sup>$  Sahakyan A.K., Mkoyan G.S. The attitude of modern Armenian youth towards education  $\prime\prime$  Sociology and Law. 2017. No. 4. P. 6-11.

The process of studying Armenian students abroad is a positive phenomenon. Together with the acquisition of knowledge, advanced training, they get access to advanced scientific schools, research centers, and scientific laboratories. They master several foreign languages, increasing their competitiveness in the global educational market, and later in the labor market. However, a serious concern is the fact that a significant part of them intend to stay and work abroad. In general, the emigration potential of Armenian students studying abroad is very high. Studying abroad is actually one of the main channels of migration in the field of science and technology, and the actual data on intellectual migration does not reflect this fact, since students (trainees, graduate students, etc.) are not counted as skilled migrants.<sup>15</sup>

This resource of human capital is of particular value, since, as a rule, the best and most motivated students and graduate students from all over the world go to study abroad. By the time they complete their studies, many of them have a good command of the language of this country, are familiar with its laws and customs, as well as the requirements of employers, and tend to stay in it to work.

According to the National Report "Youth of Armenia", there is a noticeable increase in potential emigrants among Armenian youth. Thus, among respondents aged 18-30, 64.4% would definitely want to study at a foreign university, 22.3% would rather, 0.5% are already studying, and only 4.9% would definitely not want to go abroad with purpose of study.<sup>16</sup>

"I would very much like not to lose this scientific potential, because the "brain drain", the aging of scientific personnel and the shortage of young people in scientific teams have become chronic phenomenon in our science<sup>17</sup>.

The "emigration" aspect of educational migration in the future is especially dangerous and fraught with long-term costs.

What forces the youth of Armenia to look for a worthy alternative abroad:

1. Weak professional orientation among the Armenian youth. When entering universities, attention is paid not to the prospect of employment, but to the prestige of the specialty. This leads to fierce competition for young professionals in the labor market. A significant part of the unemployed youth seeks to get a job in their field, which leads to migration.

2. Studying abroad with the prospect of employment is also attractive because of the expected high salary.

<sup>&</sup>lt;sup>15</sup> CM. Meyer J/B, And Brown. «Scientific Diasporas: A New Approach to the Brain Drain». Discussion Paper № 41. World Conference on Science «Science for the twenty-First Century». UNESCO-JCSU, Budapest (Hungary), 26 June – 1 July 1999, p.1.

<sup>&</sup>lt;sup>16</sup> National Report "Youth of Armenia" Part I. Yerevan: Ministry of Sports and Youth Affairs of the Republic of Armenia, 2011, p. 77 (in Armenian).

<sup>&</sup>lt;sup>17</sup> G. A. Pogosyan. "Society in an Age of Change: Hopes and Realities". journal "Bulletin of the Russian Academy of Sciences", 2012, volume 82, no. 5, p. 446

3. Young people do not see prospects for self-realization in Armenia, and are interested in better living, working and learning conditions.

In order to reduce the outflow of young professionals abroad in Armenia, it is necessary to make changes in personnel policy, open access for young people to vacancies according to their profile, and increase the prestige of popular specialties by providing higher scholarships. It is necessary to use foreign experience, to provide returning young specialists with socio-economic and labor benefits. In other words, it is important to create employment and career opportunities for Armenian youth in order to motivate them to stay in the country.

Consideration of the features, characteristics and causes of the process of intellectual migration in Armenia made it possible to identify its current trends. The explanation of the "brain drain" should, first of all, be sought in the contradictions of the socio-economic and political development of the country, which resulted in an imbalance between the number of trained personnel and the opportunities for their effective use that actually exist in society. Intellectual migration in Armenia is distinguished by the high professional motivation of highly qualified specialists, the youth character and the selectivity of demand for domestic scientists in the foreign labor market.

Over the past decades, Armenia has been a donor country of intellectual resources in the foreign labor market: the demand for highly qualified specialists leads to the fact that talented and educated Armenian scientists widely offer themselves as an intellectual "commodity". Moreover, the demand for this "goods" abroad is selective. The most demanded are specialists from a number of natural and exact sciences, primarily physicists, mathematicians, programmers, biologists, chemists, physicians, as well as scientists involved in high-tech developments. Threats to economic and national security caused precisely by intellectual emigration from Armenia are difficult to quantify. However, you can try to identify causal relationships, highlighting the most serious of them. Firstly, the "brain drain" from Armenia, whatever its scale, increases our technological lag behind the most advanced countries. Secondly, the "brain drain" can lead to the destruction of domestic scientific schools. The mass nature of the departure of young scientists and graduate students to study and work abroad can seriously exacerbate the problem of the reproduction of scientific personnel. In addition, the process of "internal emigration" (the departure of scientists to other sectors of the economy), especially from the sphere of fundamental research, is also quite active.

The socio-demographic aspect of the problem is also important. After all, young people leave, focused on obtaining professional qualifications and higher education. They postpone the creation of a family and the birth of children, which naturally leads to a decrease in the birth rate. It is likely that the children born to them will not return to Armenia. Thus, the demographic mode of reproduction of

intellectual potential is violated. This situation also poses a threat to the country's gene pool and contributes to the "aging of the nation."

Despite the obvious negative aspects of the phenomenon of the outflow of qualified specialists abroad, it is part of the objective process of globalization of the intellectual labor market, which most countries of the world face to one degree or another. Therefore, it is necessary to think not about how to stop this process, but to work on mitigating it and extracting possible benefits from it. Indeed, by and large, the participation of scientific personnel in joint projects, "virtual" employment, studying abroad are attributes of the new time and contribute to a more rational use of accumulated human capital on a global scale. By joining this process, Armenia will be able to turn migration into a powerful factor in economic development.

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## 寡头转型:未来还是终结的开始?

# OLIGARCHIC TRANSFORMATION: A CHOICE BETWEEN THE FUTURE OR THE BEGINNING OF THE END?

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抽象的。现代寡头政治日益两极分化,随着神经网络算法和生物技术、克隆和干细胞的突破,资本的不可动摇的统治思想和延长永生和青春的愿望变得非常可行。然而,明确的着装规范和对封闭社区普遍全球法则的虔诚不允许我们谈论各种价值观的自由解释,神话传说的网络云隐藏着公司经济和政治的管理机制对族群的影响和人类进一步发展的思想。

关键词:银行家、公司统治、网络统治、全球治理、美国、俄罗斯、中国、工业4.0、ICT、神经网络、人工智能、大数据、TNC、TNB、PMC、BRICS、SCO、EAEU。

Abstract. The modern oligarchy is subject to increasing polarization, the ideas of the irremovable domination of capital and the desire to prolong eternal life and youth are becoming quite feasible with neural network algorithms and breakthroughs in biotechnology, cloning and stem cells. However, a clear dress code and devotion to the general global laws of closed communities do not allow us to talk about the freedom of interpretation of various values, and the network cloud of myths and legends hides the mechanisms for managing the economy and politics of corporatocracy influence on ethnic groups and ideas for the further development of mankind.

*Keywords:* banksters, corporatocracy, netocracy, global governance, USA, Russia, China, Industry 4.0., ICT, neural networks, AI, Big Data, TNC, TNB, PMC, BRICS, SCO, EAEU.

The modern world is full of various trends, whose bizarre interweaving creates a visible chaos in the development of civilization, making it impossible to discern the true aspirations of clans, classes, communities and states that are trying to isolate the most comfortable conditions for quality existence and independence from the objective laws of being and the universe from the passing time. The very processes of targeting each next step depend on holding each stratum in a multi-layered relationship pie that, according to the timeless classic, begins with personal commitment: to an idea, a person, a deity, a community. And here a systemic error is laid, for only God can grant us the path and destiny that we deserve from the standpoint of sinfulness and sacred destiny. Therefore, the search for false Christs and false prophets leads to new heresies, a momentary redistribution of the quality of modern relations, preparing us for an extremely emasculated role of puppets, undereducated, devoid of will and even imagination. The world of technocrats who launched the digitalization of the entire planet, as a self-adjusting system of cost control and personal admission of everyone to the division of the global pie, determines not only the role with words, but also the consequences for the actions carried out. Each decision in the management of any subject of the economy should be considered from the standpoint of subjective involvement in the development of the scientific and technological revolution itself, which devours its people with the simplest and most affordable solutions in ecology, logistics and production. Not only are all financial flows under the tight control of institutions of cheap and long-term credit, feeding legions of intermediaries and pulling true financial and commodity relations into ecosystems of simplifying business processes, but also lead to the fact that these same flows draw digital environments informationally and explain the nature of the accompanying changes. A person ceases to be even a battery for a host of machines of a matrix-type utopia, he/ she is only allowed to reach the optimum of his/her controlled civilizational development and then polarizes in the plane of creating his best skills, abilities and knowledge, determining his/her place either in the "brain drain" or simplifying its delivery to the trenches of global instability. The pension system is becoming an unaffordable luxury, changing its preferences of the state of the criminal-network type, serving the interests of oligarchic groups fighting for dominance in the technological and raw materials competition [1]. At the same time, the competitiveness of the ICT sector, which is conducting a general digital transformation, reveals the difference in declaring speeches and actually achieved results in deeds [2] - "you will recognize them by deeds". As in the Holy Scriptures, the general

ideas of "salvation, first for the chicks of the nest of Israel", and then for the whole world, where the Word of God will be preached [3], are laid down. The analogy of ongoing evolutionary changes comes down to fairly clear principles:

"separate the sheep from the goats", - reasonable and admitted to the true sacred knowledge of the further world creation of individuals from the "grass", the plebs, thirsting for "bread and circuses";

to replace the "paradise" inside each of us with a state of induced search for the division of traditional values into the coven of transhumanism ("families will be divided in every house", "son against father and mother against daughter", etc.);

"I didn't come to give you peace, but a sword", to ignite points of instability, plunging covid-weary peoples into wars for resources, fresh water and biological protein, which has long been controlled by the Anglo-Saxon lobby of corporate-cratic institutions of "thinking tanks" that give a new value system: slaves no longer receive money, but the right to live in access to benefits and to their loyalty to the authorities (the existing world order), which form the quality of handouts and the fat content of pieces from the master's table;

when Christ passes in communion with the apostles from slavish terminology to a fraternal image of the further implementation of the religion of universal unity in love for God, then here too a transformation occurs, in the calling of new shepherds, new apostles, guaranteeing the purity of ideas from the heresy of the moment and isolating the saving elect from the remaining heretics and atheists who fall short of the fruits of civilization (3.9 billion people do not have access to the Internet) and do not understand where the herd is being led, driven by animal passions and vicious emotions;

apostles of a new type should have their own flock, basic maniples of the Roman model, sects of subordination, capable of working under the guise of mentoring ideas, and worshiping the challenges of waiting for the arrival of the "Creator", nevertheless, shouting tirelessly "crucify Him";

the previous paragraph explains the "staff turnover" in the ranks of the modern oligarchy (since 2001, more than 78% of entrepreneurs from the Forbes list have gone bankrupt), which are reformatted in three areas: 1) the ability to mimic in creating new values and the ability to use the state as the basis of their personal enrichment; 2) loyalty to the clan structure of various customers, those "gray cardinals" who are called the "Committee of 300", but in reality it is up to 100 people of the world's unknown rulers who develop a strategy for the survival of mankind and its expected development; 3) the ability to sacrifice, for the sake of the interests of one's community and the tendency to isolate those principles that are defining and unshakable only for "their own", and the rest remain acceptable in any field, because it is a fodder base for the development of "their own" [4].

And here a peculiar interpretation of the sacred books arises, from the point of view "for whoever has, it will be given to him, and whoever does not have, what

he has will be taken away from him." Since only the joint retention of market strata in the behavioral economy of Daniel Kahneman [5] allows states to carry out corporate takeovers, hostile mergers and acquisitions, and conduct currency wars for the devaluation of national currencies and strengthening the exports of their countries with virtually impunity. At the same time, it becomes the norm to believe that through participation in the WTO, the optimum is achieved for solving the problems of maximum efficiency and personal irresponsibility of crime and bureaucracy, which advance an illegitimate agenda, continue to polarize and diversify global chains and industries. The consequence of this is an increase in the criminalization of the "gray" and "black" sectors of the world economy, and fintech and blockchain technologies make it possible to minimize the tax base and bring money to the "safe havens" of offshore companies, which are the flagships of the comprador of the sovereign policy of nation states degenerating due to the fallen post-COVID capitalization and removal of social functions of the former quality of life of citizens. Offlines and lockdowns help "forget" the pre-Covid level of consumer economic benefits and provide only consistent windows of opportunity for truncated activity tied to the initial levels of Abraham Maslow's pyramid. At the junction of state expediency and the growth of expected marginality, bureaucracy and criminal structures are uniting, which, from the remnants of the development of a single globalized world economy of industries and mutually compatible markets, issue schemes of drifting inertia, when it is possible to "govern" institutionally on behalf of such states, through networks of corporatocrats, netocrats and new Bankster class [6]. At the same time, the middle class becomes a luxury, because the redistribution of wealth occurs in the process of waves of change of ownership, which is characterized by a new colonial paradigm and the imperialist structure of the polycentric world being built. America can no longer and does not want to bear the overall burden of leadership and delegates to its colonies part of the Anglo-Saxon "white man's burden", which, in a gentlemanly way, takes away the tops of the formed wealth. The latter are formed by creating new oligarchic ideas of a reasonable population reduction to the level of a natural background for solving infrastructure development problems based on AI algorithms that solve the prognostic problems of the future urban post-industrial society. And here, any global governance comes from expediency and a system for optimizing societies through a series of pandemic waves, unfrozen conflicts and the creation of zones of regional instability. Since there are already too many states in the "nuclear club", all participants in the milking of the plebs, human plankton, come up with ideas for an uncompromising fight against Evil, appoint their superheroes and draw Marvel universes where virtual and augmented reality rules today. It is very sad and difficult for a person, especially of the emerging generation "alpha", given his/her initial creative predisposition, to find salvation in the "mind games" of the bleak reality of gray everyday life, which are full of growing uncertainty and menacingly lead him to a painful choice of responsible decisions, which, this is infantile child, not ready to receive. In order for growing up to have an orderly character and the result would be guaranteed from the positions of an unequal shadow boxing, only a few will be able to compete with their unique competencies with AI algorithms and survive in the metauniverses of the future world, which does not expect a fair division of its already won privileges [7]. And therefore, all the vision of such people should be turned deep into the processes of the subconscious, replete with irrational shocks of the logic of a brief state of euphoria, which, like doping, accumulates and increases its dose as you get used to it. And the first key to the steps of the "ladder of happiness" begins with the manipulation of consciousness in the world of gadgets that dissolve the analytical abilities of children to clearly and pragmatically perceive the realities of the world around them. In order to make this painless for morality and justified philanthropically for society, pandemic intrigues are invented that deprive a person of live communication and the ability to compare in the real world what is drawn and presented to him in the virtual.

The rigidity of such a position is realized by netocrats, the owners of global media and ICT kingdoms, who, through "digital nomads" or realized disproportions of component bases, managed by the degradation of infrastructures, destroy the system of government management of society and put them on corporate decisions of a "short step", which does not allow one to appreciate the grandiosity implemented intention. These experiments are financed by banksters, who pay for the creative economy itself, and all those who move from their bodily shells to created surrogates, previously shown by Bruce Willis in the fantastic thriller of the coming future "Surrogates" [8].

Since the processing speeds of stress-atomized brains of everyone require point deformation, global management creates chat bots, spyware, and sleeping bookmarks that envelop our digital traces in the virtual space through neural networks, translating the statistics of decisions made into the Big Data periphery and cyber threat. becomes inevitable, for all of us become both targets and victims. Further, the rich and powerful of this world sculpt our digital images from the information that we secretly or openly publish about ourselves, which is a "secret" and is commercially protected under the law on our personal data. Understanding the depth of the fall or development of everyone, ultra-high-speed computers, they will become quantum in the future, draw personal hooks of non-fiction "soap opera" of our life before our eyes and accompany us in all environments, especially cybernetic ones, so that Neo does not go crazy too soon and did not try to wake up at the wrong time [9]. As a result, we have a life with scenarios of collective insanity of clamped activity completely prescribed for us, which is a necessary part of the declared "spiritual health". And this paradox is insurmountable.

This means that the nature of the emerging new round of oligarchic zoning will be reduced to the competition of ICT solutions to improve the picture of a successful and well-fed life, which should become cheap and mass, on the shoulder of every living person. And whoever succeeds in this becomes automatically integrated into the institutions of global management of the corporatocracy movement to the stars, to the planets of new expeditions/expansions and total space tourism. It is impossible for a long time, as part of 8 billion people, to be an eyesore to successful and very rich people. They crave peace and paradise on Earth, which is available and guaranteed only to a few chosen ones.

Therefore, the businesses of the future and entry into the VIP zone "their own" is possible through the ideological uniqueness and technical perfection of the unreal events of virtual worlds, which can and should become the basis for their realizable reality and mental adequacy for everyone. The task is simple: either manageably go crazy, or disappear at the level of noise and spam of the system. And the oligarchs, realizing that they are part of something bigger and perfect, will continue to expect clan optimization and market share, which is now individually formed in the brains of everyone in the world of e-commerce.

The ideological preferences that existed before, today, are increasingly receding into the background, because the era of the Internet and artificial intelligence has presented people with a simple choice: an electronic concentration camp of global governance institutions of rooted oligarchic elites or a joint fair distribution of goods, services and markets on marketplaces and in the metauniverses of a single control and civil use, guaranteeing non-toxic ecosystems between concentrated capital and human labor. The probability of the second option is still extremely illusory, because earthlings are slipping more confidently and irrevocably to the level of animal needs and lead a consumer lifestyle in an era of uncontrolled accumulation, which was the result of the collapse of the socialist system and the opening of totalitarian cults, which are condemned from the standpoint of the true Christian faith. The tragedy of these assessments lies in the simplification and indiscriminate vulgarization of the real achievements of the masses and class societies, which were aimed at the creative development and growth of the moral qualities of the individual in the image and likeness of God. The transition from the state of defeatist enclaves of the collapsed collection of countries of the traditions of communism was stopped by the Celestial Empire, partly continues to be cultivated in Cuba, Venezuela, Vietnam and North Korea. And the ideas that went out of circulation, which became unfashionable, of the red elites were involved in global criminal schemes and continued the concentration of the oligarchic international of corporatocrats. The result of this renewal was the inertia of unfreezing the ideas of nationalism and chauvinism, fascism and globalism of the neocons, who dream of bringing the world to the state of the "chosen" and "doomed"[10].

Therefore, Russia, as a country of sacred meanings and orthodox Christianity of the Orthodox type, must bring the correction of the world elites to tangible values and try to control the bacchanalia of transnational PMCs and TNB bankster capital within the framework of international law and platforms for global integration interaction, which are now beginning to become BRICS, SCO and EAEU.

The January 2023 report of the leading think tank, the American Rand Corporation, on 22 pages entitled "Avoiding a Long War", speaks of the need for an early reconciliation with Russia and recognition of the results of the MDF, as well as careful preparation for a limited counteraction with China, which should be brief (perhaps in the battle for Taiwan) during 2025, but no further [1].

Such introductions show that the oligarchic elites are not sure of the correctness of the course they have chosen: both towards global dehumanization, and towards the total dominance of a single center of power, and in the growing sense of an impending climate catastrophe, which has already been announced in the next decade, and a return to a world that has collapsed into oblivion. Europe of the "green agenda", as the apotheosis of the sovereign hopes of the Old World, which ended the era of cheap pipeline gas from Russia...

What do the oligarchic global elites follow to the end with confidence and categorically: to prevent leakage of information about their imperfection, in the growing desire to increase their income and not fly out of the closed communities of global governance, which leads not only to bankruptcies, but also to the revenge of their own nations, who still believe in the "sacredness" of managerial processes and in the "chosenness of God" of the populist leaders imposed on them, ruining their native fatherlands for the glory and prosperity of their own oligarchy.

And films about "men in black", a direct hint to the masses that global governance is not always earthy character, but should only be modified according to classical traditions, and by those people appointed for this struggle, whom the "secret forces" called to save humanity and bring purification from foreign threats of villains, most of whom want to create, at our expense, and only for themselves, a new paradise on Earth...

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# 区域一体化进程中政治精英的形成与发展 POLITICAL-ELITE FORMATION AND DEVELOPMENT OF THE REGIONAL INTEGRATION PROCESS

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抽象的。现代世界正在经历另一场变革:从单极向多极转变。新的政治角色正在出现,包括在欧亚空间。他们的活动在很大程度上由现有的政治精英决定。有必要澄清用于对正在进行的政治进程进行科学研究的需要的术语。在这方面,"精英"一词非常重要。

关键词:政治精英,欧亚一体化,科学研究,现状,术语。

Abstract. The modern world is going through another change: from unipolar it is transforming into multipolar. New political actors are emerging, including in the Eurasian space. Their activities are largely determined by the existing political elites. It is necessary to clarify the terminology used for the needs of scientific study of the ongoing political processes. In this regard, the term "elite" is of great importance.

*Keywords:* political elites, Eurasian integration, scientific study, current state, terminology.

The Eurasian continent is currently undergoing another transformation of the political landscape. New alliances are forming in the vast Eurasian space, new confrontations are emerging, previously veiled contradictions are becoming much clearer. The regional integration process (the Eurasian integration) plays a special role in the changes of the Eurasian political landscape. There have been some changes since the creation of the Eurasian Economic Union. If earlier Kazakhstan and Russia acted as its "locomotives", today the top leadership of Kazakhstan does not so clearly contribute to the further development of this regional integration.

The development of current social and political processes continues to attract the attention of many researchers, experts and politicians. One of the consequences of Russia's special military operation aimed to protect the population of the DPR and the PRC, is the end of the unipolar world. Recall that in the middle of the second decade of the XXI century, O.V. Stoletov, describing Eurasia as a space of global geopolitical and geo-economic competition between the leading actors of the world political process<sup>1</sup>, highlighted the particularly polycentric nature of the Eurasian space. This continent is historically characterized by very strong political actors. Today, they include not only Russia, the EU, but also the People's Republic of China, Turkey, India, and Iran. It can be said that the anti-Eurasian orientation is also maintained by the US foreign policy.

Political elites play a significant role in all these processes. Initially, after the collapse of the Soviet Union, the formation of new political elites was influenced by three main factors: the renaissance of traditionalism, the inertia of the Soviet nomenclature and the innovation of reforms<sup>2</sup>. Kazakh researchers believe that the processes of elite formation in post-Soviet states have similar features due to the common historical past and the similarity of political systems<sup>3</sup>.

In modern realities, representatives of this part of international actors were forced to define more clearly their positions both on interstate relations and on domestic policy. Their attitude towards the regional integration process has always been defined as difficult. One can cite as an example the opinion, on the one hand, of political scientist Nurlan Yerimbetov, who 10 years ago called those «who shouted then about neocolonialism and discrimination on a sovereign basis, "politicians" and "inveterate cowards"»<sup>4</sup>. And, on the other hand, many representatives of the business elite of Kazakhstan highly appreciated the potential of Eurasian integration and subsequently used it very effectively.

We should not forget the fact that many national elites of the CIS countries formed their political capital, building it on a negative interpretation of the common Soviet past. This found its manifestations in interstate relations. In 2014, even countries friendly to the Russian Federation, such as Belarus and Kazakhstan, refused to support the Russian embargo in response to Western sanctions imposed in connection with accession of the Republic of Crimea to the Russian Federation. Then pro-American, pro-European, pro-Turkish and other elite groups gradually began to take shape in Eurasia. This was explained by the fact that the new Eurasian states, using their historical experience, often sought to find another, advan-

<sup>&</sup>lt;sup>1</sup> Stoletov O. V. Comparative analysis of transformation strategies of the Eurasian political space // Politicheskaya nauka. M., 2015. No. 4: Comparative Studies of World Politics. / Ed.-comp. numbers Chikharev I.A. S. 81.

<sup>&</sup>lt;sup>2</sup> Iskakov I. J. Political elites and Eurasian integration: Russia and Kazakhstan at the end of the XX — beginning of the XXI centuries. // Bulletin of the Moscow State Regional University. Series: History and Political Sciences, 2017, No. 5. pp. 198-205.

<sup>&</sup>lt;sup>3</sup> Shakirbayev S. Formation and development of political elites in the post-Soviet space [Electronic resource] Access mode: http://www.kisi.kz/ru/categories/politicheskaya-modernizaciya/posts/ formirovanie-i-razvitie-politicheskih-elit-na-postsovet (accessed 05.05.2011)

<sup>&</sup>lt;sup>4</sup> Surganov V. How Putin imposes the Eurasian Union Access regime on the Elbasy: http://zonakz. net/articles/44273 (accessed 30.05.2012)

tageous, as they imagined, external ally instead of Russia. But at the same time, they disregarded the fact that Western countries are not strategically interested in the formation of Eurasia as a competitive political whole.

The process of new national elite-formation was influenced by a number of factors, which should include not only the geopolitical position of the Central Asian countries (the reason why this region was called Central Asia), but also purely ethnopolitical factors (inter-clan relations, traditions of informal factors of incorporation into the ruling strata, etc.).

The analysis of the ongoing events revealed the need to clarify the terminology and methodology of political processes study. In particular, the question of what the political elites are became more acute, and at the same time the need to clarify the term itself was actualized. One of the reasons in this research is the need to motivate national elites to build a supranational project within the framework of Eurasian integration, since the elites' own interests often prevail over national-state needs.

In political and sociological theory, the elite is usually interpreted as a small group of influential people with disproportionately large wealth, privileges, political power or skills in the group. In the Great Russian Encyclopedia D. G. Podvoisky defines the term «elite» as a small group of persons occupying the highest status positions (not necessarily formally fixed) in the social hierarchy system and exerting a significant influence on the life of society in various spheres and/or possessing certain exceptional qualities and abilities that receive high public appreciation and recognition<sup>5</sup>. The term «elite» is noted to be used by social sciences only in the twentieth century. Russian experts have taken it from Western sociological and political literature, although the role of an individual (or a chosen minority) in history has been considered in various epochs. It was studied by scientists from different countries: from Plato to F. Nietzsche. It is impossible not to mention the work of the Russian philosopher G. V. Plekhanov «On the question of the role of personality in history».

Italian sociologists G. Mosca and V. Pareto are considered to be the founders of the elite theory. Mosca in 1881 formulated the theory of the ruling class. V. Pareto used the term "elite" in his «Treatise on General Sociology» a decade and a half later. In the second half of the twentieth century, US researchers (C. R. Mills et al.) studied the practical questions of the elite-formation processes. Ideological struggle of the Western world with Marxist theory can be considered as one of the reasons for the emergence of a new terminology. The works of G. Mosca, V. Pareto, R. Michels, etc. formed an approach that relied not on the division of society into classes, but on its division into the elite and the mass.

<sup>&</sup>lt;sup>5</sup> The Great Russian Encyclopedia Access mode: http://www.вокабула .RF 国际会议

Many dictionaries and reference books note that the term "elite" is extremely ambiguous. G. K. Ashin, who is considered the founder of scientific elitology in Russia, drew attention to the fact that «Mosca tried to do without this term in most of his works». Even the mind that was at the origin of the term, Ashin emphasized, understood the complexity of its application and endowing some phenomena with the definition of elitism<sup>6</sup>. It is no accident that the social sciences avoided using the concept of the elite until the beginning of the XX century, and in the USA even later.

Naturally, the term «elite» raises a lot of questions, starting with the simplest: if we consider the political elite to be the subject of the political process, it turns out that it has seized power, i.e. in this case, the term inherently contradicts the ideals of democracy. It is impossible not to notice that the division of society according to the principle of «elite - mass» reflects only superficially the structure of the socio-political systems of modern states. A negative part in the use of the term is represented by diversity of elites (or their definitions). In scientific writings and experts' speeches, one can find such denomination of the elite as: ruling, regnant, governing, etc. The political elite, for example, is often divided into ruling and opposing or even counter-elite, aiming to change the entire political system<sup>7</sup>. In addition, in practice and in science, subjective definitions of the elite prevail. They reflect not the objective characteristics of this social group, but what the author of the proposed definition sees in his dreams. Building on the "chosenness" of those who are included in the elite, they are attributed such qualities as: merit, honesty, conscientiousness, imperative, etc. In practice, we have to face the fact that the elite (including the political one) is characterized by love of power, corruption, and self-interest. Members of the political elite use any means to achieve their goals, taking the position «all means are good».

For these reasons, we can support those researchers who consider the term «elite» to be inappropriate. Often the use of this term is justified by the fact that disputes over terminology are futile and meaningless. We hold a different point of view. It is extremely important to make the understanding of the term elite accurate and unambiguous in order to avoid mutual misunderstanding. It should be made objective, eliminate its ambiguity. This requires an objective and careful scientific analysis.

<sup>&</sup>lt;sup>6</sup> Ashin G. K. Elite: the history of the term Access mode: http://www.elitarium.ru/2004/08/05/jelita\_istorija\_termina.html (accessed 07.11.2014)

<sup>&</sup>lt;sup>7</sup> Krivoruchenko V. K., Matsuev A. N., Plotnikov A.D., Syzdykova Zh. S. Elite: on the question of the concept //Knowledge. Understanding. Ability. 2012. No. 3. p. 134.

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# 北极作为中国外交政策的战略载体 THE ARCTIC AS A STRATEGIC VECTOR OF CHINA'S FOREIGN POLICY

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注解。 近年来,北极空间越来越受到世界各国的关注,因为它的资源和区位可以带来一定的战略和经济优势。 各国对北极冰川融化引起的宏观经济和地缘政治扩张的新经济前景表现出极大兴趣,科学家估计北极冰川融化在最近几十年翻了一番。 特别是,有可能开发一条从亚洲到欧洲的盈利航线,开发潜在的自然资源,北极也是创建和实施长期项目的新机会。

值得注意的是,由于在美国与俄罗斯和中国对抗的背景下具有如此重要的战略 和地缘政治意义,开放的北极地区变成了大国之间激烈竞争的另一个舞台。在这 方面,该地区是评估美国、俄罗斯和中国之间紧张局势的重要环节。本文探讨了 中国目前在北极与其他国家的合作和竞争问题上的立场。

关键词:北极,中国在北极的利益,美国,俄罗斯,中国,对抗,北极地区。

Annotation. Recently, the Arctic space has been arousing increasing interest among the states of the world since its resources and location can bring certain strategic and economic advantages. States are showing great interest in new economic prospects for macroeconomic and geopolitical expansion caused by the melting of Arctic glaciers, which scientists estimate has doubled in recent decades. In particular, there is the possibility of developing a profitable route from Asia to Europe, the development of potential natural resources, and the Arctic is also a new opportunity for the creation and implementation of long-term projects.

It is noteworthy that due to such strategic and geopolitical significance in the context of the US confrontation with Russia and China, the opening Arctic region turns into another arena of intense rivalry between the great powers. In this regard, this region is an important link in assessing the tension between the United States, Russia and China. This article examines China's current position on Arctic cooperation and rivalry with other countries.

*Keywords:* Arctic, China's interests in the Arctic, USA, Russia, China, confrontation, Arctic region.

## China's activities in the Arctic

The national sovereignty of such countries as Denmark, Iceland, Finland, Norway, Sweden, Russia, Canada and the USA extends to the continental part of the Arctic. China in the geographical sense is a "near-Arctic country", that is, one of the states located near the Arctic Circle, which gives China the right to show its interest in Arctic issues. Currently, China is taking an increasingly active position in the processes of exploration and development of the Arctic. China's interest in Arctic policy can be explained by its needs for internal development and an attempt to take a more important place in the world's economic and political systems [Kizhaeva: 125-130].

Having formulated in official statements and documents its interests in the Arctic, namely the development of resources and trade routes, China has used commercial ties with Arctic states, multilateral diplomatic channels and scientific research to justify its presence in the region, defending its rights to commercial development and navigation, being an Arctic country [Van Czyun'tao]. In the Arctic Council, China claims that its Arctic Policy was first approved in 2015<sup>1</sup>. Nevertheless, it can be argued that China began to show its interest in the Arctic much earlier.

China has long been involved in international relations in the Arctic. In 1925, China became a participant in the Svalbard Treaty and began to take part in discussions on solutions to problems related to the Arctic. As a member of the International Arctic Scientific Committee, China has been actively conducting scientific research in the Arctic since 1996. Since 1999, China has organized a number of scientific expeditions in the Arctic using the research vessel "Xiu Long" as a base. In 2004, China built the Yellow Arctic Station in Nu-Aalesund on the Svalbard archipelago<sup>2</sup>. By the end of 2017, China had conducted eight scientific expeditions in the Arctic Ocean and has been working at the Yellow River Station for 14 years. Using a research vessel and stations as a platform for research, China has gradually created a multidirectional system for observing the sea, ice and snow, the atmosphere, the biological and geological system of the Arctic.

In 2005, China was the first Asian country to host the Arctic scientific weeklong summit, a high-level conference on Arctic issues. In 2013, China became an observer at the Arctic Council.

Thus, for several decades China has been paying close attention to research in the Arctic and the prospects for its development. And in recent years, Chinese companies have begun to explore commercial opportunities using the Arctic sea routes.

<sup>&</sup>lt;sup>1</sup> Xiaoning Y. China's 2016 Observer Activities Report. Arctic Council Open Access Repository (accessed 20.01.2023).

<sup>&</sup>lt;sup>2</sup> Arctic Yellow River Station // China Internet Information Center URL: http://www.china.org.cn/ english/features/CPR/168820.htm (accessed: 07.02.2023).

### China's Strategic Prospects in the Arctic

The Arctic was first mentioned in 2011 in the twelfth five-year economic plan of the Communist Party of China. The Arctic has become part of the Chinese Belt and Road Initiative: it is planned to link the Northern Sea Route and the maritime Silk Road of the XXI century. The plan was announced in 2017 in the Concept of Maritime Cooperation within the framework of the BRI. This concept should determine the scope and criteria of the route of the Northern Sea Route [Ostrovskij: 98-103].

Thus, the importance of the Arctic in the official documents of the People's Republic of China has increased, and in 2018 this region was included in the One Belt One Road initiative called the "Ice Silk Road" [Mihajlichenko: 333-345].

The leadership of the People's Republic of China adheres to the principle that non-Arctic states should also have rights to operate in the Arctic. In this situation, the argument is used that many problems of the Arctic region can lead to global consequences, and their solution requires the efforts of the entire international community [Rainwater]. China considers climate change, pollution of water resources and the Arctic coast, fishing problems, sustainable development of the Arctic and others to be such problems of the Arctic region<sup>3</sup>. The status of a "non-Arctic state" does not give countries a place to participate in global issues of this region, which, from China's position, prevents it from actively participating in Arctic issues.

# China's Arctic Policy: the struggle for rights in the Far North

The evolution of the concept of China's positioning in the Arctic reflects the trend of growth of its economic and political influence in the region. The status of a "non-Arctic state" assigned to China in the early years of its participation in the Arctic process is a classic example of the assignment of a status that the world's leading participants use to expand and rationalize control over other participants in interaction. This status was formulated in the Ottawa Declaration in 1996, at the same time the Arctic Council was created<sup>4</sup>, which included eight Arctic countries, so named because of their geographical borders with the Arctic. This division of countries into Arctic and non-Arctic immediately allowed us to demonstrate the difference between the narrow "privileged" club of Arctic states and all other "non-Arctic states", which led to discrimination and even exclusion of participation of countries outside the region in Arctic issues. This has become an important factor hindering cooperation between China and the countries of the Arctic region and the beginning of China's long struggle for recognition and expansion of their rights in the Arctic.

<sup>&</sup>lt;sup>3</sup> Nong Hong. China's Interests in the Arctic: Opportunities and Challenges. Examining the implications of China's Arctic policy white paper. Washington, Institute of China-America Studies, 2018. 26 p.

<sup>&</sup>lt;sup>4</sup> International Cooperation in the Arctic URL: https://www.arctic-council.org/explore/work/ cooperation/ (accessed: 07.02.2023).

The status of a "non-Arctic state" does not give the PRC the right to make decisions on Arctic issues and deprives it of direct tools to influence the Arctic agenda and promote its interests. In view of this, China tried to realize its interests by "pushing" its position: the leadership of the PRC actively lobbied for interests and rights in the Arctic Council, concluded favourable bilateral agreements with the "Arctic states", and also engaged in the development and presentation of a new concept of status for states, in which the concept of "Near-Arctic State". The proposal for the status is a Chinese initiative put forward back in 2010. The status presupposes the creation of a certain hierarchy among states: thus, China expresses a desire to approach the privileged "Arctic states" and move away from the "non-Arctic countries" that do not meet certain characteristics. This is an active attempt to break through the limitations of the status of "non-Arctic states" and demonstrates China's desire to achieve a certain role in solving global issues, as well as protecting its interests in the Arctic region.

Today, China has managed to achieve a fairly wide recognition of its "State observer", "Near-Arctic State" status and international consensus. China is still not an Arctic country, and it cannot make any territorial claims in the Arctic region. But he has the appropriate legal rights and interests in other areas: fishing in non-territorial waters, scientific research and expeditions, environmental monitoring, etc. China's scientific presence in the Arctic, in turn, not only provides China with legal access to the waters of the region, but also technical capabilities for mapping and monitoring the region. Thus, this research activity can support both China's commercial and military activities in the Arctic.

Later, China chose a more appropriate concept that recognizes China as one of the "stakeholders in the Arctic" in order to meet China's needs in realizing its national interests. The concept of an "interested party" is to allow China to use international law to protect its interests in the Arctic region as flexibly as possible. The concept of an "Interested party in the Arctic" represents China not as a violator of the management of the Arctic, but as an important participant in the regulation of Arctic issues. Thus, China's policy emphasizes that China's participation in the management of the Arctic is not interference in the internal affairs of the Arctic countries, but reflects its concern about Arctic issues, for which China is ready to seek solutions [Lej: 99-110].

Many experts noted that with the obvious strategic nature of the Chinese Arctic policy, it was not unified and fixed in the form of an independent document or doctrine. China, in turn, took its time with this step and continued a cautious foreign policy course, assuring its partners that its Arctic policy is based on the principles of respect, cooperation and mutual benefit.

An important step in the development of the Arctic policy of the People's Republic of China was the adoption of the "White Paper of the People's Republic of

China on Arctic Policy" by the Special service of the State Council of the People's Republic of China on January 26, 2018<sup>5</sup>. It formulated China's official position on the problems of the Arctic agenda, the tasks and priorities of the People's Republic of China on cooperation with the "Arctic states". It confirmed China's idea to make the Arctic a common heritage of mankind, to link projects within the framework of the "Ice Silk Road" and expressed commitment and respect for the ideas of sustainable development and common interests.

The general meaning of the national strategy outlined in the document is to internationalize the Arctic space and give it the status of the common heritage of mankind. In particular, the situation in the Arctic is seen as going beyond the initial cooperation only between the Arctic countries and has an impact on the common interests of countries outside the region and the development of the international community.

As already mentioned, since China is geographically somewhat remote from the Arctic, the government confirms its close connection with the Arctic and declares its rights in relation to the region. Moreover, climate change has a direct impact on China's ecosystem, which, in turn, affects economic interests in agriculture, fisheries, marine industry and other industries [Karlusov: 24-32]. The Chinese leadership uses a special term – "Near-Arctic State" – a state that does not have a sovereign territory in the Arctic zone, but is located in relative proximity to the Arctic Circle<sup>6</sup>.

According to the statements, China recognizes the need for the internationalization of the Arctic but excludes the possibility of challenging the sovereign rights of the Arctic states to their regional territories. The document states that the international community should respect the sovereignty and jurisdiction of the Arctic countries, as well as respect the traditions and culture of the indigenous peoples of the region. These remarks are intended to reassure countries that believe that China's economic expansion may lead to a change in polar borders.

# **China's Arctic Policy with Arctic Countries**

The Arctic resource base is of the most important interest to China's economy due to the country's high dependence on foreign oil and gas imports, including Russia and the Middle East. The acute shortage of energy forces China to pursue an active investment policy in the field of exploration and development of natural resources of the Arctic.

Having published for the first time a detailed document outlining its intentions, China is beginning a new stage of cooperation with Arctic countries, especially

<sup>&</sup>lt;sup>5</sup> Full Text: China's Arctic Policy. The State Council Information Office of the People's Republic of China, 26.01.2018. http://english.gov.cn/archive/white\_paper/2018/01/26/content\_281476026660336. htm (accessed 20.01.2023).

<sup>&</sup>lt;sup>6</sup> China's Hybrid Arctic Strategy // Per Concordiam. URL: https://perconcordiam.com/chinashybrid-arctic-strategy/ (accessed: 05.02.2023).

with Russia, which, according to observations, plays the role of an important partner in the implementation of Arctic routes and deepening knowledge about the Arctic region.

The plan to establish international control over the Arctic resolves potential contradictions between China and the largest countries in the region, especially Canada, the United States, Russia, Denmark, and Norway. However, the policy of the "Big Arctic Five" contradicts the interests of China and the principles proclaimed by it. The states of the region are increasingly implementing national programs to expand the area of the Arctic shelf zone, for the development of new territories rich in minerals. The contradictions encourage China to cooperate with countries in the region whose sovereignty problems are not so fundamental (with Greenland and the Faroe Islands, the autonomous regions of Denmark and Iceland).

For China, its legal point of view on the Arctic is based on two main legal documents: the Svalbard Treaty and the UN Convention on the Law of the Sea. At the national level, China has publicly stated its readiness to expand its activities in the Arctic by publishing numerous public documents. And although no public statements have been made, China also hints that it has the right to freedom of navigation in the exclusive economic zones of the Arctic coastal States and on the high seas, the right to fishing and seabed mining, as well as the right of passage in the territorial waters of the Arctic states.

However, it is worth paying attention to the fact that interstate relations in the Arctic to a certain extent reflect US-Russian relations on the world stage [Nikulin: 392-403]. Actual struggle for influence in the Arctic territory is taking place within the framework of the US-Russian confrontation and the growing rivalry between the US and China. The alignment of forces is developing in such a way that relations between Russia and China are taking the format of a strategic partnership, for China this is another opportunity to advance its expansion towards the West, and in turn Russia is doing its best to resist the United States, which has turned the Arctic into another branch of NATO<sup>7</sup>. This may be evidenced by the events of 2022, when the Arctic countries defiantly refused dialogue in response to disagreement with Russia<sup>8</sup>. An increase in the US military presence in the region can also serve as proof: the constant presence of nuclear multipurpose submarines of the US Navy, the navigation of NATO ships in the Barents Sea<sup>9</sup>.

<sup>&</sup>lt;sup>7</sup> Stoltenberg prizval k usileniyu prisutstviya NATO v Arktike // Izvestiya URL: https:// iz.ru/1385968/2022-08-26/stoltenberg-prizval-k-usileniiu-prisutstviia-nato-v-arktike (accessed: 01.02.2023).

<sup>&</sup>lt;sup>8</sup> Stanet li Arkticheskij sovet "pol-arkticheskim"? // Rossijskaya Gazeta URL: https:// rg.ru/2022/10/26/stanet-li-arkticheskij-sovet-pol-arkticheskim.html (accessed: 29.01.2023).

<sup>&</sup>lt;sup>9</sup> Granicy kontinental'nogo shel'fa Rossii priobretayut osoboe znachenie // Informacionnoe agentstvo URL: https://iarex.ru/news/89576.html (accessed: 31.01.2023).

In October 2022, the United States presented a new national strategy for the Arctic, which puts forward rivalry with Russia in this region as one of the main goals<sup>10</sup>. However, America is also skeptical about China's presence in the Arctic, since the further development of China's influence in the Arctic and cooperation between Russia and China in this region will certainly lead to a clash of interests of these countries. In general, the actions of Russia and China and their strategic partnership in the Arctic are considered by the United States as a threat to its national security and are ready for retaliatory measures.

Despite the fact that the main task of the Arctic countries is the development and exploration of the region, it is no secret that the countries are more interested in sharing influence. Therefore, the United States considers China's presence in the region unacceptable. In the West, the idea of Russia as a junior partner, and in the future a vassal of China, is popular. According to this point of view, Beijing is gradually subjugating Russia by using its resources and capabilities to its advantage. The so-called "creeping conquest" of the Arctic by China consists in gaining access to the natural resources of the region, creating transport and communication infrastructure there, developing and taking control of the Northern Sea Route from East Asia to Europe<sup>11</sup>.

To sum up, China's Arctic strategy is aimed at achieving two main goals: ensuring access to economic opportunities in the Arctic and strengthening the capacity to protect the rights and conditions it defends in the region. China's priority areas in the exploration and development of the Arctic remain the economic sphere, as well as environmental issues. China declares the ultimate goal of its policy to ensure the sustainable development and development of the Arctic while respecting the interests of all interested parties and international law.

Being an important player in world politics and occupying a significant share in the global economy, China seeks to increase and consolidate the degree of its regional and geopolitical influence. It should be borne in mind that the Arctic region, which requires intensive development both in the field of scientific research and in the field of mineral exploration, is an area where China can play an important role.

In addition to the little-studied and harsh natural conditions of this region, the main factor that complicates international cooperation on the development of the Arctic is the confrontation of the interests of countries in this region. The USA-Russia-China triangle considers the Arctic as a new field for confrontation, which in the future may lead to problems in the implementation of projects for the development of the Arctic region and leads to its further militarization, increased military-political tension and will increase the risks of military clashes in the region.

<sup>&</sup>lt;sup>10</sup> The National Defense Strategy. U.S. Department of Defense, 2022.

<sup>&</sup>lt;sup>11</sup> Rossiya i Kitaj v Arktike: sotrudnichestvo, sopernichestvo i posledstviya dlya evrazijskoj bezopasnosti // Carnegie Endowment for International Peace URL: https://carnegiemoscow.org/ commentary/81384 (accessed: 17.01.2023).

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# 那奈族儿童教育过程中的历史人文景观 HISTORICAL AND CULTURAL LANDSCAPES IN THE EDUCATIONAL PROCESS OF NANAI CHILDREN

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抽象的。 在这篇文章中,我们分析了下阿穆尔地区文化和景观中心的定位地 点,这些地方是远东土著民族的居住区。 现代世界社会将保护文化遗产视为文 化领域的一项重要任务。 我们通过在这些地方组织国家公园和民族志博物馆来 考虑保护文化景观的问题,在这些地方组织游览,让游客了解民族村庄的历史、纳 奈人的物质和精神文化。

根据 2019 年、2021 年到哈巴罗夫斯克边疆区到 Belgo、Verkhnyaya Ekon (Komsomolsky 区)、Kondon 村 (Solnechny 区)的民族定居点的考察结果, 作者强调了民族认同的具体情况、 在学校、学前教育机构中培养儿童的民族元素。 他强调,民族传统的复兴和保存是通过民族教育法诉诸民族传统、精神价值 直接形成的。

关键词:景观、国民教育、纳奈人、习俗、教育、文化。

Abstract. In the article, we analyze the places of localization of the cultural and landscape centers of the Lower Amur region, which are the zone of residence of the indigenous Far Eastern ethnic groups. The modern world community recognizes the preservation of cultural heritage as an important task in the field of culture. The problem of preserving cultural landscapes is considered by us through the organization of national parks and ethnographic museums in these places, in which excursions are organized that acquaint visitors with the history of national villages, the material and spiritual culture of the Nanais.

Based on the results of the expedition in 2019, 2021 to the Khabarovsk Krai to the national settlements of Belgo, Verkhnyaya Ekon (Komsomolsky District), the village of Kondon (Solnechny District), the author highlighted the specifics of national identity, the features of ethnic elements in the upbringing of children in school, preschool educational institution. He emphasized that the revival, the preservation of the national tradition is formed directly by appealing to national traditions, spiritual values, through national pedagogy. *Keywords:* Landscape, national education, Nanais, customs, education, culture.

The main goal of family education from early childhood among the Nanais was the transfer from generation to generation of family traditions, customs, laws, and knowledge. The traditional experience of educating the younger Nanai generation was closely connected with the "unwritten law of adaptation to the environment, with economic activity" [1, p.51]. Craft was the basis of labor activity, which was introduced at a fairly young age, which had its own system of values, rituals, rules, where from the very beginning of training the younger generation developed physical and labor skills.

In the harsh, extreme Far Eastern conditions of human habitation, the peculiarity of which was the constant confrontation with various natural hazards, the national Nanai games were a necessity for adaptation, understanding of the existing way of life of the Nanai society, and the formation of strong-willed qualities in the younger generation. Since ancient times, the Nanais have known various children's outdoor games, which were a variety of physical exercises, competitions that were intended to develop strength, dexterity, endurance, perseverance, insistence, and other physical, moral abilities of a person, developing technical and commercial skills. Outdoor games in nature contributed to the successful assimilation of the basics of complex and in many ways dangerous types of fishing activities. Taken together, all this contributed to the development of professional skills and abilities necessary for success in hunting, fishing, and St.-John's wort. [2, p.14]

Nanai traditional toys were made from a variety of natural processed and unprocessed materials: fish skin, moss, wood, bird feathers, bones, birch bark, fabric, paper, iron, etc. The shapes and varieties of toys depended on the meaning put into it. So, the toy "Odobi hoopoe" - "bird of happiness" is a bird with widely spread wings. She was the mother's amulet of the child from his birth until the end of his life. In the upbringing of the younger generation, oral folk art was of particular value, where national traditional knowledge was transmitted, fantastic ideas about the world order, which were told to children in the form of fairy tales "ningman" and myths "telungu". The features of an ideal hunter-hunter are concentrated: fearlessness, speed, cunning, dexterity, luck, prey, accuracy, modesty, honesty, frugality towards the environment and respect for the Nanai laws of hunting. So, in all severity they punished for the manifestation of greed, which is why it was forbidden to take more from nature more than necessary to provide food. Boasting was also condemned, which is fraught with punishment from the patron spirit in the form of deprivation of good luck in fishing. No less common are stories about the persecution by animals of the person who spoke disrespectfully about them. [3, p.107]

In modern realities, the transmission and preservation of Nanai culture occurs through kindergartens, schools, museums, cultural centers, through educators, teachers, and least of all through the family. The harmonious relationship of children with the world of nature is carried out with the help of a local history education program, where they get acquainted with the flora and fauna of their native land, seasonal phenomena, their characteristic features; developing in children a caring attitude towards all living things. According to the results of our expeditions to the Khabarovsk Krai to the national settlements of Belgo, Verkhnyaya Ekon (Komsomolsky District), the village of Kondon (Solnechny District), the most national entertainment events, such as Fisherman's Day, Village Day, Spring Pudin, National Cuisine Festival «Amta» is held in ethnographic museums, assembly halls of schools, in national centers, open-air museums. Today we see a close interpenetration of Russian and Nanai culture. Soloists perform Russian folk songs and Nanai dances on the stage.

According to our field notes in the village of Kondon, schoolchildren know the significance of a cult place: the Sleeping Dragon Hill (Kailason). So the heart of the dragon (Miava) is located across the river opposite the Kondon camp, the dragon's head (Kondo) is located downstream of the river, and its belly is located on its bend (Yamihta camp), the next turn of the river is the dragon's tail (Urguli). [4, p.110-111]

Since the villages have ethnoterritorial specificity along the main channel of the Amur and in the area of the r. Devyatka, then national holidays can be distinguished as visible markers of elements of the historical and cultural landscape. We single out the ceremonies that are preserved today, for example, guests of the holiday in three villages pass through willow gates, which are a symbol of purification during the rite or chiori. The willow is considered a sacred tree whose leaves scare away evil spirits. Until now, an important role in modern festive events is played by the cult of water and fire, which consists of various rituals of praying or feeding the spirits. After the rite of purification, they are invited to the rite of propitation of the spirit of fire Podya - feeding sacrificial food from the ritual dishes of the noyon. [4, p.118]

In the secondary school named after Akima Samara s. Condon, 70 students study, we interviewed 50 schoolchildren (29 girls, 21 boys). As a result of identifying the degree of knowledge of the Nanai language, it was found that 25 schoolchildren can read and write in the Nanai language, 6 people can only learn poems, songs, but do not know the language. In the basic educational school of the Belgo village, out of the 30 students surveyed in grades 1-9, only 18 can read and write in the Nanai language and 4 people learn poems, songs, without knowing the language. In the Upper Ekon secondary school, we interviewed 20 students of grades 2-6, 9 people who can read and write in the Nanai language, and do not know the language, but only three can learn poetry and songs. [5, p. 4092] This is important, since the images of the place are very accurately reproduced in Nanai songs, poems, legends, becoming part of the picture of the world, which is symbolically preserved in folk art.

At the present stage of historical development, there is a revival of the Nanai cultural traditions of the village, not without features that appeared as a result of the transformational processes of the Nanai society and generally influenced the organization of the current educational process, both at the family level and at the level of state educational and leisure institutions. According to the results of our study, the originality of the modern educational process begins with changes in the family structure and interpersonal relationships within the main unit of society.

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