



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

Proceedings of the
International Conference

Date:
September 8

Beijing, China 2023

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”

Part 3

2023 年 9 月 8 日。中国北京
September 8, 2023. Beijing, PRC

Proceedings of the International Conference
**“Scientific research of the SCO countries: synergy
and integration”** - Reports in English

(September 8, 2023. Beijing, PRC)

ISBN 978-5-905695-82-7

这些会议文结合了会议的材料 – 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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俄罗斯联邦各主体地区预算月度总收入预测 (2013:01÷2023:03)
**FORECASTING OF MONTHLY AGGREGATED REVENUES
OF REGIONAL BUDGETS OF SUBJECTS OF THE RUSSIAN
FEDERATION (2013:01÷2023:03)**

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注解。为了解决提高预测准确性的问题,本文与俄罗斯联邦主体预算收入的传统计量经济线性预测模型 (ARMA/ARIMA/SARIMA) 相比,基于时间序列平稳性的假设,其中缺乏结构性中断,其特点是预测精度低 (“R 方”, 不超过 80%), 这是一种预测非线性、非平稳时间序列的模型,由每月预算总收入组成 俄罗斯联邦主体, 2013 年: 01 至 2023: 03, 基于时间序列初步分解程序, 基于离散小波变换 (ReverseBiorthogonalSplineWavelet[8, 8] 系列), 其精度 高于 99% (“Rsquared” ≈ 0.999793)。

所提出的提高射频频科目月预算收入预测准确性的方法的科学新颖性在于, 已经证明了对时间序列进行初步分解并随后对所获得的部分进行预测的必要性, 从而产生了较高的预测精度。预测的准确性。所获得的结果与使用传统计量经济学方法 (ARIMA/SARIMA) 的结果存在显著差异, 其特点是精度低得多 (50-80%), 并且预测精度随着预测范围的增加而降低。

这篇文章是新颖的, 因为它提出了解决提高各级预算收入预测准确性问题的新方法, 从而可以制定更有效的预算和投资政策。

关键词: 俄罗斯联邦主体预算收入、预测、离散小波变换。

Annotation. To solve the problem of improving the accuracy of forecasts in this paper, in contrast to traditional econometric linear forecasting models (ARMA/ARIMA/SARIMA) of budget revenues of the subjects of the Russian Federation, based on assumptions about the stationarity of time series and the absence of structural breaks in them and characterised by low forecast accuracy (“RSquared”, no more than 80%), a model of forecasting a non-linear, non-stationary time series, made up of monthly aggregate revenues of budgets of the subjects of the Russian Federation, for the period from 2013: 01 to 2023:03, based on the procedure of preliminary decomposition of time series, on the basis of

discrete wavelet transform (ReverseBiorthogonalSplineWavelet[8,8] family), the accuracy of which is higher than 99% (“RSquared”≈0.999793).

The scientific novelty of the proposed method of improving the accuracy of forecasting monthly budget revenues of the RF subjects lies in the fact that the necessity of preliminary decomposition of the time series and subsequent construction of forecasts for the obtained parts has been proved, resulting in high forecast accuracy. The obtained result differs significantly from the results of using traditional econometric methods (ARIMA/SARIMA), which are characterised by much lower accuracy (50-80%) and decreasing accuracy of forecasts with increasing forecast horizon.

This article is new, as it forms a new approach to solving the problem of improving the accuracy of forecasts of budget revenues at all levels, which allows for more effective budget and investment policy.

Keywords: *budget revenues of subjects of the Russian Federation, forecasting, discrete wavelet transformation.*

JEL Classification: H20, O23

“The article was prepared based on the results of research carried out at the expense of budgetary funds under the state assignment of Finuniversity”

1. Introduction

Local and regional governments play a crucial role in both public finances and the welfare of citizens. To be able to carry out their activities in a planned and organised manner, governments must have an accurate estimate of future revenues. The level of revenues of regional budgets and local governments depends, among other things, on changes in the economic condition, the level of inflows of external funds, the level of employment, labour productivity, the level and quality of human capital, the functioning of the institutional environment and the effectiveness of the implemented economic and social policies [10]. This income is characterised by a certain degree of variability, which depends primarily on unexpected changes in economic activity, political and administrative adjustments or changes in the structure of consumer demand [5].

Potential overestimation of income may require unexpected expenditure constraints, leading to a decrease in investment activity and an increase in debt and, as a consequence, may negatively affect the level of community development, the competitiveness of the local economy and local welfare. ([7]; [3]). However, failure to fulfil forecasts can lead to excessive taxation and levies [4]. Good planning for the delivery of public services and programmes requires an accurate estimate

of the revenues required and the costs associated with the delivery of all necessary activities [14].

Forecasting revenue levels is important for both short- and medium-term planning of current and investment projects, as well as for determining policies regarding the level and sources of debt financing [2].

Without accurate and precise forecasts, it will be difficult for governments to avoid budget deficits and cover expenditures, especially capital expenditures [6]. Physical capital, namely infrastructure investment, plays a determining role in policies aimed at stimulating the economy, regional potential, accelerating economic growth and achieving greater convergence [12].

Proper revenue forecasting is also crucial for a sustainable budget programme [8] and is a cornerstone of budget preparation, especially in multi-year budgeting [13]. Robust revenue and expenditure estimates can “provide an understanding of available funding; assess financial risk; evaluate the likelihood that services can be sustained; and identify key variables that cause changes in revenue levels” [9]. Local governments are paying increasing attention to revenue trends, especially during periods of financial downturn, and accurate revenue estimates can help maintain fiscal balance and increase citizen confidence [15]. An important aspect of local government revenue forecasting is also the fact that the process is closely linked to the planning and implementation of public policy and thus is subject to considerable political pressure [11].

2. Purpose of the study and hypothesis.

The purpose of this study is to solve the problem of improving the accuracy of forecasting a non-stationary, nonlinear time series composed of monthly aggregate revenues of the budgets of the subjects of the Russian Federation for the period from 2013:01 to 2023:03.

One of the most promising ways to solve the problem may be the application of wavelet transform as the most frequently used recently mathematical apparatus for the analysis and forecasting of non-stationary time series.

In order to solve the problem of improving the accuracy of forecasts based on the objective set in this study, a scientific **hypothesis was formulated**:

(H1) Preliminary decomposition of the time series composed of monthly aggregated revenues of the budgets of the subjects of the Russian Federation, for the period from 2013:01 to 2023:03, on the basis of discrete wavelet transform (hereinafter - DWT) allows increasing the level of accuracy of traditional forecasting methods from 80% to more than 99%.

3. Data and methodology of the study

In this paper, for wavelet analysis, the modelling is carried out in Wolfram Mathematica 12.0 computer system, which includes several different families of

wavelets, as well as a procedure for making predictions based on interpolation and extrapolation of time series data, using the **ArrayPad[array,m]** programme.

As a preprocessing procedure for a non-linear, non-stationary time series composed of monthly aggregated revenues of the budgets of the subjects of the Russian Federation, for the period from 2013:01 to 2023:03, this study uses series decomposition based on DWT family **ReverseBiorthogonalSplineWavelet**[8,8].

The initial data of the time series composed of monthly aggregated revenues of the budgets of the subjects of the Russian Federation for the period from (2013:01) to (2023:03) were downloaded from the website of the Treasury of Russia [1].

4. Discussion of the results

The results of model forecasts of monthly aggregate revenues of the budgets of the subjects of the Russian Federation for the period from 2013:01 to 2023:03, based on the decomposition of time series using DWT family **ReverseBiorthogonalSplineWavelet**[8,8], are presented in Figures 1-3.

Figure 1 shows the dynamics of real monthly aggregate revenues of the budgets of the RF subjects for the whole period (2013:01÷2023:03) (blue curve) and the dynamics of forecast values for the **tested period** (2021:03÷2023:03) (yellow curve) of revenues, in trillion rubles.

The **whole period** of monthly observations (2013:01÷2023:03) is 124 observations and was divided into two periods: from 1 to 100 are training points and from 101 to 124 are test, forecast points/observations. In Figure 2, the entire observation period (124 points) is represented by empty circles through which the interpolation curve in black colour passes, while the predicted points are highlighted by triangles in red colour connected by an interpolation curve in red colour.

Figure 3 shows the result of correspondence (correlation) between actual and forecast values of the analysed time series after the first iteration based on the **ReverseBiorthogonalSplineWavelet**[8,8] transformation. As can be seen from Figure 3, the accuracy of the forecast by the R2 indicator, at the level: $R2 \sim 0.999793$, which indicates that the forecast values of the analysed time series correspond quite accurately to the actual values of the time series, which in turn indicates a high forecasting potential of the methods based on the preliminary decomposition of the time series made up of monthly aggregate revenues of the budgets of the subjects of the Russian Federation, for the period from 2013:01 to 2023:03, based on the **ReverseBiorthogonalSplineWavelet**[8,8] transformations.

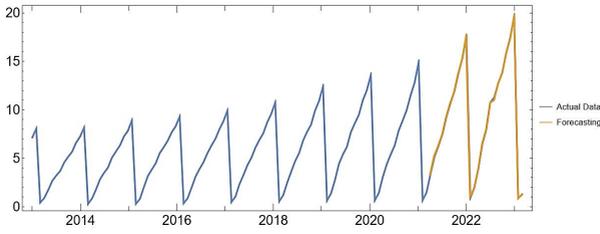


Figure 1. Real monthly aggregate budget revenues of the RF Subjects (2013:01÷2023:03) (blue curve) and forecast values (2021:03÷2023:03) (yellow curve) of revenues (trillion rubles). Source: authors' calculations.

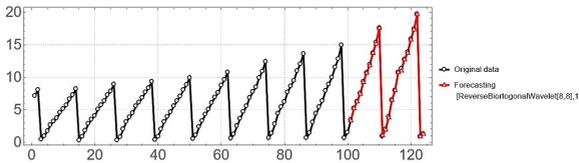


Figure 2. Real monthly aggregate budget revenues of the RF Subjects (1÷124) (black curve) and forecast values (101÷124) (red curve) of revenues (trillion rubles). Source: authors' calculations.

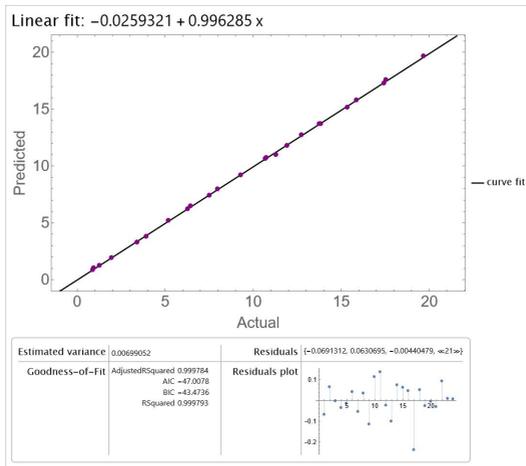


Figure 3. Dependence of forecasted values of monthly aggregate revenues of the RF subjects' budgets (2021:03÷2023:03) on actual values for this period of time, in trillion rubles, after the first iteration based on the discrete wavelet transform **ReverseBiorthogonalSplineWavelet**[8, 8] ($R^2 \sim 0.999793$).

Source: authors' calculations.

Verification of hypothesis (H1)

As can be seen in Figures 1-3, the results of the model forecasts of monthly aggregate revenues of the budgets of the subjects of the Russian Federation (2021:03÷2023:03), unambiguously indicates the achievement of the goal of the study and the validity of hypothesis (H1): it is the preliminary decomposition of the series on the basis of DWT family **ReverseBiorthogonalSplineWavelet**[8, 8] contributes to the achievement of forecast accuracy of more than 99%, while without decomposition achieves an accuracy of about 80%.

5. Conclusion

Summarising the results obtained in this paper, it can be emphasised that the application of the procedure of preliminary decomposition on the basis of DWT of non-stationary nonlinear time series from monthly aggregated revenues of the budgets of the RF subjects (2021:03÷2023:03), contributes to a significant increase (from 80% to more than 99%) in the accuracy of traditional methods of time series forecasting.

The novelty of this paper lies precisely in the demonstration of the effectiveness of the application of the procedure of preliminary decomposition on the basis of DWT of a non-stationary nonlinear time series of daily balances of budgetary funds on the accounts of the STA (single treasury account) to solve the problem of improving the accuracy of traditional forecasting methods.

Theoretical significance of the results of the work is determined by the fact that they give the direction of search for improving the forecast accuracy of traditional forecasting methods of nonlinear nonstationary time series, indicating the significant forecasting potential of forecasting methods with preliminary decomposition based on discrete wavelet transforms (DWT).

The practical significance of the obtained results is of undoubted interest and allows for a more efficient use of the revenue part of the budgets of the subjects of the Russian Federation, based on the compilation of more accurate revenue forecasts.

Limitations of the work

Despite the significant results obtained, it is necessary to note some limitations of the work: in this study at the stage of forecasting used traditional methods based on extrapolation of the solution of regression equations. In future studies, the forecasting methods will be extended by applying Artificial Intelligence, Machine Learning and Neurons Networks with Deep Learning, which together with wavelet decomposition will undoubtedly further improve the accuracy of cash flow forecasts.

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国际劳动关系法律规制的现代问题与展望
**MODERN PROBLEMS AND PROSPECTS OF INTERNATIONAL
LEGAL REGULATION OF LABOR RELATIONS**

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注解。 文章探讨了国际劳动关系法律规制的现状以及国际劳动法的发展前景。 这表明,在现代条件下,国际劳动法正在失去其监管潜力,因为各国劳动法制度的多样性并没有为普遍规范的制定和适用创造条件。 对此,笔者结合所发现的问题,明确了国际劳动法进一步发展的方向。

关键词: 国际劳动法、政治局势、两极分化、区域化、国际劳工组织。

Annotation. *The article examines the current state of international legal regulation of labor relations, as well as prospects for the development of international labor law. It is indicated that in modern conditions, international labor law is losing its regulatory potential, since the diversity of national labor law systems does not create conditions for the development and application of universal norms. In this regard, the author defines the directions of further development of international labor law, considering the identified problems.*

Keywords: *international labor law, political situation, polarization, regionalization, International labor organization.*

Labor and closely related social relations are always formed under the influence of the economic situation in the country and in the world, and depends on the level of development of production forces. The international labor law formed today establishes minimum standards (procedural and procedural), on the basis of which the rights and obligations of subjects of labor relations are determined, a model of legal regulation is formed based on the principle of universalization using the convention mechanism.

The main result of international labor regulation is international labor standards, which constitute relevant agreements between States on issues related to the use and protection of hired labor, improvement of its conditions, protection of individual and collective interests of employees. The formal expression of such regulation is the norms enshrined in legal acts adopted by the UN, the Interna-

tional Labour Organization (ILO), regional associations of states, as well as their bilateral, sometimes trilateral agreements.

At the same time, different standards in force in different countries have an ambiguous effect on the possibilities of international labor law to form a universal mechanism for regulating legal relations in the labor market.

In addition, at present, the problems of international legal regulation of labor relations are most closely connected with the polarization of the political situation in the world, with the fact that in the modern civilizational space two global blocs of countries are forming, professing different ideologies of the organization of social relations, the interaction of government and society, having different value orientations and views on the legal provision of state construction.

The greatest amount of legal differences is associated with traditions and the level of legal culture, with the level of development of means of production, the general development of national legal systems, as well as with religious factors of the formation of public consciousness associated with participation in labor processes.

According to researchers, one of the fundamental legal differences are differences in the ideological, religious and ideological development of national labor law systems, on the basis of which (differences) a national legal worldview of labor law phenomena arises [5].

Under these conditions, international legal institutions lose a significant part of their authority, since they are initially oriented towards the Western understanding of civilizational development, establishing values of democracy and lifestyle standards that do not coincide with the “Eastern” perception of social development problems.

This conclusion fully applies to the activities of the International Labour Organization (ILO), which has historically been formed on the Western ideals of labor relations and Western labor law standards, reflecting the Anglo-Saxon vision of the rights of the employee and employer, labor standards, work ethics, but do not fit into the legal mentality of other nations and peoples. An example is the ILO Convention No. 190 “On the Elimination of Violence and Harassment at Work”, which calls for “monitoring and enforcement of national laws and regulations on violence and harassment at work; provide penalties, when necessary, in the case of acts of violence and harassment at work” [2].

This Convention, of course, has a good purpose and is relevant for all civilized countries that form their national labor laws considering the need to protect the diverse rights and freedoms of all participants in labor relations. However, nevertheless, a number of countries, including Russia, have not signed this Convention for the reason that the approach outlined in it, from the point of view of national traditions and national ethics of labor relations, is questionable. In particular, dif-

difficulties arise in the Russian national consciousness about understanding the approach to the problems of “harassment in the workplace”, bearing in mind that if in the Western interpretation “harassment can be considered a complementary statement against any member of a team of professionals that goes beyond working relations”, then in the Russian tradition such an action (complementary statement) it is not perceived as harassment, but is a manifestation of politeness and one of the elements of the motivational mechanism of labor collective management.

Thus, for Russia, the norms set out in the Constitution of the Russian Federation, which states that the state guarantees equality of human and civil rights and freedoms (Article 19 of the Constitution of the Russian Federation), including the right to work in conditions that meet the requirements of safety and hygiene, are absolutely sufficient from the point of view of regulating these problems (Article 37 of the Constitution of the Russian Federation) [3], as well as the norms of the Labor and Criminal Codes of the Russian Federation.

Accordingly, the different perception of labor law problems concerning purely national aspects of labor relations objectively does not currently allow for the creation of a universal labor regulation mechanism, which the ILO claims, considering the legitimate interests of all states.

In this regard, the prospects for international regulation of labor law processes based on the principle of universalization seem very uncertain, and the way out of this situation may be a greater level of attention to regional peculiarities of labor law relations regulation, which consider all their diversity and national specifics.

Thus, the opinion seems relevant that international labor law should be considered as a complex sub-branch of labor and international law, bearing in mind that we are talking about some complex legal education, including the norms of international and domestic labor law [1].

The opinion is also relevant that “the use of foreign experience requires knowledge not only of legal norms, models, but also of the conditions for the creation and development of legal systems in which they exist and are implemented... from the point of view of the possibility of using borrowed samples” [4].

Fully sharing this position, speaking about “attention to the problems of regionalization”, we consider it possible to create regional offices within the ILO, which should investigate the full range of labor law problems on a regional scale, prepare recommendations for the International Labor Organization, which, in turn, becomes an advisory collegial body making decisions on the activation of the convention mechanism taking into account the opinions of representatives of the regions.

We also consider it possible to adopt regional conventions, which can be considered as recommendation documents aimed at solving problems of labor activity at the regional level, based on the experience of other states and peoples.

In general, the conducted research suggests that in modern conditions, the system of international legal regulation, including the system of international legal regulation of labor law processes, needs a radical restructuring, which should be based on an understanding of the multiplicity of labor law phenomena and processes that cannot be regulated using previously created templates and standards, but they require a flexible approach that takes into account the national specifics of labor activity and the work-law mentality of peoples.

Summing up this thesis, we point out that the development of domestic labor law in Russia directly depends on the need to bring national legislation closer to the new political situation, when the vector of political and economic interaction between Russia and foreign countries is shifting from West to East.

In this regard, international labor law should be perceived as a kind of legal model describing the mechanism of regulation of labor relations with a certain degree of subjectivity, which is based, to a greater extent, on the Anglo-Saxon perception of labor law phenomena, which significantly affects the process of law enforcement, requiring a thorough analysis of the norms of international labor law for their compliance with national traditions in the field of labor activity and the specifics of the national labor law system.

Let us draw attention to the fact that the Russian legislator seeks to limit the unconditional legal priority of the norms of international law on the territory of Russia, imposing on the Constitutional Court (Article 34 of the Federal Law “On International Treaties of the Russian Federation [6]) the obligation to establish the fact of compliance of international legal norms with the provisions of the Constitution of the Russian Federation.

The above suggests that the norms of international law cannot always be included in the Russian regulatory framework, since their content contradicts the Basic Law, as well as the foundations of public law and order.

However, nevertheless, Russian labor law is not in a legal vacuum, the best world practices of regulating labor relations, which have entered the international legal regulatory framework, are integrated into domestic legislation and are successfully applied in the process of regulating labor activity.

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DOI 10.34660/INF.2023.54.57.100

音乐会表演者专业世界观形成过程的价值论方法

**AN AXIOLOGICAL APPROACH TO THE PROCESS OF FORMING
A PROFESSIONAL WORLDVIEW OF A CONCERT PERFORMER**

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The implementation of professional activity according to the developed world-view beliefs and ideals is possible only with the acquisition of a system of values in the music-pedagogical process under the condition of providing the future concert performer with the opportunity for personal creative growth. Potentially infinite aspiration of the personality to self-development, expressed in the need for creativity, is directly related to the ability to internalise the values of culture. From the point of view of axiology it looks like crystallisation of individual worldview values formed in the process of social practices by a certain generation throughout life [6]. Sociocultural experience as an extra-natural phenomenon forms a complex self-developing system that determines the programme of behaviour of the human community on the basis of formed value orientations. According to M.S. Kagan, “an important methodological principle of modern axiology is the application of ... “biogenetic law” discovered by E. Heckel in the last century: ontogenesis repeats phylogenesis, that is, the laws of individual development repeat the development of the species” [3, p. 61]. Here it is important to note that modern psychology has long ago rejected the “botanical” theory of cultural and moral development of human personality¹¹. According to Vygotsky’s conclusions, mental processes are transformed in humans in the same way as the processes of their practical activity, becoming mediated through “instruments of spiritual production”. Such psychological “tools” are various sign systems - language, mathematical signs and other semantic systems. Due to interiorisation, the external form of a sign’s existence turns into an internal means of organising mental processes generating a system of mediation operations, which means the replacement of primary links between functions with secondary ones, constructed artificially in the course of human

¹ Как отмечал Л. Выготский, «только в процессе длительных исследований, охвативших десятилетия, психология сумела преодолеть первоначальные представления о том, что процессы психического развития строятся и протекают по ботаническому образцу» [2. с. 6].

mastering of various sign systems [2]. In fact, the development of personality according to L. Vygotsky is proportional to its contribution to the preservation and development of universal culture.

The core of human personality is considered to be the allocation of the main life motives in the form of value orientations. The value sphere is built in the process of human socialisation, along with cognitive, emotional, as an artificial one, as it is formed in the process of cultural and educational activity of a personality in the form of higher mental functions that condition the objectification of the supra-individual. The adoption of value orientations occurs not by means of mechanical assimilation of the received knowledge, but on the basis of a motivated value-sense attitude to them, suppressing all other motives [7]. This process is always accompanied by cognitive activity in the direction of comprehension of cultural and historical archetypes of collective consciousness.

The very appeal to the axiological method in the field of music education promises the researcher success in any of the aspects of pedagogical science. Music as a source of value orientations in the context of spiritual culture has been the subject of research of many outstanding scientists of the XX century, such as A. Losev, B. Asafiev, V. Medushevsky, V. Kholopova, T. Cherednichenko, G. Ermakova, L. Zaks, R. Telcharov, A. Sokolov, B. Yavorsky and others. Each of the above authors made a significant contribution to the justification of the axiological approach in relation to musical art, revealing its value through the justification of aesthetic principles that condition its nature. In their studies, the axiological approach to the comprehension of music is revealed in the deciphering of the meanings embedded in the musical text, providing its communicative functionality. After all, the indisputability of music's mission in affirming the ideals of Beauty, Harmony and Goodness should not overshadow the mechanism of their realisation in practice.

In the professional activity of a concert performer the main value is the creation of his own original interpretation of a musical work. The integrity of his professional outlook directly depends on the generation of ethical and aesthetic attitudes and technological skills in the process of education in music schools, where interpretation work becomes the main criterion of the student's creative abilities. His performing interpretation should embody his own evaluation of artistic meanings, bringing awareness of the contextual content of music far beyond the boundaries of musical lines. However, its independence, in its turn, should be based on a basis in the form of the formation of value-archetypal thinking. In her work on communicative archetypes D. Kirnaraskaya writes about the formation of communicative archetypes in the form of universal sound, visual-spatial and motor-plastic signs "symbolising certain social relations and roles". She notes the presence in the social system of social communication archetypes of appeal, pe-

tion, game, which appear as “universal sound, visual-spatial and motor-plastic signs symbolising certain social relations and roles”, and substantiates their manifestation with “the acceptance by all members of society of the social role and the way of their assertion and functioning” [4]. In the same article, she writes about the different stages of social communication, of which the highest can be considered the epistemological one, related to the transmission of ideas and thoughts: “this type of communication relies on the noosphere and the highest intellectual abilities of man. It assumes the existence of special sign systems - written speech, mathematical symbols and other artificial languages created for a special purpose” [4].

Being an intellectual product, musical semantics from the moment of its appearance has established itself as one of the communicative values of mankind as a universal way of spiritual communication. According to T. Lazutina: “music is a form of assimilation, a way of existence of value relations and is considered as a set of material and spiritual values created by man, the purpose of which is the creation and transmission of a diverse world of values through a specific language, the formation of the social ideal, which is embodied in the social and axiological function” [5, p. 60]. In this case, the language of art can be considered a derivative intellectual product of social communication, modelling its own archetypes of ethical and aesthetic space. Among them are genre, programme, form, style, i.e. those on which the performer relies in choosing the necessary means for the competent reading and reproduction of the composer’s text of a musical work within the stylistic norms legitimised by this or that historical epoch. They determine the value paradigm of the future concert performer when forming his sense of form, style, image-associative thinking [10].

In relation to the value criteria of performing interpretation in the professional environment, one can still find a lot of misconceptions. This is probably due to the fact that the performed work, recognised as a world masterpiece, is itself considered a self-sufficient value, the touch of which justifies the actualisation of the value space of the creative activity of any concert performer. One can often hear the opinion that the interpretation of a musical work is conditioned by one’s artistic taste. There are also recommendations of teachers to pupils on the performance of a musical work “to play beautifully” or “to show individuality”, etc. However, it is not so simple: the attempt to penetrate through the lines of the musical text into the world of the creator, into the sphere of his specific aesthetic norms and means of expression, should not allow mistakes in the assessment of the principles that determine the essence of the spiritual life of a whole historical epoch. Spiritual connection with a musical work of this or that stylistic direction occurs through the emotional involvement of the student in the value and meaning dialogue, motivating the cognitive process in the field of similarities and differences between

cultures. It is the increase in the degree of awareness of this issue that contributes to the maturity of the professional outlook of the future concert performer. The degree of its formation is evidenced by the student's free orientation in the dialogue of cultures. Style competence as one of the main characteristics in the axiological aspect of performing skills largely ensures the artistic authenticity and significance of his/her performing interpretation of a musical text.

In support of the idea of the actualisation of the performer's value space in connection with the limitation of the performer's own meaning, let us cite some provisions from I. Stachinskaya's article on the interpretation of Carl Reinecke's Undine Sonata for Piano and Flute: "if we take into account that, in general, performing interpretation is a resistance between stable and mobile means of expression, where the composer's text of a musical work, the time, the stylistics of the epoch and, in general, the aesthetic conditions of its creation act as the stable ones, then the ability to penetrate as far as possible into the figurative content of the work and to find the appropriate means of expression in the form of performance technology, emotional saturation, construction of form, etc. is the main criterion for the truth of performing interpretation. Here the main criterion of the truth of the performing interpretation is the ability to maximally penetrate into the figurative content of the work and find the appropriate means of its expression in the form of performance technology, emotional saturation, construction of form, etc." [8, pp. 15-16].

These words refer to the technology of creating an interpretation: for example, the depiction of the water element requires a certain density of sound, its thinning, a certain use of the *vibrato* technique, and the depiction of programme characters requires special figurative and emotional expressiveness in the performance of typical rhythm and intonation formulas characteristic of the stylistics of the epoch of the composition's creation. According to the researcher, the formation of performing interpretation consists in the combination of the musician's stable means in the form of knowledge of stylistics, performing traditions and performance technology, and mobile means in the form of technical equipment of the performer, the level of his spiritual and emotional development, which as a result causes the phenomenon of variant multiplicity of existence of concepts of the same musical work [9]. In addition, the process of creating a performing interpretation becomes a way of reflexive cognition of the musician's values at the personal level. As a result, the interaction between performing interpretation and professional worldview invariably leads to the concert performer acquiring his or her own value space. The absence of author's instructions on articulatory peculiarities in the performance of the text opens up great possibilities of self-expression for the interpreter in realising the composer's idea at the level of expressive means, such as dynamics, timbre, phrasing, articulation, agogics, etc.

In this case, the performer, based on the formed value paradigm, must independently decide on the intonation of meaning, based on theoretical knowledge and regularities of the organisation of performing means. His creative freedom is limited by the stylistic norms of a certain historical epoch and the author's instructions on how to perform his own music. Thus, according to the researcher, "the stable means of interpretation of the Undine Sonata by K. Reinecke for the performer include the programme based on the plot of the tale by Friedrich de La Motte Fouquet, the composer's musical text, technological and stylistic methods (performing breathing, articulation, phrasing). Mobile means of technological order can include the use of the *vibrato* technique, the use of stroke and dynamic palette depending on one's own idea of the imaginative content of the musical work. The performer's imagination can be supplemented not only by familiarity with different musical interpretations of the given plot, but also with similar plots that captured the aesthetic and cultural space of the Romantic era" [8, p. 21].

Thus, the basis of the axiological method in the field of professional skills of future concert performers should be formed by the mechanism of recreating value rather than its evaluation. Its justification can be the analysis of the ratio of stable and mobile means in the interpretation of the performed musical work. As it is known, self-restraint leads to self-improvement. The formation of professional outlook in future concert performers is manifested in the attitude to the performed musical composition from the position of such archetypes of musical art as programme, stylistics, genre, form, drama, etc., the assimilation of which limits the performer's imagination to certain limits of aesthetic norms. With the mobility of performing techniques and individual preferences, his interpretation tends to stabilise in its conformity to the style peculiarities of a particular historical epoch, as well as to the historically established principles of a particular performing school or tradition. In the search for one's own reading of the musical text, the contextual-interpretation method based on value-archetypal thinking will contribute to the creation of a professional and, at the same time, original interpretation of the musical composition being performed. In general, the axiological approach can be justified in finding effective mechanisms for justifying and asserting a particular value orientation.

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DOI 10.34660/INF.2023.46.46.101

莫斯科艺术学院WPU学前教育学和心理学系教授实施联合教育计划的发展和特点
**DEVELOPMENT AND FEATURES OF THE IMPLEMENTATION
OF A JOINT EDUCATIONAL PROGRAM OF THE MOSCOW
INSTITUTE OF ARTS WPU BY PROFESSORS OF THE FACULTY
OF PRESCHOOL PEDAGOGY AND PSYCHOLOGY OF MPSU**

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抽象的。文章讨论了中俄两国高等教育领域合作的主要历史阶段。讨论了莫斯科国立师范大学和渭南师范大学联合办学项目的创建和实施问题。描述了莫斯科国立师范大学学前教育学和心理学学院的教师利用远程学习技术与莫斯科艺术学院 WPU 的学生组织教育过程的特点。

关键词：联合教育项目、中国、俄罗斯联邦、教师教育、学前教育、合作、远程学习技术。

Abstract. *The article discusses the main historical stages of cooperation between the PRC and the Russian Federation in the field of higher education. The issues of creation and implementation of a joint educational program of Moscow State Pedagogical University and Weinan Pedagogical University are covered. The features of the organization of the educational process by teachers of the Faculty of Preschool Pedagogy and Psychology of Moscow State Pedagogical University using distance learning technologies with students of the Moscow Institute of Arts WPU are described.*

Keywords: *joint educational program, China, Russian Federation, teacher education, preschool education, cooperation, distance learning technologies.*

The implementation of joint educational programs (hereinafter JEP) of Chinese universities and higher education institutions of other countries has been an important form of cooperation in the field of education in China for almost 30 years. “Temporary Regulations on the Joint Educational Program of Chinese Universities and Foreign Universities” (1995), and later “Rules of the Joint Educational Program of Chinese Universities and Foreign Universities”, published by the State Education Commission and the State Council of the People’s Republic of China, respectively, became the first official documents defining this direction,

as one of the priorities in the field of higher education. Since 2005, the Ministry of Education of the People's Republic of China has issued a number of orders and other legal acts that regulated the procedure for implementing JEPs and made amendments to current documents.

Cooperation between China and the Russian Federation in the field of education began in 1995 with the formation of the Sino-Russian Committee and the signing of an agreement on the mutual recognition of documents on education and academic degrees, at the same time the first JEP at the undergraduate level was approved. To date, more than 100 undergraduate JEPs and several dozen master's JEPs are being read. Work on the formation of the first joint university with China in Shenzhen in 2014 was started by Moscow State University named after M.V. Lomonosov. On August 25, 2015, Moscow State Pedagogical University (hereinafter referred to as MSPU), the leader of domestic pedagogical education, and Weinan Pedagogical University (hereinafter referred to as WPU) signed agreements on cooperation and the establishment of the Russian-Chinese Pedagogical University of Arts (VPU Moscow Institute of Arts). Cooperation between MSGU and VPU began in 2013 during the implementation of the One Belt, One Let project, implemented by the countries of the Eurasian Economic Union. In the summer of 2015, during a meeting of university rectors, the similarity of educational institutions was noted: the established traditions of classical higher education, the rich history of universities, the leading position in the field of teacher education, and the desire to expand educational ties. Weinan Normal University is one of the leading universities in China, implementing educational programs in the field of art, with a great emphasis on the study of national culture. The Moscow Pedagogical State University also has an «Institute of Arts», which is engaged in similar activities. The exchange of experience in the field of filling the content of education, the use of various methods and technologies characteristic of the educational tradition of each country, the involvement of teachers from Moscow State Pedagogical University in the implementation of the JEP - all this is a reliable basis for the formation of a new effective educational institution in China. The Moscow Institute of Arts of WPU, together with the Moscow State Pedagogical University, implement educational programs in the following areas: fine arts, psychology and pedagogy of preschool education, music education. The specificity of the educational project of the Moscow Institute of Arts of the VPU is that students are simultaneously enrolled in both the WPU and the Moscow State Pedagogical University and receive education on the basis of jointly developed curricula and work programs of teachers from two universities. 30% of the curriculum disciplines are implemented by teachers from the Russian side. In his research Ph.D. Chen Guo notes that the methodology for building educational programs in the two countries is similar, which has become a good basis for creating uniform requirements for

their construction[6]. There are also only minor discrepancies in the structure of each program of academic disciplines, which made it possible to create a unified form containing the goal, objectives, the place of the discipline in the structure of the educational program, planned results, the amount of academic hours allotted for studying the discipline, content, educational and methodological support of independent activities of the work of students, funds of assessment tools, including assessment tools recommended for use with students with disabilities, educational, methodological and information support of the discipline, material and technical support of the discipline and assessment materials for intermediate certification. It is worth noting that the work programs on the part of the PRC also spell out the requirements for academic honesty and academic behavior of participants in the educational process. Also, Chinese professors are allowed to review the content of the educational program of the academic discipline every semester.

As mentioned above, almost a third of the disciplines of educational programs are implemented by the Russian side. Teachers from the departments of preschool pedagogy, developmental psychology, theory and methodology of preschool education of the Faculty of Preschool Pedagogy and Psychology of Moscow State Pedagogical University ensure that Chinese students master such disciplines as “Introduction to Professional Activities”, “History of Pedagogy”, “Preschool Pedagogy with Workshop”, “Preparing Children for Education at school”, “Psysical developement in preschool educational institutions”, “Modern educational programs for preschool education” and many others. Before the coronavirus pandemic , teachers of departments, along with remote classes, participated in the educational process in person. However, the epidemiological situation made its own adjustments and the teaching format was revised in favor of the use of distance learning technologies. In accordance with clause 1 of Article 16 of the Federal Law “On Education in the Russian Federation”, distance educational technologies are understood as “educational technologies implemented mainly using information and telecommunication networks with indirect (at a distance) interaction between students and teaching staff” [5]. Distance educational technologies are an integral part of distance learning.

During the pandemic, as well as after it, teachers from the departments of the Faculty of Preschool Pedagogy and Psychology developed electronic educational courses on the distance learning portal InfoDa Moodle. Electronic educational courses consist of modules, the number of which is regulated by the work program of each discipline. Each module contains theoretical material presented in the form of an electronic lecture, a glossary of terms, links on a page on the global Internet, author’s materials of teachers. After mastering the theory, students are invited to complete practical tasks aimed at the formation and consolidation of the competencies prescribed in the program. Practical tasks can have a traditional

form (writing an essay, compiling a summary, a comparative table, etc.), and also include the creation of a WIKI page, a resource that allows students to combine the achievements of students to solve a common educational problem. The educational resource «Forum» is actively used, both consulting, in which students can ask clarifying questions and receive answers from the teacher of the discipline, and educational, organized as an element of group work in practical classes. Current and intermediate certification of students is also carried out using the educational resources of the electronic course, often in the form of a test and a creative task, which makes it possible to identify the level of formation of professional competencies. It is worth noting that the InfoDa distance learning portal also offers the possibility of holding webinars and colloquia online. Moscow State Pedagogical University is also actively working on the TEAMS platform . The choice of platforms for the contact work of teachers with the audience is based on the technical capabilities of both parties and the information policy of countries in the field of the Internet space. It is also worth noting that some materials for practical tasks, as well as some lecture material, may be presented by the teacher in English for better development and understanding of China by students.

The use of these resources ensures the implementation of distance education in the format of mobile learning (e-learning format using personal electronic devices), synchronous e-learning (e-learning format in which all participants in the educational process interact with each other in real time, including online), asynchronous learning or learning at your own pace (a format in which students receive any electronic resources to acquire information and complete tasks, while the task can be completed in a place convenient for the teacher and at any time within the stated calendar schedule) and, of course or blended learning, which is characterized as an educational approach that combines teacher-led learning and online learning [1]. An analysis of educational work on SOP over the past years has shown that the above-described organization of distance learning using an e-learning portal and conducting online lectures on the listed resources undoubtedly has a positive effect on the motivation of Chinese students to study the discipline and allows them to independently plan their educational activities to achieve the desired result .

Thus, we can say that the creation of JEP between China and the Russian Federation is an important direction of the education policy of both countries. Cooperation in this area has its own history and is now at a dynamic stage of its development. The country's leading pedagogical university, Moscow Pedagogical University, actively cooperates with the Higher Educational Institution at the JEP level in various areas and profiles. Teachers of the Faculty of Preschool Pedagogy and Psychology participate in the development of educational programs, work programs of disciplines and modules, plan and implement various training formats, actively including distance learning technologies in their work, which allow

them to most effectively build the educational trajectory of students of the Moscow Institute of Arts WPU.

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代表英语单元音和双元音的字母及其组合
**LETTERS AND THEIR COMBINATIONS REPRESENTING
ENGLISH MONOPHTHONGS AND DIPHTHONGS IN
WRITING**

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抽象的。 本文致力于研究俄罗斯联邦教育机构英语课堂教学工作者的教育活动中单元音和双元音的图形拼写问题。 作者确定了音素图形拼写的主要方式,即用于形成相关声音的字母和字母组合。 该研究旨在定义和描述英语发音的图形拼写方式。

关键词: 双元音、教育活动、英语、图形拼写、单元音、教育工作者。

Abstract. *The article is devoted to the study of the problem of graphic spelling of monophthongs and diphthongoids in educational activities of the pedagogical worker in English classes at educational institutions in the Russian Federation. The author identifies the main ways of graphic spelling of the phonemes, namely letters and combinations of letters used in the formation of the sounds in question. The study aims to define and describe the ways of graphic spelling of English sounds.*

Keywords: *diphthongoids, educational activities, English, graphic spelling, monophthongs, pedagogical worker.*

First classes of English at the overwhelming majority of educational institutions in the Russian Federation make pedagogical workers solve a lot of vital issues while training their students within the main language aspects that are listening, speaking, reading and writing (such aspects as interpretation and translation are being omitted here since they are in the domain of a limited number of specialized Russian universities; for this reason transliteration, being a way of rendering

lexical units in writing, is not the subject of our research). Writing universally seems to be the most complicated aspect in its mastering due to the fact that it is directly connected with grammar, lexicology, phonetics, punctuation, spelling and stylistics. One complexity of writing is “phonetics [12] vs spelling” problem. In short, we mean a case when one letter or a group of letters contained in various lexical units [1] has several ways to be pronounced, e.g.:

- vowel letter *a* in the following lexical units: *plague* [a:], *cradle* [eɪ], *adorn* [ə], *gall* [o:], *acrid* [æ], *Bologna* [jə], *vintage* [ɪ], *garish* [εə], *swab* [ɔ];
- consonant letter *s*: *episode* [s], *fusion* [ʒ], *controversial* [ʃ], *liaison* [z], *Asia* [ʃ] or [ʒ], *CIS* [es] [5], [8];
- double *oo*: *flood* [ʌ], *nook* [ʊ], *tattoo* [u:], *floor* [o:], *brooch* [əʊ];
- a group of vowel and consonant letters *ough*: *through* [u:], *sought* [o:], *dough* [əʊ], *rough* [ʌf], *cough* [ɔf], *thorough* [ə];
- a combination of consonant letters *ch*: *avalanche* [ʃ], *chime* [tʃ], *ochre* [k], *Greenwich* [dʒ] [9], [10], [11].

To avoid bewildering in writing among students and to ensure that they will learn to write well is one of the primary tasks of the pedagogical worker in the initial and further stages of teaching English.

This publication is a humble attempt to unfold our experience in classifying the modes of graphical spelling of ten monophthongs ([ʌ], [a:], [ɪ], [ɔ], [o:], [ʊ], [æ], [e], [ə], [ɛ:]) and two diphthongoids ([i:], [u:]) [2], [3], [4], temporarily omitting the consonant sounds [6], [7].

The relevance of the research work arose in the light of insufficient coverage of the multiple ways of graphical spelling of vowel and consonant phonemes and their combinations in textbooks currently applied in the educational process.

Our research is based on the material of various extracts taken for our consideration from pieces of fiction, periodicals, textbooks, the Internet. We also dealt with corporate letters, movie subtitles, pieces of advertising; off-line and on-line dictionaries; reference books to contemporary English pronunciation [13]. We examined the parts of English speech and their transformations regarding case, degree, mood, number, tense and voice categories. It seemed natural for us to view abbreviations, acronyms, clipped words, interjections, loan words, etc, paying particular attention to such toponyms as geographic names, corporate names, days of the week, months, nationalities, people's names, patronymics and sur-names, social networks, astronoms, types of drinks, meals and food, etc.

Paradoxically, some English consonant sounds can be rendered by vowel letters, e.g.:

- [f] can be rendered by vowel letter *u* (*lieutenant* [leɪ'tenənt]);
- [j] can seldom be rendered by vowel letter *e* (*Eugene* ['ju:dʒi:n], *eureka* [juə'rika] or [jo:'rika], *Europe* ['juərəp] or ['jo:rəp]); by vowel letter *u*

(*unique* [ju: 'ni:k], *use* [ju:z], *usual* ['ju:ʒəl] or ['ju:ʒl]); by vowel letter *y* (*yacht* [jo:t], *year* [jɪə] or [jə:], *youth* [ju:θ]);

- [w] can sometimes be rendered by vowel letter *o* (*one* [wʌn], *once* [wʌns], *oneself* [wʌn 'self]); by vowel letter *u* (*cuisine* [kwɪ 'zi:n], *persuade* [pə 'swɛd], *quake* [kweɪk]).

We can observe a reverse process, when consonant letters render vowel sounds if they are pronounced under their names in the English Alphabet, e.g. letter *Pp* in *PPP* (that stands for *Power Point Presentation*) ['pi: 'pi: 'pi:]. To be more exact, consonant letters can render one (letter *Rr*), two (letters *Bb*, *Cc*, *Dd*, *Ff*, *Gg*, *Hh*, *Jj*, *Kk*, *Ll*, *Mm*, *Nn*, *Pp*, *Ss*, *Tt*, *Vv*, *Zz*, the latter in American variant of English), three (letters *Qq*, *Xx*, *Zz*) and six sounds (letter *Ww*):

- letter *Rr* rendered by one sound [a:];
- letter *Bb* rendered by two sounds [bi:];
- letter *Qq* rendered by three sounds [kju:];
- letter *Ww* rendered by six sounds [dʌblju:].

Letters rendered by two (*Bb* [bi:], *Hh* [eɪtʃ], *Nn* [en]), three (*Qq* [kju:], *Xx* [eks], *Zz* [zed]) and six sounds (*Ww* [dʌblju:]) involve both consonant and vowel sounds. This postulate says that if we pronounce the consonant letters in definite positions (in abbreviations and compound words, for instance), we have to use both consonant and vowel sounds to utter them, e.g. abbreviation *CIF* [si:ai 'ef] and compound word *X-ray* ['eksreɪ]:

- *CIF* is composed of letter *C* – [si:] rendered by two sounds, consonant [s] and vowel [i:], letter *I* [ai] rendered by one vowel sound [ai], letter *F* rendered by two sounds, vowel [e] and consonant [f];
- *X-ray* is composed of letter *X* [eks] and word *ray*.

Thus, a notable feature of this article is its inclusion of examples where consonant letters can take part in rendering vowel sounds.

The ways of graphical spelling of vowel phonemes described here correspond to the style which is currently the norm in Great Britain and the Commonwealth. Standard American usage differs in one respect; in this case examples of American spelling are marked in brackets, e.g. *o(u)r* (*vigour* or *vigor* ['vɪgə]).

In the pages that follow are to be found specimen letters and letter combinations depicting English monophthongs and diphthongoids.

Monophthongs

Vowel sound [ʌ] can be represented by English letters *o* (e.g., *dozen* ['dʌzn]), *u* (*thus* [ðʌs]), *w* (*WTO* [dʌblju:ti: 'əʊ]) and by groups of letters *oe* (*does* [dʌz]), *oo* (*blood* [blʌd]), *ou* (*double* ['dʌbl]), *uh* (*uh-huh* [ʌ 'hʌ]) or [ʊ 'hʊ]). Sound [ʌ] can be put in the opening (*oven* ['ʌvən] or ['ʌvən]) and central (*flood* [flʌd]) position of lexical units. One does not meet it in the neutral and ending position of lexical units. Monophthong [ʌ] is represented by two vowel letters (*o*, *u*), one conso-

nant letter (*w*), three groups of vowel letters (*oe, oo, ou*). In one case, this phoneme is made in graphic spelling by a group of a vowel and a consonant letters (*uh*).

Vowel sound [a:] can be represented by letters *a* (*disater* [dɪz'a:stə]), *e* (*ensemble* [a:n'sa:mbəl]), *r* (*R&D* [a:(r)ən'di:]) and by groups of letters *ah* (*Ah* [a:]), *al* (*almond* ['a:mənd]), *ar* (*arc* [a:k]), *are* (*aren't* ['a:nt]), *arre* (*bizarre* [bɪ'zɑ:]), *au* (*laugh* [lɑ:f]), *ear* (*hearth* [hɑ:θ]), *er* (*sergeant* ['sɑ:dʒənt]), *ir* (*memoir* [mem'wa:]), *oi* (*turquoise* ['tɜ:kwa:z]), *ois* (*bourgeois* ['buəʒwa:]), *uar* (*guard* [gɑ:d]). Sound [a:] can be put in the neutral (*Ah* [a:]), opening (*ask* [a:sk]), central (*barley* ['ba:lɪ]) and ending (*spa* [spa:]) position of lexical units. Monophthong [a:] is represented by two vowel letters (*a, e*), one consonant letter (*r*) and 12 groups of letters (*Ah, al, ar, are, arre, au, ear, er, ir, oi, ois, uar*). In two cases, this phoneme is made in graphic spelling by groups of vowel letters (*au, oi*), in ten cases by groups of vowel and consonant letters (*Ah, al, ar, are, arre, ear, er, ir, ois, uar*).

Vowel sound [ɪ] can be represented by letters *a* (*image* ['ɪmɪdʒ]), *e* (*depart* [dɪ'pa:t]), *e* or *i* (*enquire/inquire* [ɪn'kwɪə]), *i* (*inlet* ['ɪnlet]), *o* (*women* ['wɪmɪn]), *u* (*busy* ['bɪzi]), *y* (*hymn* [hɪm]), by French letter *é* (*protégé* ['prɔ:tɛʒeɪ]) and by groups of the letters *ae* (*palaeontology* [pælɪɒn'tɒlədʒɪ]), *ai* (*fountain* ['fauntɪn]), *ay* (*Friday* ['fraɪdɪ]), *ea* (*Guinea* ['gɪni]), *ee* (*yankee* ['jæŋki]), *ehea* (*forehead* ['fɔ:ɪd]), *ei* (*forfeit* ['fo:feit]), *eig* (*sovereign* ['sovərɪn]), *eo* (*pigeon* ['pɪdʒɪn] or ['pɪdʒən]), *ey* (*kidney* ['kɪdnɪ]), *ia* (*marriage* ['mæɪɪdʒ]), *ie* (*kerchief* ['kɑ:tʃɪf]), *ui* (*guild* [gɪld]), *wi* (*Greenwich* ['grɪmɪdʒ]).

Sound [ɪ] can be put in the opening (*ink* [ɪŋk]), central (*climate* ['klaɪmɪt]) and ending (*plenty* ['plenti]) position of lexical units. One does not meet it in the neutral position. Monophthong [ɪ] is represented by seven vowel letters (*a, e, i, o, u, y, é*) and 14 groups of letters (*ae, ai, ay, ea, ee, ehea, ei, eig, eo, ey, ia, ie, ui, wi*). In 11 cases, this phoneme is made in graphic spelling by groups of vowel letters (*ae, ai, ay, ea, ee, ei, eo, ey, ia, ie, ui*), in three cases by groups of vowel and consonant letters (*ehea, eig, wi*).

Vowel sound [ɔ] can be represented by letters *a* (*wrath* [rɔθ]), *e* (*entrepreneur* [ɔntrəprə'nə:] or [ɑ:ntrəprə'nə:]), *o* (*inoculate* [ɪ'nɔkjuleɪt]) and by groups of letters *ach* (*yacht* [jɔt]), *au* (*sausage* ['sɔsɪdʒ]), *ea* (*Sean* [ʃɔn]), *ho* (*honest* ['ɔnɪst]), *oh* (*John* [dʒɔn]), *ou* (*lough* [lɔh]), *ow* (*knowledge* ['nɔlədʒ]). Sound [ɔ] can be put in the opening (*onto* ['ɔntu:]) and central (*pond* [pɔnd]) position of lexical units. One does not meet it in the neutral and ending position of lexical units. Monophthong [ɔ] is represented by three vowel letters (*a, e, o*) and seven groups of letters (*ach, au, aw, ea, ho, oh, ou*). In three cases, this phoneme is made in graphic spelling by groups of vowel letters (*au, ea, ou*) and in four cases by groups of vowel and consonant letters (*ach, aw, ho, oh*).

Vowel sound [o:] can be represented by letters *a* (*gall* [gɔ:l]), *o* (*sanatorium* [sænə'tɔ:riəm]) and by groups of letters *al* (*stalk* [sto:k]), *aor* (*extraordinary*

[iks'tro:dənəri]), *ar* (*swarm* [swo:m]), *au* (*taunt* [to:nt]), *augh* (*naught* [no:t]), *aw* (*thaw* [θo:]), *awe* (*awesome* ['o:səm]), *hau* (*haut* or *haute* [o:t]), *oa* (*broad* [bro:d]), *oar* (*hoard* [ho:d]), *oor* (*floor* [flo:]), *or* (*enforce* [in'fo:s]), *ore* (*pore* [po:]), *orps* (*corps* [ko:]), *ort* (*rapport* [ræ'po:]), *ough* (*ought* [o:t]), *our* (*four* [fo:]), *wor* (*sword* [so:d]). Sound [o:] can be put in the neutral (*or* [o:]), opening (*all* [o:l]), central (*walk* [wo:k]) and ending (*door* [do:]) position of lexical units. Monophthong [o:] is represented by two vowel letters (*a*, *o*) and eighteen groups of letters (*al*, *aor*, *ar*, *au*, *augh*, *aw*, *awe*, *hau*, *oa*, *oar*, *oor*, *or*, *ore*, *orps*, *ort*, *ough*, *our*, *wor*). In two cases, this phoneme is made in graphic spelling by groups of vowel letters (*au*, *oa*) and in sixteen cases by groups of vowel and consonant letters (*al*, *aor*, *ar*, *augh*, *aw*, *awe*, *hau*, *oar*, *oor*, *or*, *ore*, *orps*, *ort*, *ough*, *our*, *wor*).

Vowel sound [ʊ] can be represented by letters *o* (*bosom* ['bɒzəm]), *u* (*bull* [bʊl]) and by groups of letters *oo* (*nook* [nok]), *ou* (*haute couture* [əʊtko'tjʊə]), *oul* (*should* [ʃʊd]). Sound [ʊ] can be put in the opening (*Ugh* [ʊh]) and central (*butcher* ['bʊtʃə]) position of lexical units. One does not meet it in the neutral and ending position of lexical units. Monophthong [ʊ] is represented by two letters (*o*, *u*) and three groups of letters (*oo*, *ou*, *oul*). In two cases, this phoneme is made in graphic spelling by groups of vowel letters (*oo*, *ou*) and in one case by a group of vowel and consonant letters (*oul*).

Vowel sound [æ] can be represented by letters *a* (*acrid* ['ækrid]), *i* (*meringue* [mə'ræŋ]) and by groups of letters *ai* (*plait* [plæt]), *a'a* (*ma'am* [mæm]), *ua* (*guarantee* [gæ'ren'ti:]). Sound [æ] can be put in the opening (*act* [ækt]), central (*pad* [pæd]) and ending (*Nah* or *Nahh* [næ]) position of lexical units. One does not meet it in the neutral position. Monophthong [æ] is represented by two letters (*a*, *i*), two groups of vowel letters (*ai*, *ua*) and a combination of a vowel letter and the apostrophe (*a'a*).

Vowel sound [e] can be represented by letters *a* (*ate* [et] or [eit]), *e* (*peril* ['perəl]), *u* (*bury* ['beri]), *f* (*FOB* [efəʊ'bi:]), *l* (*LTD* [elti:'di:]), *m* (*BMW* [bi:em'dAblju:]), *n* (*NGO* [endʒi:'əv:]), *s* (*SOS* [esəʊ'es]), *x* (*x-ray* ['eksreɪ]), *z* (*ZT* [zed'ti:]), by French letter *é* (*apéritif* [ə'perəti:f]) and by groups of letters *ai* (*said* [sed]), *ea* (*pleather* ['pleðə]), *eg* (*phlegm* [flem]), *ei* (*leisure* ['leɪʒə]), *eo* (*jeopardize* ['dʒepədaɪz]), *ie* (*friend* [frend]), *ue* (*baguette* [bæ'get]). Sound [e] can be put in the opening (*embassy* ['embəsi]) and central (*twenty* ['twenti]) position of words. One does not meet it in the neutral and ending position of lexical units. Monophthong [e] is represented by four vowel letters (*a*, *e*, *u*, *é*), seven consonant letters (*f*, *l*, *m*, *n*, *s*, *x*, *z*) and seven groups of letters (*ai*, *ea*, *eg*, *ei*, *eo*, *ie*, *ue*). In six cases, this phoneme is made in graphic spelling by groups of vowel letters (*ai*, *ea*, *ei*, *eo*, *ie*, *ue*) and in one case by a group of vowel and consonant letters (*eg*).

Vowel sound [ə:] can be represented by groups of letters *ieu* (*milieu* ['miljə:]), *ear* (*pearl* [pə:l]), *eor* (*George* [dʒə:dʒ]), *er* (*tertiary* ['tə:ʃəri]), *ere* (*were* [wə:]), *err* (*inferred* [in'fə:d]), *eur* (*amateur* ['æmətə:] or ['æmətə]), *ir* (*dirge* [dɑ:dʒ]), *olo* (*colonel* ['kə:nəl]), or (*attorney* [ə'tə:n]), *our* (*courtesy* ['kə:təsi]), *ur* (*nocturnal* [nɔk'tə:nəl]). Sound [ə:] can be put in the neutral (*Er* [ə:]), opening (*earnest* ['ə:nɪst]), central (*hurt* ['hɑ:t]) and ending (*infer* [in'fə:]) position of lexical units. Monophthong [ə:] is represented by 12 groups of letters (*ear, eor, er, ere, erre, eur, ir, olo, or, our, ur*). In one case, this phoneme is made in graphic spelling by a group of vowel letters (*ieu*) and in 11 cases by groups of vowel and consonant letters (*ear, eor, er, ere, erre, eur, ir, olo, or, our, ur*).

Vowel sound [ə] can be represented by letters *a* (*abrupt* [ə'brʌpt]), *e* (*fraudulent* ['fro:dʒələnt]), *i* (*principal* ['prɪnsəpl]), *o* (*custody* ['kʌstədɪ]), *u* (*focus* ['fəʊkəs]) and by groups of letters *ai* (*villain* ['vɪlən]), *ar* (*leopard* ['lepəd]), *ay* (*always* ['o:lweɪz] or ['o:lweɪz]), *ea* (*sergeant* ['sɑ:dʒənt]), *eo* (*sturgeon* ['stɑ:dʒən]), *eou* (*outrageous* [aut'reɪdʒəs]), *er* (*southern* ['sʌðən]), *er* or *re* (*fibre* or *fiber* ['faɪbə]), *eu* (*pasteurize* ['pæstɪ'fəraɪz]), *eur* (*chauffeur* ['ʃəʊfə] or ['ʃəʊfə:]), *gh* (*Edinburgh* ['edɪnb(ə)rə]), *hu* (*sorghum* ['so:gəm]), *ia* (*initial* [ɪ'nɪʃəl]), *ie* (*sufficient* [sə'fɪʃənt]), *io* (*tension* ['tenʃən]), *iou* (*vicious* ['vɪʃəs]), *iour* (*saviour* ['seɪvə]), *iu* (*premium* ['pri:mjəm] or ['pri:mɪəm]), *oar* (*cupboard* ['kʌbəd]), *oi* (*tortoise* ['to:təs]), or (*tailor* ['teɪlə]), *ou* (*ominous* ['ɔmɪnəs]), *ough* (*thorough* ['θʌrə]), *o(u)r* (*vigour* or *vigor* ['vɪgə]), *re* (*macabre* [mə'kɑ:bə] or [mə'kɑ:br]), *ue* (*guerilla* [gə'ri:lə]), *uer* (*lacquer* ['lækə]), *uor* (*liquor* ['lɪkə]), *ur* (*surmountable* [sə'mauntəbl]), *ure* (*torture* ['to:tʃə]), *wer* (*answer* ['ɑ:nʌs]), by a combination of the apostrophe (‘), a consonant and a vowel letters ‘*re* (*we're* ['wɪə]), a vowel letter and the apostrophe *o'* (*o'clock* [ə'klɔk]). Sound [ə] can be put in the opening (*about* [ə'baʊt]), central (*tenant* ['tenənt]), central and ending simultaneously (*opera* ['ɒpərə]) and ending (*clever* ['klevə]) position of lexical units. One does not meet it in the neutral position. Monophthong [ə] is represented by five letters (*a, e, i, o, u*), by 30 groups of letters (*ai, ar, ay, ea, eo, eou, er, eu, eur, gh, hu, ia, ie, io, iou, iour, iu, oar, oi, or, ou, ough, o(u)r, re, ue, uer, uor, ur, ure, wer*), by one group of consonant letters (*gh*), by one combination of a punctuation sign (the apostrophe), a consonant and a vowel letters ('*re*) and by one combination of a vowel letter and a punctuation sign (the apostrophe) (*o'*). In 14 cases, this phoneme is made in graphic spelling by groups of vowel letters (*ai, ay, ea, eo, eou, eu, ia, ie, io, iou, iu, oi, ou, ue*), in 15 cases by a group of vowel and consonant letters (*ar, er, eur, hu, iour, oar, or, ough, o(u)r, re, uer, uor, ur, ure, wer*), in one case by a group of consonant letters (*gh*).

Diphthongoids

Vowel sound [i:] can be represented by vowel letters *e* (*genius* ['dʒi:nɪəs]), *i* (*fatigue* [fə'ti:g]), by consonant letters *b* (*BBC* [bi:bi:'si:]), *c* (*CNN* [si:en'en]),

d (PhD [pi:'eitf'di:]), *g* (NGO [endʒi:'əʊ]), *p* (PA [pi:'ei]), *t* (t-shirt ['ti:fə:t]), *v* (VIP [vi:'ai'pi:]), *z* (Zz [zi:]), by French letter *i* (naïve [nai'i:v] or [na:'i:v] or *na-ive* [na:'i:v]), and by groups of letters *ae* (algae ['ældʒi:]), *ea* (grease [gri:s]), *ee* (seethe [si:ð]), *eh* (vehicle ['vi:kl]), *ei* (protein ['prəʊti:n]), *eo* (people ['pi:pl]), *ey* (key [ki:]), *ie* (retrieve [ri'tri:v]), *oe* (Phoenix ['fi:niks]), *uay* (quay ['ki:]). Sound [i:] can be put in the opening (*eat* [i:t]), central (*scheme* [ski:m]) and ending (*payee* [pei'i:]) position of lexical units. One does not meet it in the neutral position. Diphthongoid [i:] is represented by three vowel letters (*e, i, î*), by eight consonant letters (*b, c, d, g, p, t, v, z*) and by 10 groups of letters (*ae, ea, ee, eh, ei, eo, ey, ie, oe, uay*). In nine cases, this phoneme is made in graphic spelling by groups of vowel letters (*ae, ea, ee, ei, eo, ey, ie, oe, uay*) and in one case by a group of a vowel and a consonant letters (*eh*).

Vowel sound [u:] can be represented by vowel letters *o* (*tomb* [tu:m]), *u* (*ruth* [ru:θ]), by consonant letters *q* (*IQ* [ai'kju:]), *w* (*WC dAblju:* 'si:]), and by groups of letters *eau* (*beauty* ['bju:ti]), *eu* (*pharmaceutical* [fa:mə'sju:tikəl]), *eu* or *oeu* (*maneuver* or *manoeuvre* [mə'nu:və]), *ew* (*screw* [skru:]), *heu* (*rheum* [ru:m]), *hou* (*ghoul* [gu:l]), *iew* (*review* [ri'vju:]), *oe* (*canoe* [kə'nu:]), *oo* (*maroon* [mə'ru:n]), *ou* (*acoustics* [ə'ku:stiks]), *ough* (*through* [θru:]), *ue* (*rue* [ru:]), *ueue* (*queue* [kju:]), *ui* (*bruise* [bru:z]), *wo* (*two* [tu:]). Sound [u:] can be put in the opening (*Oops* [u:ps]), central (*shrewd* [ʃru:d]) and ending (*bamboo* [bæm'bu:]) position of lexical units. One does not meet it in the neutral position. Diphthongoid [u:] is represented by two vowel letters (*o, u*), two consonant letters (*q, w*) and by 16 groups of letters (*eau, eu, eu, ew, heu, hou, ieu, oe, oeu, oo, ou, ough, ue, ueue, ui, wo*). In ten cases, this phoneme is made in graphic spelling by groups of vowel letters (*eau, eu, eu, oe, oeu, oo, ou, ue, ueue, ui*) and in six cases by groups of vowel and consonant letters (*ew, heu, hou, ieu, ough, wo*).

To sum up, we must note that the solution to the problem of graphic spelling of monophthongs and diphthongoids is still for the most part in its infancy. No single spelling rule can guarantee uniformed pronunciation of this or that vowel phoneme, that is why the best way to specify correct pronunciation of a lexical unit remains in looking it up in off-line and on-line dictionaries. However, the ways of graphic spelling of ten monophthongs ([ʌ], [a:], [ɪ], [ɔ], [o:], [ʊ], [æ], [e], [ə], [ə:]) and two diphthongoids ([i:], [u:]) described by us can simplify to some extent this process in the initial and further stages of teaching English at educational institutions in the Russian Federation.

Our brief outline of the modes of graphical spelling of the vowel sounds shows that further more careful and scrupulously detailed investigation is necessary to get the objective data by which we can more fully ascertain each method to render the vowel phonemes. Nevertheless, the research allowed us to work out and prepare for publishing a guide-book containing drills to consolidate the skills of spelling and pronunciation of lexical units.

The logical outcome of our work permits to state that the data of the review can be helpful in the pedagogical reality of Russian schools, colleges, universities when teaching English phonological and spelling nuances to students who master English as a foreign language. However, we cannot purport to have covered the entire range of variations of letters and groups of letters depicting monophthongs and diphthongoids. For this reason, we invite our fellow scholars to join us in further more thorough research of this issue.

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后现代时代的回顾: 艺术与实用
**A REVIEW IN POSTMODERN EPOCH: THE ART AND
PRAGMATIC**

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注解。 本文旨在回顾后现代条件下艺术评论流派的现状,在媒体融合的影响下,艺术评论流派在流派特征上失去了稳定性,获得了新的特征。 在现代媒体空间中,评论具有多功能性和多主题性的特点。 评论参与了世界审美图景的形成,这使其成为大众媒体的领先地位之一。 社会政治出版物侧重于作品的主题和思想,专业出版物侧重于作品的掌握程度、地位的确定及其分析,而大众媒体的评论,其受众是最广泛的,几乎从不依赖于对作品的详细分析,而是包括对艺术对象的情感态度、对它的印象以及通常的评价成分。 选择评论对象的优先考虑因素是出版物的类型和作者的观点。 现代艺术评论结合了新闻的分析性、信息性和艺术性公共主义类型的特征。 个别作者对艺术现象评价的主要反思往往不伴随着基于作者的艺术史知识和专业能力的论证。 作者的专业能力、对世界的价值观、世界观、人生观和创作经历,以及与读者对话交流的优先模式,决定了艺术作品作为评论对象的选择以及交流策略和言语策略。 最终影响当代艺术新闻这一流派的转变。

关键词: 艺术新闻、艺术话语、评论、语用学、收件人、作者、艺术现象。

Annotation. *The article is devoted to the review of the current state of the art review genre in postmodern conditions, which, losing its stability in terms of genre features, under the influence of media convergence, acquires new features. In modern media space, the review is characterised by polyfunctionality and polythematicity. The review participates in the formation of an aesthetic picture of the world, which gives it one of the leading positions in mass media. While socio-political publications focus on the theme and idea of the work, and specialised publications focus on the level of mastery, determination of the status of the work and its analysis, the review in mass media, whose addressee is the widest audience, almost never relies on a detailed analysis of the work, but includes an emotional attitude to the object of art, an impression of it and often an evaluative component. The priority factors in choosing the object of the review are the type of publication and the author's opinion. The modern art review combines the*

features of analytical, informational and artistic-publicistic genres of journalism. The predominant reflection in the review of individual author's assessment of an art phenomenon is often not accompanied by an argumentation based on the art history knowledge and professional competences of its author. The author's professional competences, his value picture of the world, worldview, life and creative experience, as well as priority models of dialogical communication with the reader determine the selection of art works as objects of review, as well as those communicative strategies and speech tactics that ultimately affect the transformation of this genre in contemporary art journalism.

Keywords: *art journalism, art discourse, review, pragmatics, addressee, author, artistic phenomenon.*

Introduction. In the last decades of the 20th century, the system of journalistic genres was characterised by the loss of normativity, which resulted in the lability of the boundaries between informational, analytical and artistic-publicistic genres [See: Streltsov 1990]. In the 21st century, there is more and more freedom in terms of the presence/absence of generic features of genres, which determines the author's strategies of orientation, first of all, on informative tasks of the message, as well as on the specifics of his/her own style, rather than on genre canons, including in terms of language [See: Annenkova 2011]. Such transformations lead, for example, to the gradual displacement of art criticism by art journalism and the emergence of new features in its main genre.

One cannot but agree with M. Castells, who emphasises: "Time is erased in the new communicative system: past, present and future can be programmed in such a way that they interact with each other in one and the same message" [Castells 2000: 352].

The relevance of studying the current state of the review genre also lies in the fact that the exchange of actual information, which is the focus of the interaction between the author and the audience, determines not only the expected openness of modern journalism, but also its discreteness, when information appears in the form of "quanta", disintegrates into segments, and does not give an opportunity to make a complete picture of the object. Media space is characterised by multidimensionality, including many levels, when information undergoes transformations due to the overlapping of information flows, including in technical terms, when not only by switching from one channel to another, but also by displaying several heterogeneous channels of information (text, video and audio) on one monitor at once. Modern journalism, developing under postmodern conditions, refuses to be linear, hierarchical and systematic, so the ability to focus on a single event, image, political persona or showbiz star brings its own adjustments to the parameters of journalistic texts of various genres. The aim of the article is

to consider and systematise the features of an artistic review under postmodern conditions. We deliberately leave aside the literary review because of the complex interaction between literary criticism, art journalism, the personality of the author of a literary work, as well as the text of the work itself, which allows us to focus on the most common features of art discourse and identify the patterns inherent in the modern media space.

The research methods include deductive-inductive, comparative-comparative, interpretative methods, method of analysis and synthesis applied to the object of research in an integrated way.

Results. The art review, traditionally belonging to analytical journalistic genres, is characterised in modern media space by the synthesis of the features of informational, analytical and artistic-publicistic genres. The distinctive features of the modern review are rich informativeness, advertising character, tendency to reduce the text volume, critical analysis aimed at any one aspect of the work - content or form, or complete absence of the analytical component. The review is also characterized by the reflection of a new type of author, whose professional competences, worldview, creative and life experience, ethical and aesthetic principles, models of dialogue with the reader, methods of selecting art works and corresponding communicative strategies and speech tactics determine the specifics of this genre in contemporary art journalism.

Discussion. Art journalism is a regular in its nature information and analytical activity, the purpose of which is to present cultural phenomena of various scales in the media space - from regional to global, and in this type of journalism all genres and forms of information broadcasting are used, there is an assessment and critical judgement [Sidyakina 2012: 125]. It is safe to say that the language and style of art journalism is not only an indicator of the quality of the published materials themselves, but also a representative of the main trends inherent in contemporary art consciousness [See: Pichko 2015]. One of the most demanded and dynamically developing art journalism genres at present is the review, the impact of which on the addressee is conditioned by a number of factors. Thus, the artist's aesthetic self may not coincide at all with the way the reviewer expresses his emotions, the consequence of which is the synthesis of aesthetic strategies and ethical components of creativity, which is reinforced by the subjective perception of the author of the review, actualised in rhetorical strategies [Kaida 2016: 113]. It is also important that an art review can also reflect the author's subtext, as the perception of art is conditioned by public sentiment, historical and political events, as well as the tastes of a particular addressee: "It is necessary to deduct not only the aesthetic assessment of the performance reviewed by the journalist, but also to understand the principles of its perception in the context of time [Kaida 2013: 123].

The traditional attribution of the review to the analytical group of genres [Streltsov 1990] highlights the presence of an obligatory element of its structure - a critical analysis of a work of art, while the review should also include the necessary information about the author, the date of the play's premiere, the director, the performers, etc. Today, a review can be referred to both informative and analytical genres, which is conditioned by readers' needs for objective information rather than assessments of events and facts. Nevertheless, it can also be confidently stated that a review often reflects an individual-author's assessment of a particular aesthetic phenomenon, and this assessment is not supported by an argumentation based on the art history knowledge and professional competences of its author.

Art in Russia traditionally represents not only a space of objectification of aesthetically significant meanings, but also a sphere in which new value paradigms are formed, tangibly influencing the worldview of the nation as a whole and the individual in particular. That is why the role of an art journalist is a responsible one, often entrusted not only with monitoring the development of cultural processes, but also with mediating between the art object and its addressee. The potential viewer, reader, listener should receive from the author of the review exhaustive information about the work of art, about the meanings embedded in it.

The parameters of a review are often determined by the type and format of a publication, which determine various information and analytical standards, and authors even within a newspaper, magazine, or Internet publication can create their reviews based on a different understanding of the requirements for this genre, and this understanding is based, for the most part, on the principles of Western European or domestic journalism. The art journalist's choice of a certain model determines the choice of works of art for review, the ways of their analysis and interpretation, the structure of the review and other important parameters of the genre.

For example, V. Stepanovskaya's review in *Novaya Gazeta* devoted to the premiere of the opera *Tannhäuser* at the Mariinsky Theatre is characterised by the presence of components traditional for an art review, including statements by V. Stepanovskaya's review in *Novaya Gazeta* devoted to the premiere of the opera *Tannhäuser* at the Mariinsky Theatre is characterised by the presence of components traditional for an art review, including a statement that precedes the discussion part itself: "The production involved star soloists, the full overture of the Dresden version of the opera was performed with Wagnerian scope, the impressive choruses and ecstatic music conducted by Valery Gergiev electrified the hall, while the stage incarnation raised questions and was not accepted by everyone." [Stepanovskaya: URL]. Noteworthy in this review is the reference to the opinion of the stage director himself, which, however, does not prevent the introduction of polemical reflections into the text, for example: "As Vyacheslav Saro-

dubtsev himself admits, the current “Tannhäuser” is a performance with “a newly invented dramaturgy, which nevertheless does not contradict Wagner’s idea”. The latter, however, can be disputed, as there is the existence of ideas in their profane, reduced version. In the performance, the Grotto of Venus in the first act, where Tannhäuser languishes satiated with erotic pleasures, is turned into a low-brow strip club with half-naked girls in cages, where Venus is a prima donna on dusty scaffolding” [Stepanovskaya: URL].

Media space currently has several review formats, among which there are the review-navigator and the review-stimulus, which generally continue the traditions of Russian journalism, as well as the review-filter and the review-signal, the models of which are borrowed from Western art journalism. Of course, different formats are characterised by different degrees of implementation of the cultural and educational mission. Although modern media are characterised by a variety of opportunities for presenting various kinds of reviews, we cannot speak about the full compliance of modern reviews with the audience’s demands. Often reviews depend on editorial policy, which may be determined by market requirements, preferences of sponsors, publication owners, and advertisers. For example, K. Dolina’s review presents a block of information that allows us to simultaneously evaluate this text as both a review-stimulus and a review-signal: “The State Hermitage Museum is expanding its scope of activity to include related arts - literature and theatre. The Austrian-Russian project Flora, which has been launched at the museum, is a “mystery evening”, a “wandering” performance, which offers 12 mini-performances in one evening on subjects related to 12 Hermitage works”” [Dolina: URL].

Reviews can not only reflect the content and artistic value of a work of art, but also noticeably distort these characteristics. The fragmented nature of the media addressee determines the accessibility to a particular social group not of all information, but only a part of it, which is due to the influence of the format of a particular publication. The subject, semantic, and value incompleteness of the review determines its inadequacy to the needs of the addressee; moreover, the regularities of the cultural process and the facts that form it are not analysed in detail in the review, which means that the addressee does not get a full picture of the cultural phenomenon.

The review is a very common genre in publications of various formats, and it is characterised by a certain set of structural elements, including information about the title of the work and its author, the place and time when the public was first introduced to it, a description of the cultural context and the place of the work in the artist’s work, an analysis of the content and form of the work of art, the inclusion of quotations in the review (in the case of a review of a literary work) and/or a reference to an authoritative opinion about the work.

The broad addressability of the review in its classical form is being lost in the modern media space under the influence of market laws and a focus on advertising and informativeness. Publications of different formats need different types of reviews: advertising and informational texts are essential for mass audiences, while detailed analysis is needed in specialised publications. However, the processes of genre transformations in contemporary art journalism cause reviews to lose the reflection of the results of analysing and interpreting works of art, which, in turn, affects the determination of the status of a work of art in the artist's work or in the world cultural process as a whole. Thus, in K. Dolinina's review a separate place is given to the author's personal impressions, which are given more in the style of a bohemian hangout than a convincing art critic's opinion: "The actors and musicians work in a range from an affective student etude to a brilliant, quarter-tone mono-performance. And here regalia, seniority and degree of recognition mean nothing - Sergei Migitsko, an honoured artist of everything from the Lensovet Theatre, easily loses to Vladimir Kuznetsov, a 30-year-old actor of the small "Such Theatre". Although it's not always clear: maybe the second one just got better material" [Dolinina]. [Dolinina: URL]. Emotional attitude to the object of the review prevails in V. Slovohotova's review of the play Mkhokhodova. Slovohotova's review of the Chekhov Moscow Art Theatre's production of Y. Olesha's novel *Envy*: "Behind the plywood wall there are staircases leading, if not to the sky, then to the "bright" future, where any emotion can be artificially induced. But this is hard to believe when you look at the crowd obsessed with the thirst for the irrational. Zhenovach's play is one big metaphor: KavaleroV finds himself hostage not just to the Babichev brothers, but to his own feelings and, no less importantly, his own intellect. The improvised meeting where the characters confess their dreams takes place in his head, and the communal flat itself is a model of his inner world, where both good and evil coexist. At the top of the pyramid is not common sense, but her majesty envy, for it is this envy that undermines the building and forces KavaleroV to take up the knife. The historical experiment to create a hero of the new time fails, because it was conceived by cranks who can believe in the eternal radiance of pure reason. KavaleroV is just a little extra man, and nothing human is alien to him." [Slovohotov: URL].

The genre of modern art review is influenced by postmodernist consciousness, as art itself often embodies the idea of hopelessness, pessimistic attitude to the world and to the individual. Therefore, the characteristics of discreteness and disharmony are inherent in the review itself, which, on the other hand, is increasingly moving into the sphere of entertainment and pre-performance, largely following the general trend of art in terms of public epiphany, on the one hand, and attraction techniques, on the other. The art review can now rely on variant interpretations of a work of art, and it can contaminate various aesthetic categories and reflect an

ironic perception of reality. The modern understanding of the world is actualised in the choice of lexical means, methods of influencing the reader, and in the general character of the style of art reviews. Nevertheless, reviews contain valuable material not only in terms of aesthetic and ethical assessments of various cultural phenomena, but also in terms of discovering the most important qualities of contemporary artistic consciousness, which are somehow fixed in the language and cultural process as a whole.

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DOI 10.34660/INF.2023.60.83.104

关于中国学生在俄罗斯大学适应的学习流程和教学支持（来自工作经历）
**ABOUT THE LEARNING PROCESS AND PEDAGOGICAL
SUPPORT FOR THE ADAPTATION OF CHINESE STUDENTS IN A
RUSSIAN UNIVERSITY (FROM WORK EXPERIENCE)**

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抽象的。本文探讨了俄罗斯大学中中国高级学生的教育过程结构。给出了正在研究的主题并显示了作业示例。建议开展一系列活动，让学生舒适地沉浸在外语环境中。大量中国学生来到俄罗斯大学接受高等教育。

关键词：俄语作为外语、教育过程、中国学生的社会适应、教学支持、语法、言语表达、词汇。

***Abstract.** The article examines the structure of the educational process for advanced-level Chinese students at a Russian university. The topics being studied are given and examples of assignments are shown. A set of activities is proposed for comfortable immersion of students in a foreign language environment. A large number of students from China come to Russian universities to obtain higher education.*

***Keywords:** Russian as a foreign language, educational process, social adaptation of Chinese students, pedagogical support, grammar, speech production, vocabulary.*

As you know, every year a large number of students come to Russian universities wanting to receive higher professional education, and, of course, our university is no exception. Visitors are attracted, first of all, by the in-demand specialty and the opportunity to immerse themselves in the culture of the language they are learning. As a rule, Chinese students choose the following areas of training, such as economics, philology, linguistics, linguistics and literary criticism, and so on. It is well known that a large number of Chinese citizens are educated at the Peoples' Friendship University of Russia, the State Institute of Russian Language named after. A.S. Pushkin, Kazan (Volga Region) Federal University, Moscow Pedagogical State University, Moscow State Linguistic University, Far Eastern Federal University and other universities in our country.

I want to talk about our Kazan National Research Technological University, where advanced-level Chinese students studied every year. But despite the previously received training in the field of Russian as a foreign language, there were still some difficulties both in the language itself and in adaptation to the new language environment and culture. From my practice of teaching Russian as a foreign language, I observe the need for regular repetition of material studied at the initial stage of training. In this article I will talk about ways to solve the above. As it turned out, the guys were prepared in terms of the Russian language, but they produced very little. The reasons are clear: the large number of students in study groups (in Chinese universities), the dominance of written over oral speech, immersion in a new environment.

Throughout the academic year, students studied various aspects of the language: each lesson of the textbook consisted of several blocks, the latter in turn included:

- introduction to the topic (“Modern youth” / “Ecological boomerang” / “Sport” / “Marriage and family” / “Russian folklore” / “Transport system” / “Economy and society” / “Higher education” and many others);

- conversation and discussion on a specific topic;

- familiarization with new vocabulary: translation into the native language, examples of use, explanation in Russian, since distortions and inaccuracies are often identified when translating into the native language;

- working on the topic using the grammatical material of the textbook and additional information from the teacher;

- “a moment of laughter”: small jokes;

- pre-text tasks;

- work with text;

- lexical and stylistic work;

- final work, which consists of the following: writing an essay / public speaking / conversation on issues.

Let’s take a closer look at some types of work. For example, when studying Russian folklore, it is at the same time worth considering in detail the means of artistic expression (imagery): comparison, personification, metaphor and others. Proverbs and sayings, as is known, reflect the spiritual life, mood and morality of the people.

In parallel with Russian folklore, we took and studied Chinese folk tales, proverbs and sayings [1]: *What is written on paper, even the gods will not erase. You won’t learn to work when you are young; in old age you will be left empty-handed. Persistence is the key to success. There is no shame in not knowing; the shame lies in not finding out; When fate turns away, then gold also fades; When fate smiles, then iron shines brightly.*

Before starting lexico-stylistic work, it is necessary to study in detail the functional styles of the Russian language, lexical and syntactic features, genres of each style, and examples of use. We recommend finishing with a test on this topic. A manual on teaching functional styles [2] helped us with this.

Working with vocabulary is a fascinating, effective, necessary and useful process. This includes the most relevant topics for foreigners (especially relevant at the advanced stage of learning): word composition, synonyms, synonymous series, antonyms, paronyms, borrowed vocabulary, word combinations, lexical redundancy, etc. As an independent task, you can invite students to work with an explanatory dictionary of foreign words:

- find the meaning of a foreign word in a dictionary and write it down in a notebook;
- determine the origin of the word;
- be able to use.

In the process of studying / repeating / consolidating the above, parts of speech should be repeated, since this is no less important and this is where confusion arises among foreigners. For a long time, many people, without exception, make mistakes when using adverbs and adjectives. We regularly completed tasks aimed at studying and mastering verbs with different prefixes. As an example, we can give the following: the verb to live with prefixes: get used to it, survive, survive, live, live, live, live, make money, survive, survive, etc. It is necessary to give students knowledge about polysemy, literal and figurative meaning, and provide examples of use in everyday life and in fiction.

Studying the topic “Sport”, we talk about the place and role of sports in modern life in Russia and China, about types of sports; students make a report about a famous athlete from Russia and China. Using this material, we practice grammar: we recall word-forming suffixes.

kind of sport	sportsman
figure skating	figure skater
chess	chess player
wrestle	wrestler
swimming	swimmer
boxing	boxer
run	runner

Speaking about the topic “Higher Education”, we also consider the education system in Russia and China, respectively. We practice vocabulary and speech structures, supplementing them with dialogues.

Regarding the successful assimilation of fiction, understanding of history, culture and the very sociocultural adaptation of Chinese students to the new ethnocultural environment, here we can recommend:

- joint trips of students and teachers to the Historical Museum;
- thematic visits to theaters, cinemas, exhibitions, libraries;
- holding a “Dating Day” (to introduce different study groups to each other);
- holding New Year celebrations within the university;
- conducting a sightseeing tour of the university’s academic buildings; a sightseeing bus tour of the city where students live and study; sightseeing;
- visiting a ski resort, ice skating rink during the New Year holidays.

Thus, what is described above can lead to successful mastery of Russian as a foreign language, the ability to produce oral speech in all areas of communication and comfortable adaptation to a new ethnoculture. All this is possible with a properly structured educational process, a comfortable environment and the diligence of the student himself.

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DOI 10.34660/INF.2023.95.96.105

消费作为现代文化哲学中的标志：主要规定
**CONSUMPTION AS A SIGN IN THE MODERN PHILOSOPHY OF
CULTURE: THE MAIN PROVISIONS**

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抽象的。文章旨在确定解释消费的象征性质的主要趋势。消费符号概念的主要论点是主张消费是一种交换系统和语言的等价物。本文指出了消费意识形态的符号解释的最重要趋势。包括消费与“空性”逻辑的联系、将消费视为社会意识形态分层的现代手段、赋予身份建构的消费功能、消费的内涵与现实性和缺乏性原则等。二十世纪寻找真实的经验，以及将消费解释为隐含的暴力。

关键词：消费、消费意识形态、消费社会、空符号、拟像、真实、后现代性、显性和隐性暴力。

Abstract. *Article aims to identify the main trends in the interpretation of the symbolic nature of consumption. The main thesis of the sign concept of consumption is the claim that consumption - a system of exchange and equivalent of language. The article identifies the most significant trends of sign interpretation ideology of consumption. These include the connection between of consumption with a logic of “null character”, consideration of consumption as a modern means of ideological stratification of society, empowering the consumption function of the constitution of identity, the connotation of consumption with the principle of reality and lack of experience in search of the real in the XXth century, as well as the interpretation of consumption as an implicit violence.*

Keywords: *consumption, ideology of consumption, consumer society, empty sign, simulacrum, real, postmodernity, explicit and implicit violence.*

Consumption in modern philosophy is considered as the dominant social process. Consideration of this process has long gone beyond the scope of economic and sociological research. And if economics and sociology in the phenomenon of consumption are interested in such aspects as the relationship between consumption and production, consumption and pleasure, the study of the personality of the buyer-consumer, then philosophy is characterized by a broader research context in which consumption is one of the hypostases of postmodernity.

The most significant milestone in the study of consumption was the iconic interpretation. Formed in the middle of the twentieth century, it remains dominant until our time. The main thesis of the iconic concept of consumption is the statement that consumption is a system of exchange and the equivalent of language [1]. Consumption is the language of our society and the way society members communicate with each other, since consumption is based on the code of signs and distinctions. The function of the consumed, as well as the pleasure associated with consumption, are secondary. This article aims to identify the main trends in the interpretation of the iconic nature of consumption.

I. *The logic of the empty sign.* One of the most significant trends in the modern interpretation of consumption has become the connotation of the latter with emptiness. In Baudrillard's philosophy, the emptiness of a sign is denoted by the concept of a "simulacrum", the main property of which is an imaginary presence [2]. In relation to the ideology of consumption, this logic asserts the emptiness of the product: it does not serve to satisfy the need and is intended for the use of not a thing, but a sign.

In Zizek's interpretation, the logic of the empty sign is connected with the fact that today no product is "really that", does not meet the expectations that it causes. Zizek considers the "Kinder Surprise" egg to be a kind of symbol of the structural gap between expectation and reality in relation to the commodity system: buying chocolate, we actually buy a toy. Zizek refers to the definition of a commodity by Marx, who pointed out its mystery, the promise of "something more", an incomprehensible pleasure, the location of which is fantasy. Modern advertising is not addressed to needs, but to this fantasmatic place. And the symbolic meaning of the "Kinder Surprise" is seen in the fact that the toy inside the shock-cold egg is the result of an attempt to directly materialize, to make visible the mysterious redundancy of the product. Thus, Kinder-Surprise gives a formula for all goods that promise "more", compensating for the absence of "less", compensating for the fact that goods by definition do not fulfill their promises: "...A real product is a product that does not need any addition, it is a product that simply gives what it promises - ...no less and no more" [3, p. 259].

An example of considering consumption in the context of the logic of an empty sign in Baudrillard can be his analysis of empty functionalism, embodied in such concepts as "gizmo", "gadget" and others. The "thing" is a gap in the functional world, a thing detached from its function. In modern civilization, more and more things fall under this empty concept [4, p. 46 - 50]. There are more and more nameless goods in society, or named with difficulty, through neoloisms and periphrases. The shortage of names creates a favorable ground for the formation of a totalitarian code of modernity, since in such a world people are less resistant to mythology.

In modern society, the relationship between an object and its symbol is reversed: it is not the image that represents the product, but, on the contrary, we buy the product because it represents a certain way of life. Žižek calls this trend the reification of experience. We do not buy objects, but experiences, involvement in a certain way of life. Items are considered and bought only as a means to get certain experiences. Goods become props, platforms around which cultural values are built [5]. They lose their material significance, while acquiring a symbolic one. By buying a thing, we buy life. Žižek points out that the next step is logical, implemented so far only in science fiction films. This step is to sell the experiences themselves, bypassing the subject.

The connection between emptiness and consumption can be seen by looking closely at the very essence of modern capitalism. The capitalist system is conditioned by the idea of capital virtualization: “The corporation belongs to another corporation that borrowed money from a bank that manages the money of ordinary people” [5, pp. 48-49]. Žižek compares the paradox of capitalism with the paradox of the electron in physics: the mass of any element is equal to the mass of rest and the mass of excess created by acceleration during movement. And it turns out that the mass of an electron consists only of excess, as if we are dealing with emptiness. We see a similar principle in the modern consumer society. The net value of the capitalist is zero, he works with an excess taken from the future.

II. *The iconic stratification of society.* The second significant trend is the connection of the ideology of consumption with the iconic stratification of society. Consumption performs the function of dividing society. The logic of the sign, replacing economic logic, assumes that the sign replaces the product, status relations replace market relations, and the principle of equivalence is replaced by the principle of difference. Baudrillard’s consumer stratification is associated with two components. Firstly, categorical sectors of needs are identified in the consumer himself, which retain only a distant connection with the living integrity of his personality. Secondly, there are status groups in society that identify themselves through one or another set of things. The hierarchy of goods and things in these social groups replaces the hierarchy of values, group morality is based on it. As a result, categories of things create categories of personalities [4]. So consumption becomes the mainstay of the social system.

Semiotic reflection of social contradictions is associated with the differentiation of people using signs. The symbolic differentiation of society is designed to eliminate real social contradictions. According to Baudrillard, the ideal space for the realization of the iconic stratification of society is a modern urban environment. If in the 19th century the city was a political and industrial polygon, today it is a polygon of signs and codes. The essence of the modern city is in the sign, it is not by chance that Baudrillard uses the concept of “semiocracy” in relation to

the city: "... Today it is the primary place of execution of signs – as the execution of a sentence on which life or death depends. ... Its essence is being imprisoned in a form/sign – everywhere. It is all a ghetto of television, advertising, a ghetto of consumers/consumed, pre-calculated readers, encoded decoders of media messages circulating/circulating in the subway, entertaining/entertaining during leisure hours, etc. Each space/time of urban life forms a special ghetto, and they all communicate with each other. Today, socialization – or rather, desocialization – occurs through such a structural scattering across many codes. ... Everyone is lined up in a row, and everyone unconsciously identifies himself with skillfully placed guiding simulation models" [2, pp. 137-138].

III. *The function of identity construction.* One of the most controversial trends was the connection of consumption with the symbolic constitution of identity. This aspect affects the basics of understanding the essence of a person. The modern system of consumption undermines the belief in the core of identity, the belief that the unity of personality is hidden behind the difference of shells.

In the work "The Doll and the dwarf" Zizek talks about the experiment of the magazine "Stern". The experiment consisted in the fact that the magazine paid a couple of homeless people to allow themselves to be handed over to the best fashion designers and hairdressers. In one of the issues of the magazine, two parallel rows of photographs taken "before" and "after" were published. The result was shocking in that the confidence that the same person was hiding behind different appearances was shaken. Although it was clear that we were dealing with the same person, it wasn't just the appearance that seemed different. The audience somehow felt a different personality behind the appearance [3, p. 264 - 270]. This experiment has undermined faith in the core of identity, which is responsible for our dignity and is preserved despite changes in appearance. The experiment made us think that the core of our subjectivity is emptiness.

IV. *Consumption is interpreted as implicit violence,* the task is set at the symbolic level to identify the mechanisms of subordination acting through consumption. Thus, Baudrillard believes that consumption is associated with a totalitarian code, which, thanks to advertising, acquires an imperative sound. The positive aspects of this process include the fact that consumption ensures the socialization and secularization of identification marks. The system of "standing" makes all caste and class rituals, all criteria of social discrimination powerless. In addition, it is noteworthy that for the first time in history, a universal system of signs and their reading is being formed. The negative aspects of the totalization of consumption include, firstly, the fact that the above-mentioned universalism is achieved at the cost of simplification, impoverishment, regression of the language of social dignity, when a person is "characterized" by his things. Secondly, a negative factor is the forced correlation with one sign system – the consumption system [4].

Through it, hierarchical differences are imposed on the whole society. It is no coincidence that Baudrillard called the Western society of his time a “semicracy”, and the modern city a landmark ghetto.

For Marcuse, consumption is a special type of manipulation of consciousness associated with the formation of “one-dimensional thinking”. Manipulation of consciousness is associated with the formation of “false needs”. Modern social contradictions are invisible to most people. In fact, the vices of capitalism have not disappeared, exploitation and slavery exist in a symbolic space, in a latent form: “slaves of a developed industrial civilization are sublimated slaves, but they are slaves, since slavery is conditioned” [6, p. 234]. Marcuse believes that modern Western civilization has achieved a paradoxical effect: it has deepened slavery in the complete absence of the slave’s awareness of his own slavery. Slavery arises on the basis of consumption. A person obeys by consuming. The consumer society creates such conditions that no one comes up with the idea of changing the social structure. Consumption is perceived as the only free form of existence.

The connection between consumption and violence is based on the difference in the modern philosophy of explicit, visible, and implicit violence. To see the invisible violence, you need to be able to distance yourself from the visible, “subjective” violence committed by a clearly identifiable force. For example, Zizek distinguishes (1) “subjective” violence, which is explicit and is only the tip of a triangle, (2) symbolic violence, embodied in language and cultural forms; this type, apparently, includes coercion-consumption, as well as (3) “systemic” violence – catastrophic consequences the work of political and economic systems; capitalist society as a whole, capitalism as a system belongs to this form [7, pp. 50-55]. The essential thing here is the fact that “subjective” violence is perceived as a violation of the norm, a peaceful state of things, whereas the other two types – “objective” violence – are inherent in the “normal” order. The system of consumption is not perceived by the layman as violent, since in this case coercion cannot be attributed to specific people, it is anonymous and total [7, p. 59]. This is the peculiarity of modern ideology: certain attitudes and norms of life are no longer perceived as ideological. They seem neutral and ordinary. On the contrary, we call ideology what stands out against a natural background: extreme religious zeal, emphasized loyalty to a certain political orientation. Therefore, the modern system of consumption can be called one of the most effective ideological mechanisms: its compulsion manifests itself as self-management of the environment.

Thus, the most significant trends in the interpretation of the ideology of consumption in modern philosophy are:

1. The connection of the consumption system with the logic of the “empty sign”, various variations on the theme of emptiness, hiding behind modern commodity fetishism.

2. Consideration of consumption as a modern ideological means of stratification of society.
3. Endowing consumption with the function of the symbolic constitution of identity.
4. The interpretation of consumption as implicit violence.

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后马克思主义视角下的社交媒体与异化问题
**SOCIAL MEDIA AND THE PROBLEM OF ALIENATION FROM
THE POINT OF VIEW OF POST-MARXISM**

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抽象的。本文考虑了经典马克思主义异化概念的转变，以及社交媒体功能背景下的相关商品拜物教和剩余价值概念。社交媒体作为创造剩余价值的工具和利用数字劳动力的手段的作用得到了体现。有人认为，社交媒体的运作基础是一种吸引、连接、提供的意识形态，作为掩盖数字劳动力剥削的技术。有人认为，这种意识形态的功能是掩盖对数字劳动力的剥削的技术。经历了积极的社交和沟通体验，个人为商业策略提供了大量的个人数据。与此同时，人们关注的焦点是数字化这样的现象，即社交媒体传播的虚拟空间引发了个体身份的分裂，而个体成为一个连续体。作为失去身份的替代方案，现代高科技资本主义提供了数字身份识别。这个过程可以在“主体之死”概念发展的框架内来理解。在先验主体之后，经验主体离开，据此我们解释了超人类主义的日益流行。与此同时，数字化可以在资本主义解域化逻辑的框架内进行解释。

关键词：社交媒体、数字化、数字资本主义、参与-连接-提供意识形态、商品化、身份分裂。

Abstract. *The article considers the transformation of classical Marxist concept of alienation, as well as related it concepts of commodity fetishism and surplus value in the context of social media functioning. The role of social media as tools for creating surplus value and as means of exploiting digital labor is shown. It is argued that social media functions on the basis of an engaging-connecting-providing ideology as a technology for masking the exploitation of digital labor. It is argued that such an ideology functions as a technology for masking the exploitation of digital labor. Experiencing a positive experience of socialization and communication, an individual provides a lot of personal data for business strategies. At the same time, the focus of attention is on such a phenomenon as digital alienation, which consists in the fact that the virtual space of social media communications provokes the splitting of the identity of an individual who becomes a continuum. As an alternative to the lost identity, modern high-tech*

capitalism provides digital identification. This process can be understood within the framework of the development of the concept of “death of the subject”. After the transcendental subject, the empirical subject leaves, in the light of which we explain the growing popularity of transhumanism. At the same time, digital alienation can be interpreted within the framework of the capitalist logic of deterritorialization.

Keywords: *social media, digital alienation, digital capitalism, engaging-connecting-providing ideology, commodification, identity splitting.*

The emergence of digital social reality is usually associated with the growth of welfare, solidarity and democracy. A digital society permeated with social communications must overcome or largely overcome many traditional problems due to the high degree of coordination of people through mobile communicators and the difficulties of hiding information in the conditions of digital technologies [1, pp. 46-90].

In the well-known book by top managers of Google Corporation Schmidt and Cohen “The New Digital World”, the authors draw pictures of the coming digital social reality in a semi-utopian form, emphasizing its advantages in comparison with the “old analog world”. These benefits are expressed in increased prosperity, solidarity and democracy. The digital society, permeated with myriads of social communications based on media platforms, should, if not outlive, then largely overcome many traditional problems. First of all, we are talking about the problems of deep economic inequality between individuals, social groups, states and geographical regions, about the abuses of political elites and officials. Positive transformations, according to digital visionaries, will be achieved due to a high degree of coordination of people through mobile communicators and transparency associated with the difficulties of hiding information in the conditions of digital dominance. In addition, digitalization gives a new impetus to globalization, which, in particular, should ensure that individuals have equal economic opportunities for employment in the economy. Not only individuals gain additional potential, but also ideas and solutions [1]. At the same time, the interests of capital in the new digital world are not articulated by the authors, just as the main question is not formulated: are digitalization, the Internet and social media capable of solving urgent social problems while remaining instruments of corporate capital, or rather generate new ones?

The concept of information society is associated with the socializing, solidifying and exposing role of social media. The subject of the article lies in the field of existential analytics of human existence within the information society. The analysis is based mainly on the ideas of the critical theory of the Frankfurt School. The aim is to demonstrate that the classical Marxist concepts

of labor, alienation, surplus value, commodity fetishism and others, reinterpreted within several generations of post-Marxism, under the conditions of the onset of a digital capitalist society, acquire new connotations that force, among other things, to reconsider the basic attitudes of Marx. In addition, at this stage, these transformations can be fully understood only taking into account transhumanistic and posthumanistic ideologies.

At the moment, a considerable number of authors are engaged in critical studies of social media within the framework of late capitalism. Among them are Andrejevic., Hesmondhalgh, Fisher, Fuchs, Mendelson, Scholz. The accusatory pathos of these researchers is usually associated with the identification of the interests of capital and the discovery of new forms of exploitation and alienation created by digital capitalism. Social media is considered from the point of view of the presence of implicit ideological attitudes that form distorted attitudes of consciousness. Marcuse saw in electronic computing devices the apogee of capitalism with its formal rationality and the desire to calculate everything in quantitative terms [2, p. 168]. However, the phenomenon of computerization fully manifests itself only at the beginning of the new century. The scale of this phenomenon is associated with the formation of a new anthropological type. We are talking about the final stage of alienation within capitalism.

We can talk about two aspects of this process. The first of them is ideological. As Lukach also noted, alienated labor needs an ideology that generates alienated consciousness. Analyzing the ideological functioning of social media, Fuchs proposes the concept of engaging-connecting-warning ideology (engaging/connecting/sharing ideology). Instagram Facebook, YouTube, Twitter, and the largest media platforms proclaim the corresponding installations at the level of their slogans [3, p. 66]. When entering the media sphere, an individual should feel like an organic part of a benevolent community of communicants. The positive social experience of communication, entering into communities of interest, from Fuchs' point of view, veils the processes of commodification hidden behind it, the extraction of surplus value. The latter are directly related to the advertising business. Media platforms are essentially the largest advertising agencies that trade users' personal data and use digital labor. Thus, an inverted commodity fetishism is formed: the directly experienced social experience masks the financial relations hidden behind it.

The conclusion that follows from this situation is as follows: an inverted commodity fetishism is being formed, consisting in the fact that now the subjective hides the objective. That is, the social experience directly experienced masks the financial relations hidden behind it, which, due to powerful mediation, may not fall into the sphere of attention at all. However, it should be noted that what plays the role of objective in inverted commodity fetishism, in classical commodity

fetishism, was seen as subjective. In other words, for Marx, commodity-money relations hide the relations of exploitation, and in the new conditions, the positive experience of socialization hides the relations of exploitation. It turns out that the morally reprehensible, but indirect use of neighbors becomes possible due to their direct positive experiences. In critical Marxist terminology, this means that the subject masks the subject, more correctly the subjective hides the subjective. Thus, the ingenious inversion proposed by Fuchs turns out to be not exactly what he pretends to be. But still, another interesting conclusion follows from this: in the conditions of digital capitalism, there is almost no place for the objective. This train of thought directs us towards Jean Baudrillard's reflections on the dominance of symbolic exchange.

The second aspect of alienation in digital capitalism is anthropological. It can be described using the concept of digital alienation. The idea of well-known sociologists that "capitalism has outgrown individualism and is no longer so shaped by it that individualism may be dysfunctional for capitalism in the modern world" explains the phenomenon of proliferation of virtual personalities, leading to the fact that the number of accounts tends to exceed the number of real users of social media [4, p. 75]. It is known that the mechanisms of identity formation in post-industrial society began to have a market consumer character, when the "I" is built through images: "the "I" becomes identical to visual signals. They include the shape of your body, the forest decorations, the type and contents of your house, the places where you visit and where you can be met, the way you behave and talk, what you talk about, your expressed artistic and literary tastes, your usual food and the way it is prepared - and many other things supplied by the market in the form of material goods, services or knowledge" [4, p. 84].

Now these signals are sent in a virtual environment within different, often non-overlapping communities, which are selected a priori so as to perceive one or another identity of the communication participant loyally. The real world does not provide such comfortable conditions. As Openkov notes, "an individual, a whole person, walks away, chained to his uniformity, as to a heavy backpack, in his place comes a continuum, a man of many faces" [5, p. 64]. Virtual space is an incubator of split identity. Projected into a virtual environment, it is alienated, and alienated, it splits. Alienation and splitting are a two-pronged process, the first inevitably entails the second. This is the first moment of digital alienation and, at the same time, the moment of deconstruction of the empirical subject. Its specificity is that it is to some extent controlled by a person. But there is a second point. The centrifugal movement of the disintegration of identity in the virtual environment, in our opinion, raises a legitimate question about its preservation in digital form, namely in the form of digital identity identification. The latter is perhaps the most important component of the digitalization process in the modern

world. It is no coincidence that this process is actively promoted by States and transnational financial structures.

Thus, for the system, a person ceases to be even an empirical subject, he turns into a digital code based on biometric information. As Openkov rightly notes, “at the first stage, a man of many faces will stop trying to be a man, at the second it will become impossible for him to go back, no matter how much he wants it” [5, p. 65]. It turns out that the attractor in the process of anthropological alienation has always been the posthuman society in its digital form. This is the limit of alienation and at the same time the completion of the dialectic of enlightenment.

Honnet distinguishes intersubjective (in relation to others), subjective (to oneself) and objective (to the world/nature) forms of reification and corresponding forms of alienation [6, p. 75]. Communicants are used to motivate the virtualization of identity, the disclosure of personal data, which is then sold to the business. At the same time, they are dehumanized, entering the race of signification, permanently being information-generating devices. Such traditional constants of human existence as reflection, prayer, empathy are excluded by digital capitalism.

Social media also blurs the line between working time and leisure or work and play. As Fuchs notes, “in the race, work and play are combined in game work, which is used for capital gains. In this sense, Facebook focuses on the total commodification of time – all human time should become a producer of surplus value ...” [3, p. 128]. The newly invented activity in the interests of capital is called “playbots” (play-bour). The strategy of capitalism in this case is to present alienated labor as creativity and freedom for the exploited, so that they experience the pleasure of exploitation.

At the present stage, the boundary between production and consumption also turns out to be insignificant, since consumer alienation is the same as labor alienation, which was pointed out by Adorno. In addition, in conditions of excess production capacity, consumption becomes more important than production. However, let's not forget that consumption is an ideology, and the means of maintaining and the source of the necessary cultural standards are the media, but increasingly social media. And they, in turn, are based on what Jenkins called a “culture of participation” in relation not to politics, but to communication, in which any user is called upon to create and distribute new content [7, p. 133]. The communicant not only distributes content, but also gives valuable personal data to the business, as well as assimilates the necessary cultural patterns. Thus, late capitalism is confined precisely to the virtual environment.

Thus, the modern stage of the development of capitalism is rightfully called “digital capitalism”, since the process of creating surplus value is largely closed to the virtual digital environment of social media. Commodity fetishism, alienation, surplus value, as well as the ideology that ensures their functioning, having

originated within the framework of industrial capitalism, are not overcome, but are fixed in a new digital form. Through a positive experience of socialization and communication, an individual provides personal data for business strategies. Their implicit ideological basis is an engaging-connecting-distributing ideology and a culture of participation promoted by social media, which are also drivers of the depersonification process. Digital alienation consists in the fact that the virtual space of social media communications provokes the splitting of an individual's identity. As an alternative to the lost identity, modern capitalism provides digital identification.

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DOI 10.34660/INF.2023.77.87.107

人口理论与世界统一问题

POPULATION THEORY AND THE PROBLEM OF WORLD UNITY

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retired

“The body is not made up of one member, but of many. If the leg says, “I don’t belong to the body because I’m not a hand,” is that why it doesn’t belong to the body? And if the ear says, “I don’t belong to the body because I’m not the eye,” then does it not belong to the body? If the whole body is an eye, then where is the hearing? If everything is hearing, then where is the sense of smell?”

*New Testament
First Epistle to the Corinthians
Chapter 12*

抽象的。本文提出了世界统一性的问题，作为一种重要的科学方法，它对周围空间和物体环境建立了稳定的建设性感知，并有可能组织一种有条不紊的彻底方法来解决个别科学的问题。作为构建统一世界秩序的主要学说，它提出将大众性巩固为一种重要的形而上学实质，描述了自然界中运行的对象和过程条件的共性。建议将矛盾概括理论作为一个工作工具，它使用抽象方法来处理人口系统的动态，这使我们能够描述一种研究任意人口系统的通用方法，以在任何科学中普遍应用。

关键词：世界统一、人口理论、矛盾概括、信用、信用化、形而上学、资源空间、人口。

Abstract. *The paper raises the question of the Unity of the World as an important scientific approach that sets a stable constructive perception of the surrounding space and the object environment, with the possibility of organizing a methodically thorough approach to solving the problems of individual sciences. As the main doctrine of building a unified world order, it is proposed to consolidate popularity as an important metaphysical substance describing the commonality of the object and process conditions operating in Nature. It is recommended to make the Theory of Ambivalent Generalization a working tool, which deals with the dynamics of population systems using an abstract approach, which allows us*

to describe a general methodology for the study of arbitrary population systems for universal application in any sciences.

Keywords: *Unity of the World, Population Theory, Ambivalent Generalization, credies, creditization, metaphysics, resource space, population.*

The grounds of disunity in science

Modern science, despite all its inclusiveness, has not come close to a reliable answer to the question: Does the surrounding World have unity? And today, apparently, the arrow of collective opinion on this issue in the scientific community is leaning towards the denial of World unity.

The fundamental statement about the existence of Unity in the Universe at the moment has no obvious connecting bridge between the General and the Particular. Moreover, this global statement is not based, in fact, on anything but two props, one of them is atomistic metaphysics, which did not resolve the collision of the coexistence of atomistic and field entities, the other prop is an ethereal dialectic, deserving such an epithet due to its supposed omnipresence, with complete baselessness. But, in the presence of such a quintessence of references to global unity, the results are formed in a free way in the form of a set of individually defined entities, on which an ensemble of principles of local application is superimposed. It is necessary to clarify: the disunity is especially clearly found not in adjacent, but on different “floors” of the Universe, that is, between, for example, electrodynamics, economics and linguistics.

Thus, the description and consideration of any issues of reality, in fact, is carried out within the framework of highly specialized approaches, generally speaking, which do not provide for the existence of unity in Nature. Each case is interpreted as a separate excess, often not having commonality with others, even if they have conjugation within the same material and physical substances. It is obvious that agreeing with such conclusions, in general, or even in a single case, is equivalent to denying World unity as a whole. Then, recognition of the lack of the possibility of appealing to global unity, and the need for it, can be demanded from any more or less honest researcher, both by actual results and by logical constructions.

The trend of non-recognition of World Unity is undoubtedly increasing in the present era, the age of a globally expanding set of objects and spaces mastered by mankind, including with the use of a scientific approach. It is as if the expansion of the boundaries of knowledge is in a counter-phase with the recognition of the unity of all natural entities. And it seems all the more incredible if we mention that an expanding set of scientific methodologies and tools demonstrate high efficiency when transferred to new scientific directions, which, as if, should increase the degree of awareness of a certain community in the surrounding reality. However, paradoxically, at the moment the processes are moving towards a rapid separation

of sciences, and finding reasons for statements about the exclusivity of individual sciences, which is a direct application for the uniqueness of scientific methods, and, accordingly, for the exclusivity of the objects of research of this science.

Nevertheless, according to a balanced reasoning, it can be assumed that the denial of the Unity of Nature can be explained by the specifics of the social and mental dependencies of the researchers themselves, being the effect of side political and religious vectors in scientific activity.

The main trend of the unification of scientific directions is due to the increasingly rapid increase in the internal complexity of all sciences. In such conditions, with a low speed of external discussions of new doctrines in the scientific community, as well as as a result of a “spotlight” view of emerging scientific problems, new knowledge for a particular scientific direction acquires the features of a cell, like a “Sect of Special Knowledge”.

It can be argued that the nature of human egocentrism is also beginning to work against the search for unifying worldview approaches, in which aspirations for greater individualization of individual areas in science are winning, which can even be called “tsekhovization” of scientific activity. Declarations of the exclusivity of some sciences are often modulated by the desire to attract funding, as well as attempts to develop scientific areas as isolated, and even monopolized business areas.

It is not necessary to evaluate too negatively, for the purposes of maintaining tolerance for various scientific views, but, all sorts of theories of “multiverse”, “parallel worlds”, “information spaces” and “space-time burrows and bubbles” generated by the mouths of some gurus from science, which also cause a lot of confusion in the public and scientific consciousness, which is also it works against awareness and the search for unity within our ordinary World.

It is also necessary to take into account the fact that science in modern society often fulfills the orders of political, class, religious and business communities, which further segments the field of science. The same reasons lead to the expressive presentation of announcements about certain scientific areas by mass media. The goal, of course, is a massive marketing and political impact on public consciousness. It is obvious that such techniques are aimed at maintaining and preserving a privileged position, including financial, for personalized elites, each in its own industry.

Thus, it should be recognized that science has reasons to deviate from the goal of establishing possible laws of the Unity of the Universe, not only for reasons of gnostic difficulties, but also for quite prosaic reasons related to the dependence of scientists on society, and the existing structural, informational and cognitive features of the scientific environment.

However, the main reason for the perception of a Single Universe as an unreliable assumption is its fundamental lack of proof, both because of the uncertainty

of the observed parameters demonstrating unity, and because of the lack of abstract models that allow verification at all levels of cognition. The problem of the lack of a formulation of the law does not allow us to find axiological connections between objects in various levels of the surrounding reality that appear to us, nor does it provide a methodological basis for indicating the directions of application for individual scientific directions. The mechanism of cognition of the surrounding world described too generically generates too many unfounded statements, and may cause the appearance of far-fetched Gnostic contradictions and prohibitions in science.

Proceeding from the above, today's science on the way to cognition of the unity of the World must get rid of the "simulacrum", i.e., get away from the incoherent description of the Universe, prove that the incoherency of the Universe does not correspond to reality, or find and indicate the demarcation for the separated bases of the world order.

Science, in the matter of the unity and fragmentation of the surrounding world, like any scientific knowledge, follows a tortuous path of dialectical change of affirmative and negative conclusions, which, perhaps, has not been studied in too much detail in modern philosophical ontology. In this paper, we will not conduct a study of all the vicissitudes of the historical path of cognition and affirmation of the unity of Nature, pointing out for example only one well-known and more or less discussed fact of the transition from polytheism to monotheism in the scientific and religious interpretation of the origin and development of the World.

Perhaps, if the bet is placed on the existence of such a phenomenon as a Single World, we have to consider as a possible option that it is the specifics of the unified laws that unite this World that generates the diversity of the surrounding World.

The situation may also be such that the unity of the World, which has not been reliably established for today, is the reason for many contradictions formulated in science and philosophy, which cannot be avoided if one does not see the underlying reasons – those laws of unity that permeate the entire Universe.

Apparently, it is possible to propose for discussion a question lying in the same plane, but formulated in a different perspective:

Is it really the laws of the One World that define the polymorphism (diversity) that we observe, or is diversity a consequence of the fact that there is no global unity?

If there is unity, then how can the relevant laws be formulated, and through what media are they embodied?

We will not put a thoughtful ellipsis, and we will try to present some solution, perhaps allowing us to "straighten" the question marks at the end of the previous paragraph.

Popularity as the key to the mysteries of the Universe

Let's try to start from the fact that Natural diversity, which is already contained in our consciousness as a fact, is the omnipotence of communities of uniform elements. Uniform objects form populations where each member can be represented by a set of atomic objects having a certain set of properties – attributes. Atomicity does not mean chemical elements, but particles-bricks, corpuscles, elements, any objects that may be involved in the formation of something larger. At the same time, each of the population sets always appears as a community of very identical objects, both by the unity of its internal composition and by the equivalence of the properties of the members.

The identity of members observed in the populations around us is striking, and requires its own scientific explanation. The phenomenality of this phenomenon, which was completely insufficiently investigated earlier, lies in the fact that there is a persisting identity in all populations, and this is observed on all floors of the Universe. Quarks, elementary particles, chemical elements, chemical compounds, species of living organisms, geological, geographical, astronomical objects of different sizes, all of them obey the rule of uniqueness of the members of each population.

There is a collision. Either someone from above sets the parameters of identity in each population, or, after all, the community itself forms this identity itself.

The third is not given: from below, from the “atomic” components, there can be no “order to the top”, because the elements of the brick elements can, and participate in various ensembles forming other “top-level” population objects that are not part of the community under consideration.

The first possibility is a continuation of many thousands of years of theosophical constructions. When they spread to all objects of the Universe, down to the smallest object, for example, the very last nucleon at the edge of the Universe, we have to admit that only the Supreme Order will indicate whether it should be among neutrons, or replenish the ranks of protons by regulating the composition of internal particles – quarks. And such reasoning, which goes directly back to the theological paradigm, can and should be attributed to all objects, regardless of their complexity. However, this path has already been largely mastered by our fathers, has it not? But does it lead to universal solutions? It doesn't seem like it.

The remaining choice: autonomous acquisition of identity for any population. It sounds completely surreal: “The population builds its own identity.”

Nonsense! To assume that even the most primitive population decides on the identity of its members by itself is beyond the limit of understanding even for supporters of an ultra intelligent Universe.

However, it turns out that in a less radical formulation of the problem, there is a solution. It is possible to imagine populations as a community of objects in-

teracting with two environments: the environment of external resources and the intra-population environment, this makes possible the sustainable, but not without crisis, development of such systems, even using examples of abstract models. It is this approach that can be called the Theory of the Population Structure of the Universe, and from the point of view of philosophy, it is the assertion of popularity as a metaphysical given. However, a sufficiently developed version of this theory has already been developed, called the “Theory of Ambivalent Generalization” [1-7]. An alternative name for the population approach arose in connection with the discovery of self-adjustment of the population during its assimilation to external conditions, leading to striking, very ambiguous excesses. And ambiguity, otherwise ambivalence, revealed in the modeling of the population approach, is of universal and fundamental importance for any and every population.

The population approach in philosophy can, perhaps, in its essence, be correlated with the introduction of quantum mechanical theory in physics, which demonstrates a probable future for a physical system, not calculated with reliable accuracy, but allowing to obtain a range of possible solutions [7].

In other respects, this approach is methodically formulated very simply: it is assumed that members of any single population generate, within the framework of their intra-population interaction, certain exchange particles [1,4] that modify other members of the population, transferring to recipients the attributes (properties) of the members of the population that gave birth to these particles. This process was called “**intra-population creditization**”, and the exchange particles were called “**credies**”, from **Credo** (Latin) - trust. If we add to this the understanding that more successful members of the population, due to their efficiency in resource consumption, have the opportunity to generate more credies (or more effectively influence them on the population), then in the process of crediting, the mechanisms of expansive and intensive adaptability of the population to external conditions and new resources are revealed.

This approach radically changes the status of the previously considered passive term “population”. Most populations, in the proposed approach, are endowed with the property of crediting, as the only way of existence within a single population. And such an approach not only indicates the illegality of attributing certain objects to a single collective, in the absence of a common interaction between them, but also places in the category of an indispensable requirement the presence of uniform exchange particles (credits) to fulfill the conditions for the entry of any objects into a single population.

At the same time, the dynamics of the interaction of a small variation for the entire population leads either to intra-population suppression of the modified part, if it is unsuccessful, or a modification of the population is carried out to a certain optimum.

It should be noted that mathematics approaches natural science, sociology, and, consequently, philosophy, since all its objects are populations carrying object and attribute entities.

Returning to the stated problem of the Unity of the World, it should be noted that the proposed approach, implemented through a population-based consideration of the Universe, and most importantly - through the disclosure of the mechanisms of Ambivalent Generalization, which is supposed to be the hidden mover of this World, allows us to solve many problems of cognition, some of which have not been resolved for several millennia. In particular, one of the most non-trivial problems is being solved - the implementation of spontaneous autonomous complication of natural systems. By the way, the proposed mechanism does not conflict with the law of entropy increase, with the release of the so-called “thermal catastrophe”, and the spontaneous complication of population structures occurs through the development of additional resource sources by the population, including energy.

Essential, in this formulation of the Law of Global Natural Unity, is its spread “from bottom to top”, from the simplest to the more complex, with the generation of increasingly intricate configurations of population spaces composed of ensembles of heterogeneous and multi-level population objects generated in other populations.

This approach not only generates a special philosophical and scientific view of the surrounding space, but also allows us to take a step in realizing that natural reflection processes implemented in any population are cognition processes. And the primary acts of cognition are the processes of crediting in populations. And that human consciousness is a mechanism that is implemented in a completely unique population – a population of neurons, where the activity of axons is both an interaction with a resource and a process of crediting.

Thus, it seems that the unity of the World is based on the Law of Ambivalent Generalization, and populations are isolated communities, self-supporting the stability of their existence, and internal self-development, which, under certain conditions, are able to expand into new resource spaces.

But what is stated in this article is by no means the whole methodology of the population approach, but only a “small pea” – an announcement for modern Science – The “Princess-On-a-Pea”, which is not worth basking in the “feather bed of omniscience”, is a preamble to draw attention to a theory that already today allows us to solve a very large number of problems on the path of scientific knowledge of the World: to improve Metaphysics, to find a material carrier for the laws of Dialectics, to resolve the antagonism between Idea and Matter, to indicate the source of laws for To know the secret of biological Life, to name the cause of Sexual differentiation, to know the general principles of the Brain, etc.

There is a deep sense in including not only physical, biological and mathematical objects, but also social, linguistic, legal, economic, political objects, with the indispensable definition of resource spaces and carriers of their active intra-population interaction, into consideration through the prism of populationality.

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DOI 10.34660/INF.2023.85.47.108

过去和现在北高加索地区各族人民之间传统的互助制度
**THE TRADITIONAL INSTITUTION OF MUTUAL ASSISTANCE
AMONG THE PEOPLES OF THE NORTH CAUCASUS IN THE
PAST AND PRESENT**

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注解。 文章通过对大量历史和民族志资料的分析，揭示了北高加索地区各民族的传统习俗之一——互助习俗，它是在集体劳动活动的基础上产生的。 展示了经济生活中互助习俗的多样性，探讨了互助习俗在社会生活中的作用。 尽管互助习俗发生了变化，但它在农村社会经济生活中的功能仍然保留，仍然是家庭成员、亲戚和邻居之间凝聚和相互支持的因素。

关键词：互助、习俗、家庭亲属关系、性别分工、舆论。

Annotation. *Based on the analysis of extensive historical and ethnographic material, the article shows one of the traditional customs of the peoples of the North Caucasus, the custom of mutual assistance, which emerged on the basis of collective labour activity. The paper shows the varieties of mutual aid customs in economic life and investigates the role of customs in social life. Despite the transformation of the custom of mutual aid, it still retains its functions in the economic life of the rural community and remains a factor of cohesion and mutual support of family members, relatives and neighbours.*

Keywords: *mutual assistance, custom, family and kinship relations, division of labor by gender, public opinion.*

For the normal functioning of society, as a single social organism, appropriate mechanisms must be created for the prevention and regulation of social problems that pass into the legal system or public institutions. Such socionormative institutions among the peoples of the North Caucasus have traditionally been the norms of customary law (adat), Sharia regulations, as well as moral and ethical principles. Each member of society was in the field of view of members of the rural community, and his actions and behavior in general became the subject of public characterization and moral and ethical assessment, on the basis of which the

reputation of him and all his relatives - members of one or more related families (Tukum / Tukhum) - was formed. There was collective responsibility of the entire clan for the actions of one person (the entire male half of the clan was responsible for murder, and blood feud extended to every man). "The entire tukhum monitors the behavior of its members, because in the event of a crime committed by one of them, in many cases all the immediate relatives of the perpetrator are punished" [2, p. 79]. In traditional Caucasian society, each member of the community and clan had to sacrifice personal interests for the sake of social and related ones. As a rule, such an order was taken for granted, and this order was regulated by public opinion. All members of the community and clan were required to take part in collective economic work (social, neighborly and related). Out of the need for short-term collective efforts in carrying out certain work, the mountaineers developed a traditional institution of mutual assistance: among the Balkars this institution was called "izeu", among the Karachais "mammat", among the Chechens and Ingush "belkhi", among the Avars "gwai", among the Dargins "bilkhaa" ", among the Laks "marsha", among the Kumyks "bulka", among the peoples of Southern Dagestan "mel", among the Ossetians "zeu". Such aids were used quite widely, both for public and individual purposes. In the process of such assistance, cohesion in the rural community was strengthened, which was a necessary condition for mountain reality. Moreover, "...a community member had to protect the integrity and viability of this socio-economic structure as the main guarantor of his own well-being." [2, p.131].

Mutual assistance is one of the traditional customs of the peoples of the North Caucasus, which arose during the period of the tribal system, which was characterized by a social form of production and consumption. Custom, as a norm of community life, has firmly entered the system of economic and social relations of rural societies. Acting as a regulator of economic relationships, custom played a significant role in people's lives. This custom was considered by members of rural society as the norm of communal living. And it manifested itself in all areas of economic life and relationships - in agriculture, in cattle breeding, at weddings, funerals, in building a house, etc. The initiators of help were relatives and neighbors who gathered with someone who urgently needed labor: during the construction of a house, during harvesting, during haymaking, during sheep shearing, etc. If one's own strength might not be enough, then one of the relatives could he went around the village residents and asked them to come to their aid, and no one refused, since every member of the community was ready to help any member of the community if necessary. M.O Kosven wrote: "This feature was especially persistently preserved in the everyday life of all the peoples of the Caucasus, even when patronymy had already experienced a deep collapse. Mutual assistance was expressed in the fact that all families of the patronymic religiously came to help

when one of the families undertook some work for which the strength of one family was not enough.” [4, p.198] Each member of society knew what and when a relative needed help. One way or another, all members of rural society were related to each other to varying degrees and were aware of the events and work that were planned for this or that person. Abandoning all their affairs, representatives of large relatives came on the day of this or that event and remained “standing” until the end, helping.

Researchers divide forms of mutual support into labor (production), material and moral [6, p. 127]. Often all forms of mutual support are provided at the same time.

On the day of weddings or funerals, this assistance was provided by all members of the clan (tukhuma) for several days. Staying at home and taking care of your own affairs was considered a disgrace. Men, women and even children took part in the events. Each of them had their own functions that they had to perform. For example, at a wedding, some men prepared tables and benches in the courtyard to seat the guests, some were engaged in cooking meat, young people had to serve the guests (bring food and drink). Some of the youth had to start collecting firewood, which was needed for several days. During the funeral, some of the youth went to the cemetery to dig a grave. Close relatives of the deceased sat at *dua/tezet* (condolence), the men in the courtyard, standing, received the men of the village or nearby villages, while the women received condolences in the rooms. For the Balkars, during the first three days of the funeral, family members of the deceased and people who came from afar for condolences were fed by their neighbors. At all public events, the roles of men and women were clearly distributed. Young girls provided the event with water, brought from springs or rivers, another part of the girls tidied up the rooms, the most experienced baked bread, pies, prepared other food, washed dishes, etc. Close relatives stayed overnight throughout the event to take care of business in the morning. Also, during the preparation of the wedding and until its end, the entire village took part in the event. Each member of society had his own functions, which he clearly knew about and performed without reminders. Almost every family brought gifts. These are all kinds of fabrics, any household utensils, clothing, products. Special, repeated assistance and constant participation of relatives and fellow villagers was provided during the construction of the house. Help was available at any time. If a fellow villager lost his home as a result of various natural disasters, then all residents of the village, before the victims moved into a new house, participated without warning and free of charge in its construction. Among the Balkars, after returning from deportation (1944-1957) from Central Asia to their homeland, the Caucasus, almost all the houses in the Balkar villages were built by joint labor in the 1958-1960s. Together, men and women made adobe to build a house, then the men laid the walls and erected

the roof, and the women coated the walls, whitewashed and painted. All the work was fun: they joked, sang songs, told funny stories from people's lives, and after finishing the work they had a meal together. For families where there were frail old people or women, houses were built using funds collected by the villagers. Someone brought sand, adobe, windows, doors, slate, lime, paint, and so they built a house for those who did not have the means to build it. Providing assistance to each other in rural society was considered by all its members as compliance with moral and ethical standards that were passed down from generation to generation and preserved. Following the order, agricultural work began in the spring: plowing, harrowing, sowing. These jobs were performed by men. Women provided mutual assistance in weeding, harvesting, and winnowing. Harvesting hay was a busy time for all community members. During his period, from dawn to dusk everyone was busy with work. Help was provided one by one. One day earlier they announced whose haymaking would take place tomorrow. Men with braids began mowing early in the morning. After 2-3 days, the dried hay was collected together by men, women and children. Help was also provided in moving and shearing sheep. Usually men were involved in this work. Women helped each other in washing and processing wool. Women helped each other in making carpets and runners, felting felt, and after finishing the work they had a meal together. Help with livestock, utensils, and money was also provided to the owner who suffered from fire, theft, or loss of livestock. When the damage caused to a member of the rural community was significant, on Friday the mosque announced a collection of funds for the victim and appointed the next of kin responsible for the collection. A member of a team providing assistance to someone was obliged to adhere to the moral and ethical standards established among the people.

“Maximum dedication to work was required from a member of society; the full application of both skills, abilities, and physical strength was expected. Just to show up, just to be present, to identify yourself, especially without straining, was considered unacceptable.... Someone helping a fellow villager with a word, a gesture, a hint did not allow himself to become in the position of doing a favor, sacrificing his time and efforts. There was only one behavioral criterion: to work as “for yourself”, as on your own farm, even better. ... It was not allowed for anyone to show off their skills, dexterity, physical strength, and especially not to ridicule someone else's inability, awkwardness, or physical weakness” [5, p.81].

The social life of the mountaineers was strictly regulated by internal laws and moral restrictions, the strict observance of which was ensured by public opinion of society and measures taken by society against those who did not comply with accepted norms. Quite strong measures were taken against such members, up to and including ostracism, which among the mountaineers is an extreme measure of punishment. Discipline was an urgent need and vital need for the mountaineers, on

which their safety and material security directly depended. Having developed in the context of a difficult struggle for existence and survival, the custom of mutual assistance has long been considered by the people as a norm of social behavior.

The custom of mutual aid was “sanctioned by society, and is guarded by the power and authority of public opinion. Mutual aid creates its own special microclimate in rural society. Thanks to him, the peasant feels socially protected, which creates confidence in the future.” [1, p.20] N.I. Voronov asks the question about the nature of the discipline of the mountaineers and finds the answer in the fact that discipline “follows from the essence of the Dagestan... this discipline is the fruit of the ancient Dagestan way of life, which, in order to maintain itself, for self-defense, determined the presence in every Dagestan community of caution, sensitivity, order and speed in actions. Thus, this discipline of the Dagestani expresses... one of the evidentiary signs of the antiquity of the Dagestani way of life[1, p.20]. Opinion of N.I. Voronov applies not only to the peoples of Dagestan, but also the entire North Caucasus.

Thus, the custom of mutual assistance, its nature and forms are most closely connected with the conditions of the environment, with the direction of the economy, with the correlation of various traditional forms in it, with the characteristics of social relations in society, with the specific forms of family and family relations, with the characteristic features of material culture, etc. For its part, as an institution that arose in the distant past and had the widest application in the internal life of the community, the custom of mutual assistance influenced the development of the traditional economy, social and family relations in society. The idea of joint collective work, mutual assistance and assistance despite the sociocultural transformation of North Caucasian society in the 20th – early 21st centuries. society turned out to be stable in North Caucasian society. Currently, the custom of mutual assistance is rarely used in the construction of a house and other household work. But he retained his position in weddings and funerals. Currently, the institute of mutual assistance is used by various public associations: political parties, national cultural centers of ethnocultural orientation and religious associations to raise funds for various events (help to raise money for an operation for children, the construction of religious facilities, etc.). Despite the transformation of forms, content and functional characteristics, the institution of mutual assistance remains a significant component of the socio-normative culture of the peoples of the North Caucasus, as one of the basic values, as a functional institution of the social system, including forms of real interaction of society at the level of family and kinship groups, neighborly relations, rural societies and in regional (Kabardino-Balkaria, Karachay-Cherkessia, Ingushetia, Dagestan) communities [7, p. 237].

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DOI 10.34660/INF.2023.81.25.109

公共协会作为民间社会的一个机构（区域方面）
**PUBLIC ASSOCIATIONS AS AN INSTITUTION OF CIVIL
SOCIETY (REGIONAL ASPECT)**

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抽象的。本文考察了社会运动出现的过程，这是俄罗斯 80 年代末开始的转型过程的结果之一。研究表明，由国家普通公民及其组织（官方称为“非政府、非营利”——NGO）“自下而上”发起的社会运动代表了新兴公民社会的第一个细胞。本文致力于分析非正式运动作为一种历史和社会文化现象及其对俄罗斯联邦主体——车臣共和国民间社会机构形成的影响。本文并不假装全面，因此，仅在实现主要工作目标所必需的范围内涵盖与非正式组织活动相关的问题。

关键词：公民社会、社会运动、权力、传播、社会。

Abstract. *The article examines the process of the emergence of social movements, which were one of the results of the transformation processes that began in Russia in the late 80s. It is shown that it is social movements initiated “from below”, by ordinary citizens of the country, their organizations (officially called “non-governmental, non-profit” - NGOs) that represent the first cells of the emerging civil society. The article is devoted to the problems of analyzing the informal movement as a historical and sociocultural phenomenon and its influence on the formation of civil society institutions in the constituent entity of the Russian Federation - the Chechen Republic. This article does not pretend to be comprehensive, therefore, issues related to the activities of informal organizations are covered only to the extent necessary to achieve the main goal of the work.*

Keywords: *civil society, social movements, power, communications, society.*

The formation of civil society is the main trend in the transformation of society over recent years. This problem has been considered for decades, and in modern times it is becoming more and more relevant. Of particular interest are issues re-

lated to the formation of civil society structures. Moreover, the problem of forming civil society in the regions of the North Caucasus is becoming especially relevant and in demand. This is due to the multinational and multi-confessional composition of the population and ethno-political conflicts. The special specificity of the region is traditionalism, the Islamic factor, as well as a number of objective factors, such as the economic backwardness of the region, conflict, violation of human rights, difficult political situation, manifestations of radicalism, extremism and terrorism, lack of a sense of security, low level of civil awareness, interethnic problems, territorial disputes, which are most acute here, necessitate further development and scientific analysis of this problem. This article focuses on the formation of the first public, so-called “informal” associations in one of the regions of Russia - the Chechen Republic, as one of the first institutions of civil society, acting as a channel for transmitting public interests to power. Today, in world practice, the generally accepted designation of public organizations is the term NGO - “non-governmental”, “non-profit”, as well as “third sector” (the first sector is public, the second sector is commercial). The state guarantees the protection of the rights and legitimate interests of public associations and unions. Interference by state bodies and officials in the activities of public associations, unions, as well as interference of public associations, unions in the activities of state bodies and officials, is not allowed, except in cases provided for by law. In the political and legal landscape of the Russian Federation, the creation and activities of public associations are regulated by the following main regulatory legal acts: the Constitution of the Russian Federation, the Federal Law “On Public Associations” dated May 19, 1995 No. 82-FZ, the Civil Code of the Russian Federation, the Federal Law dated August 8, 2001. 129-FZ “On state registration of legal entities and individual entrepreneurs”, Federal Law of January 12, 1996 No. 10-FZ “On trade unions, their rights and guarantees of activity”, a number of international legal acts, etc. It should be noted that the activities of some public associations fall within the scope of other Federal laws, for example, Federal Law dated September 26, 1997 No. 125-FZ “On freedom, conscience and religious associations”, Federal Law dated May 28, 1995 “On state support for youth and children’s public associations”, etc¹. More than a century ago in Russia, the process of formation of civil society began; the basis for its development was the rapid emergence of public organizations, which mainly pursued philanthropic and cultural-educational goals. Half a century later, with the beginning of the formation of political pluralism in the Soviet Union and the proclamation of the policies of “glasnost” and “perestroika” in the mid-80s. a revival of civil society began, caused by the instability of new political structures, economic difficulties and divisions along ethnic lines. The main attribute of civil society in the Soviet Union, which had a great influence on the formation of political pluralism in the USSR, was the emergence

of a number of non-governmental organizations called “informal” or “amateur” associations, which included the most active part of the population, which took on the role of a kind of valve that helped “relieve” social tension. These “societies,” or “movements,” as they were called then, included Soviet citizens, mainly the intelligentsia, on their own initiative. These “movements” first made themselves known in the summer of 1986, when the “Regulations on an amateur association, a club of interests” were adopted. According to official statistics, in 1990, 619 “informal” associations were created and functioned in the Soviet Union, of which more than 230 belonged to organizations of socio-political and civil initiative. In 1988, a number of clubs united into regional popular fronts, and a year later - into the Popular Front of the RSFSR, this created the conditions for active opposition activity in the elections to the Soviets in 1989 and 1990. The rise of the perestroika “informal” movement is associated with the lifting of censorship bans in 1987, and with the fact that the state authorities actually abandoned the use of articles of the Criminal Code of the RSFSR that punished dissent. The emergence of such entities, not created from above and, as a rule, not even officially registered, was caused by many reasons. The main one was the process of democratization of society, initiated by the new leadership of the CPSU headed by M. Gorbachev, and its core was glasnost. Perestroika, which began in 1985 in the USSR, instilled great hopes in the entire population of the country, including in national regions, for a radical change in the situation, primarily in the sphere of the rights and freedoms of citizens and the restoration of social and national justice violated as a result of “distortions.” The democratic movement of the late 80s was identified with the core of civil society and saw in it the main driving force of transformation². The collapse of the great power USSR and the so-called “policy of perestroika” led to the rise of the national movement locally, incl. in Checheno-Ingushetia. The wave of separatism took on a new scope after the adoption by the 1st Congress of People’s Deputies of the RSFSR in June 1990 of the Declaration on the State Sovereignty of Russia. Similar declarations, following Russia, were adopted by the parliaments of 10 union and 12 autonomous republics³. This process became even more active after Boris Yeltsin uttered the phrase in Bashkiria that the peoples of the RSFSR could take “that share of power that they themselves can swallow”⁴, thereby creating a threat to the unity of Russia itself. The national movement in the Chechen Republic set as its goal not so much secession from the USSR, but rather to increase its national-state status, i.e. secede from the RSFSR and become a union republic. The forces in the RSFSR opposing the leadership of the USSR used the separatist movements of other republics as weapons, naively hoping that such a process would stop at the borders of the RSFSR. During the collapse of the USSR, as V. Dzidzoev⁵ notes, a significant part of the population of the North Caucasus experienced increased socio-psychological and spiritual-moral discom-

fort, which, in his opinion, contributed to the awakening of religious and national self-awareness, the emergence of various national and religious parties, associations and movements. It should be noted here that the Union authorities themselves provoked the spread of nationalist sentiments among the Chechen-Ingush intelligentsia with their thoughtless national policy. On the initiative of the party secretary for ideology M.A. Suslov, campaigns were held in the autonomous republics to celebrate their “voluntary accession” to Russia. In Grozny, under the leadership of the head of the republican party organization A. Vlasov, the “voluntary entry of Checheno-Ingushetia into Russia” was celebrated. Republican party bodies and KGB bodies organized the persecution of a group of Chechen and Ingush historians (M. Muzaev, A. Vatsuev, Y. Akhmadov, Kh. Akiev, Y. Vagapov, Kh. Akhmadov) who sharply criticized the concept of “voluntary entry”⁶. The scientific concept of “voluntary entry”, developed by the local archaeologist V.B. Vinogradov, not only overturned the entire history of the Vainakhs (for example, the very concept of the “Caucasian War” was denied, since the 80-year struggle against Russian colonization did not fit into “voluntary entry”, but also actually declared the Chechens and Ingush “reactionary peoples”, incapable of independent historical development). Repressions against critics of the concept, organized by party bodies and the republican KGB, as well as the official version of the history of the Chechen and Ingush peoples, built with the support of the regional committee, caused strong rejection among the Chechen-Ingush intelligentsia. And it was the historical discourse, the discussion of the unconvincing official version of history that gave impetus to the growth of the national self-awareness of the Chechen people, intensified the discussion of the problems of the development of the Vainakh people, their history and culture, and accelerated the process of formation of Vainakh “ethno-egocentrism”⁷. Public discussion of the problems of the history and culture of the Vainakhs, criticism of the official ideology intensified social and political life in the republic, consolidated the efforts of the intelligentsia in order to revive national life. The first television and radio programs and articles appeared devoted to the blind spots in the history of the Chechens and Ingush. At the first stage of “perestroika,” informals carried out their activities within the framework of state policy and did not pretend to be a serious opposition, but the very fact of their appearance in Soviet society became a challenge to the Soviet system. Formed on the initiative “from below,” amateur formations spontaneously focused on supporting the policy of “perestroika” and democratic socialism. In the conditions of the general economic collapse of the USSR, an army of thousands of unemployed people appeared, and mass dissatisfaction with their situation was brewing among the population. But neither the Chechen, nor the Ingush, nor the Russian nomenklatura were able to solve the problems that had accumulated over decades. All this set in motion the process of forming national

political forces opposing both the all-Soviet and intra-republican party-Soviet nomenclatura, which, in their opinion, had become disconnected from the people. In Checheno-Ingush society, tension was growing more and more; all that was needed was a reason for a spontaneous explosion. As in other regions, the catalyst for escalating the political struggle in Checheno-Ingushetia was not the political, but the environmental movement. In 1988, the attention of the republican public was attracted by the construction of a huge plant in Gudermes for the production of feed protein and vitamin concentrates. A group of specialists contributed to the resonance of public opinion about the danger of this construction. It was the environmental movement that led to the emergence of informal socio-political movements in Checheno-Ingushetia⁹. In 1988, the “Union for Assistance to Perestroika” appeared, later renamed (on the model of the Baltic republics) into the Popular Front led by Kh. A. Bisultanov, which, increasing in number and becoming politicized in the nature of its activities, gradually formed, although limited, but extremely intensive space of public dialogue. The social base of the Popular Front became the poorest strata of Chechen society. However, the informal environmental and memorial movement quickly acquired the character of a national-separatist one and received massive support in the countryside among those Chechens who, in the previous decades of Soviet power, continued to feel like outcasts who were not included in the “new historical community - the Soviet people.” At rallies organized by the Popular Front, demands were made for democratization of social and political life, freedom of speech, press, revival of national culture, and changes in personnel policy. The rally dedicated to the forty-fifth anniversary of the deportation of the Chechen people had a wide resonance. Very quickly, this public arena turned into a space for a nascent civil society, in which a variety of civic initiatives were formed. By the beginning of 1989, when the movement of informals became widespread, law enforcement agencies began to take repressive measures against the leaders of the NF, which led to an increase in their popularity. These events in the republic contributed to the emergence of other organizations. The “Green Movement” appeared (leader R. Goytemirov), formally fighting for a clean environment. An informal public association, the “scientific and educational” society “Caucasus”, loudly declared itself, whose activities marked the beginning of open discussions on the problems of the history of the Vainakhs. According to A. Matveeva, during the period of perestroika, the local intelligentsia became the spokesman for national demands, mainly in the field of human rights¹⁰. One of the most authoritative public centers was the cultural and educational organization “Dosh” (“Word”), created in the fall of 1989 by representatives of the scientific and creative intelligentsia of the republic. These were famous scientists, professors of the Chechen-Ingush State University: A. Yandarov, V. Akayev, A. Bugaev, Kh. Turkaev, S. Khusainov, Honored Artist of the Russian

Federation D. Omaev, writers M. Beksultanov, M. Akhmadov, poet A. Bisultanov, head of the department of scientific and technical information of the local state university P. Viskhanova and many other authoritative people in the republic. The founding conference of the new organization, which took place in the House of Political Education of the regional committee of the CPSU, became not only an important event in the socio-political life of the republic, but also gave impetus to the political organization of the national intelligentsia. The leaders of the «Dosh» organization tried to seize the initiative of opposition political activity from the leaders of the Popular Front. For the same purpose, another informal association was created - the Popular Front for Assistance to Perestroika (later - the Chechen Party of Justice, the «Niiso» party), led by journalist L. Saligov. It included representatives of the radical intelligentsia: D. Aliyev, M. Asuev, R. Goitemirov, B. Kostoev, Kh. Akiev, I. Arsemikov and others. In areas of compact residence, Cossack formations and social movements of the Nogai and Kumyk were actively created peoples The Ingush society “Niiso”, the Organizing Committee for the Restoration of Ingush Autonomy and other informal groups also appeared. The Congress of the Ingush people, held on September 9-10, 1989, put forward the idea of creating a Republic of Ingushetia separate from the Chechens. In fact, the congress, according to V. Dzidzoev¹¹, initiated and inspired the division of a single republic and the emergence on its territory of two national-state entities - the Republic of Ingushetia and the Chechen Republic. Having consolidated the political elite of the Ingush, who felt disadvantaged in the Chechen Autonomous Soviet Socialist Republic, the Ingush congress dealt a blow to the idea of Vainakh unity and pushed Chechen national radicals to hold their own, Chechen congress, which ultimately opened the way to the abolition of the Chechen Autonomous Soviet Socialist Republic (“held without the will of the peoples inhabiting it”, - wrote the famous political scientist Zh. Gakaev)¹². In January 1989, the first informal publication appeared in Grozny - the bulletin of the Popular Front for Promoting Perestroika “Justice” (editor L. Saligov). Despite the low scientific level, the materials published in the bulletin had a wide public response and marked the beginning of a public discussion of taboo topics in the history of the Chechens and Ingush. It is possible that by their very existence, independent associations undermined the monopoly of state power in the sphere of public opinion. This was especially evident during the elections of people’s deputies of the USSR, the first alternative elections in the entire history of Soviet power¹³. As a result, not only party functionaries led by Fateev, but also independent candidates were elected to the Supreme Soviet of the USSR from the Chechen Autonomous Soviet Socialist Republic, but also independent candidates: professor S. Khadzhiev, writer A. Aidamirov, disgraced former second secretary of the regional committee of the CPSU L. Magomadov. In the wake of glasnost and democratization, the question of changing

the political leadership in the Chechen Autonomous Soviet Socialist Republic arose. On July 1, 1989, D. Zavgaev became the first secretary of the Chechen-Ingush regional committee of the CPSU. Until this time, not a single Chechen, either in tsarist times or during the years of Soviet power, became the head of the entire system of public administration in Chechnya. D. Zavgaev was the first Chechen to whom Moscow entrusted the post of first secretary of the Chechen-Ingush regional committee of the CPSU. Of course, the election of D. Zavgaev was welcomed by the majority of the population of the Chechen Autonomous Soviet Socialist Republic and even the leaders of informal organizations. Realizing that today or tomorrow the highest party nomenklatura will face a serious challenge, D. Zavgaev made energetic attempts to maintain the political initiative. He proclaimed the need to carry out deep structural reforms of the republican economy and solve pressing socio-political problems. In particular, programs for the development of healthcare, housing construction, and the creation of new jobs through the development of high-tech industries in the republic were announced¹⁴. Unfortunately, these and other government programs largely remained unrealized; there was very little time left to implement the proclaimed plans. At the same time, the process of liberalization of the government regime has begun in the republic. A key element of the liberalization course under D. Zavgaev was a radical change in the position of the Islamic religion. During the years of D. Zavgaev's reign, 200 mosques¹⁵ were built in the republic, and two Islamic institutes were opened (Nazran and Kurchaloy). In 1988, for the first time in the republic, an independent Spiritual Administration of Muslims (Muftiate Council of Ulema) was created in the republic, headed by Shaid-Hadzhi Gazabayev. Thousands of Chechens and Ingush, also for the first time in the Soviet period of their history, made a collective "Hajj" pilgrimage to Saudi Arabia to the shrines of Islam. Yu. Kulik writes¹⁶ that under D. Zavgaev, a regime of "border trade" with Turkey was established in Checheno-Ingushetia - without duties and without the seizure of even part of the currency by the Moscow authorities (which no other North Caucasus subject of the Russian Federation had at that time). Zavgaev began to demand the status of a union republic for the Chechen Autonomous Soviet Socialist Republic within the USSR. He wanted to strengthen national statehood precisely in this structure, and was consistent on this issue, not voting for the Declaration of State Sovereignty of Russia on June 12, 1990 (D. Zavgaev was one of eight deputies of the Congress of People's Deputies of Russia who refused to support this document). Soon the first alternative elections to the Supreme Council of the Chechen Autonomous Soviet Socialist Republic took place, which brought a whole group of democratic opponents of the existing government to the highest legislative body of the republic. In fierce competition, university associate professor A. Bugaev, leader of informals Kh. Bisultanov, deputy manager of the Chechingdorremstroy trust L. Umkhaev,

head of Grozny RSU No. 1 Kh. Isaev, history teacher Yu. Elmurzaev, “dissident” Sh. Gadaev and others, who organized the opposition factions “Democratic Initiative” and “Sovereignty” in the Supreme Council. The process of forming a new national elite began. For the first time among the Chechen people, Yu. Desheriev, V. Mezhidov, I. Arsakhanov, S. Khadzhiev, R. Khasbulatov and others became doctors of science and professors in various fields of knowledge. The first Chechen generals were D. Dudayev, V. Ibragimov, V. Shabakhov. S. Khadzhiev became the Minister of Union significance, and R. Khasbulatov became the Chairman of the Supreme Council of Russia. Outstanding successes were achieved in art, the world applauded the Chechen athletes. There have also been major changes in personnel policy. At the head of the ideological bodies of Checheno-Ingushetia were representatives of the national university intelligentsia: Doctor of Philosophy, Professor A. Yandarov (Secretary of the Regional Committee of the CPSU for Ideology), Associate Professor A. Bugaev (Chairman of the Supreme Council of the Chechen Autonomous Soviet Socialist Republic Committee on National Politics), Associate Professor R. Mezhidov (Head department of interethnic relations), vice-rector of the university T. Abubakarov (Minister of Economy), etc. Already in 1990, key posts, with the exception of the first secretary of the Grozny city party committee, were occupied by Chechens¹⁷. After the elections of the Supreme Council of the Republic, in Grozny, as noted historian T. Muzaev, rallies of the Popular Front resumed. The opposition movement was led by illiterate people with no experience of political activity, who soon discredited the very idea of the Popular Front. And, nevertheless, from the summer of 1988 to the autumn of 1990, the Popular Front of Khozh-Akhmed Bisultanov was rightly considered the most influential opposition public organization that opposed the party-Soviet leadership of Checheno-Ingushetia. However, after Khozh-Akhmed Bisultanov was elected as a deputy of the Supreme Council of the Chechen Autonomous Soviet Socialist Republic and appointed to the position of general director of Vtorchermet, the activities of the Popular Front became completely manageable, and by the fall of 1990, having exhausted its public program, it disintegrated¹⁸. After the collapse of the Popular Front, in February 1990, Chechen national radicals emerged as a new political force, united in the Vainakh Democratic Party, but soon the VDP, changing course, became the most “revolutionary” party, which sought the resignation of the party-Soviet leadership of the republic in headed by D. Zavgaev. It should be noted that the leaders of the VDP verbally adhered to democratic principles and values, but in fact the new party became, in the opinion of Checheno-Ingush researchers, “an organization of an extremely extremist nature”¹⁹. The VDP, created by the teacher and poet Z. Yandarbiev, the little-known young journalist M. Udugov and other equally uninfluential but active personalities, had (or so it was claimed) branches in almost all villages. However, for some reason, the

VDP almost did not appear either during the revolution or after. The same applies to the Islamic Way Party of Bislan Gantamirov, whose role was subsequently reduced to the armed protection of its leader, D. Dudayev. In the VDP program, the main goal was the creation of a sovereign Vainakh (Chechen-Ingush) Republic as a state within the USSR. This document contained points on the priority of representatives of indigenous nations in the placement of personnel, on the revival of national institutions of public self-government (MekhhKhel - “Council of the Country”), on the cessation of “artificial migration” of the Russian-speaking population to the Chechen Autonomous Soviet Socialist Republic, etc. At the same time, the Chechen-Ingush branch of the Memorial society arose, headed by A. Vatsuev. The above-mentioned organizations had a pronounced national character. In December 1990, radical national parties and organizations operating in the Chechen-ChIASSR-VDP (Zelimkhan Yandarbiev), the Green Movement (Ramzan Goytemirov), the Islamic Revival Party (Adam Deniev), the Islamic Way party (Bislan Gantamirov) and the society Caucasus» (leader Bek Mezhidov) formed the block «National Movement of the Chechen People» (NMCP), the main goal of which was proclaimed to be the struggle for the implementation of «people’s sovereignty» and the exit of Checheno-Ingushetia from the RSFSR²⁰ .. The leaders of the opposition bloc NMCP were actively involved in the work informal national organizations of the region under the auspices of the Confederation of Peoples of the Caucasus (CNC) with the aim of promoting the ideas of creating an independent state of mountain peoples similar to the Mountain Republic of 1918. National movements, which, as a rule, propagated the concept of strengthening national-patriotic feelings, became the detonator of the idea of creating new national-state entities in the North Caucasus. Leaders of public associations, disregarding neither the opinions of the peoples who have lived amicably in the republic for centuries, nor the federal center, nor the established historical realities, re-drawing administrative boundaries and even making loud statements in the “name of the people” about secession from Russia, began to create pockets of acute interethnic conflicts. A group of prominent representatives of the Chechen intelligentsia took the initiative to hold a national congress to discuss the issues of reviving national culture, language, traditions, and historical memory. Hoping to intercept the slogans of national revival from national radicals, D. Zavgaev and his supporters supported this initiative. The chairman of the organizing committee was the People’s Deputy of the Chechen Autonomous Soviet Socialist Republic L. Umkhaev, close to the liberal-reformist wing of the republican leadership. The first Chechen National Congress (CNC) took place on November 23-25, 1990. On behalf of the Chechen people, the congress declared the sovereignty of the Chechen Republic. On November 27, 1990, the Supreme Council of the Chechen-Ingush Autonomous Soviet Socialist Republic, under pressure from the executive com-

mittee of the CNC and mass actions organized by the VDP, adopted the Declaration of State Sovereignty of the Chechen-Ingush Republic. In mid-1991, one of the information and propaganda factors of the social explosion in the republic was the dramatization of events, which took extreme forms. The social explosion in the republic, as noted by one of the famous politicians L. Umkhaev, was organized and inspired. Due to the economic crisis and the collapse of the USSR, part of the male population did not have the opportunity to travel outside of Checheno-Ingushetia to earn money. The standard of living of the population sharply decreased, modern technologies were lost, which led to the archaization of public institutions. Checheno-Ingushetia by the 1990s, among the former subjects of the USSR in terms of living standards it ranked last, 73rd. These factors contributed to the ranks of demonstrators and rebels, who in turn became an instrument for the implementation of the “Chechen revolution.” According to the famous political scientist D. Gakaev, “the main result of the modernization processes in the republic is the significant lag of the Chechens from other peoples of Russia”²¹. It is manifested in a high birth rate, leading to an increase in people of working age in the population, in the numerical predominance of rural residents over city dwellers (70% of Chechens lived in villages), in a relatively low level of education (in 1989, per thousand Chechens there were 5 people with higher education -7 times less than the same number of indigenous residents in neighboring republics), in a deformed socio-professional structure of society, in the absence of a national group of industrial workers, a middle class, in the lowest (among the Russian republics) standard of living and the highest mortality rate, in the highest percentage of unemployed (40%) and a record number of otkhodniks (100,000 per year)²². V. Dzidzoev believes that it is precisely the lack of a well-thought-out national policy that can explain the fact that the North Caucasus developed according to a residual principle. For example, 25% of the industry of Checheno-Ingushetia was of union significance²³. The people of the republic suffered from the activities of the petrochemical complex an environmentally polluted environment and plundered natural resources. And revenues from oil production and refining (21.4 million tons of oil were produced in 1970, and 500 million tons during the entire period of Soviet power) went to the union budget²⁴. The authorities did not officially recognize unemployment, but a huge army of otkhodniks (commonly known as “shabashniki”), whom the authorities called “parasites” traveling for the “long ruble,” were actually looking for suitable seasonal work in the republics of the former USSR, and in fact, according to V. Dzidzoev²⁵, this problem existed in all the republics of the North Caucasus. Many issues remained unresolved among the peoples deported during the Great Patriotic War, the territorial claims of some peoples to others, the problem of divided peoples (Ossetians, Lezgins, Nogais), etc. Constant

flirting of the union (M.S. Gorbachev) and federal (B.N. Yeltsin) center with them²⁶.

A number of researchers note that the social component was one of the reasons, not associated with politics, but without the human factor, which played a certain role in the development of the mechanism of strategy and tactics of the previous revolution, it would not have played a significant role.

In the early 90s. V.V. Putin noted that the country was faced with the collapse of the economy and social system. All this, of course, gave rise to problems of separatism not only in Chechnya, but also in many regions of the country.

A characteristic feature of all informal movements of the Chechen Autonomous Soviet Socialist Republic was organizational weakness, which did not make it possible to carry out targeted and systematic work. The personal ambitions of the movement leaders, regardless of the similarity of program documents, prevented their genuine cooperation. The social base of the informal movement were representatives of rural areas; their participation in public political protests was the first time in the history of the Chechen people. Artificial introduction at the initial stage of perestroika of such concepts as: freedom without responsibility, democracy bordering on anarchy; publicity, identified with the opportunity to express one's opinion, was carried out in the absence of the people's preparedness to understand this rhetoric and the cultural level necessary for this. National radicals are essentially the same marginal "rabid democrats"; they were mostly young intellectuals with no established careers and often with difficult personal lives, occupying a peripheral position in the cultural and political field of the perestroika era. Nothing foreshadowed that these were the people who would come to power.

The emergence of public organizations was a natural phenomenon of the period of democratization of the existing system. The process of party building had no experience of democratic development and mature democratic traditions and could not be one-stage. However, the informal movement in the Chechen Autonomous Soviet Socialist Republic during the years of perestroika played an important role in the process of formation of civil society.

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多极世界作为政治思想和实践的目标
**MULTIPOLAR WORLD AS THE GOAL OF POLITICAL
IDEOLOGY AND PRACTICE**

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抽象的。 本文的目的是主张形成多极世界的政治意识形态和实践应该基于形成这个世界的所有主权国家的生活特征和差异。 随着多极世界作为元系统发挥作用所必需的经济和社会政治制度的发展,有必要创造机会在这些社会制度中体现个体文化主体固有的世界物质和精神发展方式。

关键词: 多极世界、国家主权、政治意识形态、公民身份、文化主体、价值取向。

Abstract. *The purpose of the article is to assert the fact that political ideology and practice of forming a multipolar world should be based on the features and differences in the life of all sovereign states that form this world. Along with the development of economic and socio-political institutions necessary for the functioning of the multipolar world as a metasystem, it is necessary to create opportunities for embodying in these social institutions the way of material and spiritual development of the world inherent in individual cultural subjects.*

Keywords: *multipolar world, state sovereignty, political ideology, civil identity, cultural subjects, value orientations.*

A multipolar world is a world of sovereign states that carry out their activities in the interests of their own citizens on the basis of unshakable values and norms of socio-cultural life.

The necessary conditions for a multipolar world are state sovereignty and multiculturalism of the countries that form this world. Neither state sovereignty nor multiculturalism as a quality of the social system can exist in a one-polar world.

State sovereignty as an attributive feature of the state excludes the subordination of authorities to anyone other than their own citizens, who express and consolidate their rights and obligations in the Constitution adopted at a national referendum.

At the same time, the absence of real sovereignty is ultimately due to the class essence of the state itself, the basis for the emergence and existence of which is the economic domination of some classes over others. It is the class society that inevitably gives rise to transnational associations of representatives of the ruling classes, striving for global economic and political dominance, contrary to the interests of both citizens of their own state and citizens of any other states.

Real state sovereignty is possible only when: 1) class domination is limited by laws, and any attempt at economic, political or ideological action in the interests of another state is punished on the basis of the strict application of these laws; 2) citizens are ready to defend the sovereignty of the state subjects of which they are.

The degradation of all state, social and ideological institutions of the capitalist world is going so fast that it leaves no chance for the possibility of another modernization, even at the cost of unleashing more and more new wars, each of which may be the last in the history of mankind.

Under these conditions the political ideology and practice of forming a multipolar world should be based on the features and differences in the life of all sovereign states that make up this world. Along with the development of economic and socio-political institutions necessary for the functioning of the multipolar world as a metasystem, it is necessary to create opportunities for embodying in these social institutions the way of material and spiritual development of the world inherent in individual cultural subjects.

The preservation of the territorial integrity of any state requires the formation of the civil identity of its subjects, who are aware of their historical, economic, socio-political, territorial unity as citizens of this state. However, the fact that citizens of one state acquire common features due to belonging to the same territory, common state language, unity of legal regulation and a system of diverse socio-cultural relationships does not eliminate ethnic and socio-cultural differences between them. On the contrary, it is the inevitability of these differences that forces the state to pursue a special policy in the field of interethnic and intercultural relations and develop laws that regulate the existence of its subjects not only as citizens, but also as representatives of different cultures (Torja, 2020, p. 598-609).

Multicultural sovereign states exist because the citizens of these states recognize themselves as representatives of a metasystem community that ensures the preservation of the uniqueness of their culture.

The very essence of culture as a specific way of life of a particular subject excludes the possibility of existence in a one-polar world, where the culture of one subject is actually imposed on all other subjects (Chernyakova, 2015, p.42-48).

Each sovereign state seeks to ensure its physical, economic, political, ideological, and so on, safety. Not a single cultural entity that forms a multicultural society, and not a single sovereign state that is part of a multipolar world, wants to allow

the destruction of its own identity, uniqueness, autonomy under the pressure of an aggressive intrusion into the sphere of its vital interests of another cultural entity.

That is why a multipolar world can be built only on the basis of the fundamental values of culture: Truth, Good and Beauty, the essence of which is universal, but the forms of embodiment are infinitely diverse.

Pseudo-value rhetoric and reference to “conflicting value systems” have become today an integral element of the ideological cover for any social conflicts and clashes.

However, real conflicts between individuals, social or ethnic groups or states do not occur because the warring parties have different value systems. On closer examination, it turns out that the participants in the conflicts either (1) try to impose their own understanding of values and ways of embodying them on everyone else, or (2) do not attach real importance to values, guided only by economic interests, political ambitions, and feelings of national or religious intolerance.

However, the threat to the existence of the cultural diversity of the world is posed not only by the aggressive dominance of one culture over others, but also by mass production as a product of scientific and technological progress and capitalism, generating, educating and cloning a mass consumer who does not have any specific, cultural and historical differences, other than those necessary for the profitable consumption of the goods produced. High technologies and digitalization of the socio-cultural space are objective factors of increasing stereotyping, standardization and uniformity in the life of specific cultural subjects. The Internet creates not so much a universal cultural paradigm as a homogeneous mess, not differentiated into different subjects of culture.

Neither urbanization, nor industrialization, nor digitalization, nor the mass media – in general, none of the achievements of scientific and technological progress in itself contributes to the preservation and development of multiculturalism (Chernyakova, 2017, p. 92-97). In addition, globalization (americanization) differs from the natural historical process of civilization development by the conscious destruction of cultural subjects as independent and autonomous. The orientation of the institutions of power and management towards the simplification of forms of activity and the unification of consumer products destroys the desire of cultural subjects to preserve self-identity and cultural specificity. As a result, increasing stereotyping, standardization and uniformity of socio-cultural life destroy the self-identity and integrity of specific subjects of culture.

From a culturelogical point of view, we are talking about the loss of cultural identity, the erasure of specific differences in the ways of mastering the world, the transformation of once unique and unrepeatable cultures into a global mess of endlessly cloned stereotypes (Semenenko, Lapkin, Pantin, 2010, p. 40-59). Each subject of culture, to the extent that it loses its individuality and originality, be-

comes the subject of a stereotyped and standardized mass culture. Actually, mass culture is the way of life of an individual or a community that has lost its identity.

In order for the society of the future not to turn into an undifferentiated mass of social atoms isolated from each other, absolutely identical, indistinguishable and unnecessary to either machines or other people, the state ideology should encourage citizens not to the thoughtless reproduction of samples of alien life activity, but to the awareness of one's own ethno-cultural and national-state identity (Pain, Fediunin, 2020, p.114-134).

The coexistence of different cultural traditions in a multipolar world requires mutual recognition of their right to exist precisely as different and even opposite, but equally valuable orientations.

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IS THE WORLD CONFINED TO HOME THE NEW DYSTOPIA OF AUTOCRACY? A PILOT STUDY IN TURKEY

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抽象的。 本研究的目的是实证调查大流行对个人的影响及其未来的期望。 139 名女性 (73.9%) 和 49 名男性 (26.1%) 参与了这项研究。 我们寻求以下问题的答案: “大流行年产生了什么样的社会、心理和政治影响?”、“土耳其公众从个人、国家和全球方面如何看待大流行年”?、“疫情对公众的影响与对未来的乐观或悲观预期之间是否存在相关性? ”。 这项试点研究得出的结论是,对当前进程的积极评估和对大流行时期的适应是能够乐观地看待未来的先兆。 通过这项研究的结果,我们可以希望,随着个人心理的发展/成长,世界可以再次变得美丽。

关键词: 流行病、未来、期望、心理成长。

Abstract. *The aim of this study to empirically investigate the impact of the pandemic on the individuals, and their future expectations. 139 females (73.9%) and 49 males (26.1%) participated in this study. We have seeked answers to the questions “What kind of social, psychological and political impacts has the year of the pandemic?”, “How is the year of pandemic regarded by the Turkish public in terms of personal, country-wise, and global aspects?”, “is there a correlation between the impacts of the pandemic on the public and the optimistic or pessimistic future expectations?”. With this pilot study was concluded that the positive evaluation of the current process and adaptation to the pandemic period are the precursors of being able to look optimistically to the future. By looking at the results of this study, we can have hope that the world can be beautiful again, with the psychological developments/growth of individuals.*

Keywords: *Pandemic, future, expectation, psychological growth.*

The term dystopia or anti-utopia is used to describe the repressive and foul leadership system compared to the ideal order of the utopias. In these narratives,

there is an order that “rejects human freedom”. The dystopias that are able to place public criticism at their core can be viewed as evaluative texts against rules. In these societies where the loss of a human’s essence is viewed as the main problem, and satire or mockery is used as the main elements of coping; the current system deteriorates without the awareness of the masses. While the realities of the 21st century consist of imagination and representations, the worries and ideals that appear in our minds go beyond imagination and fiction into facing a cold distopic reality that is supported by the global system and governments. Could the inevitable distopic end be the transition of democratic countries into autocratic countries due to the precatations taken during the pandemic? For the first time, the governments are receiving support from the masses this easily and commonly for a distopic request. Further, staying at home, curfews and limitations in travel are encouraged by considerably major part of the masses. These extraordinarily fantastic reactions are unusual blessings for some governments. Actually, it is not true to consider as the end. Whether we call it utopia or dystopia, it doesn’t define a future world, contrary to what many people think. Instead of interpreting dysopia only as a definiton of future, in parallel with the social order, it should be looked for in the middle of a system that is conditioned to ambition and perfection. Utopias and dystopias are the reflection of now and what is being lived now on a hazy mirror in the future. Dystopias that were put in a anti-soviet fiction in the 20th century don’t ground on the images of the double-pole world any more but they adopt many new tools and thoughts that enters our homes along with globalization. Place is the earth that doesn’t have a square meter that is not affected by pandemia. We can say that none of the disasters before that affected the earth traffic such deeply. Time is 2020s which introduced many chaotic surprises to us. Under these circumstances, we had both a tragic place and an unpredictable time to define and classify a new dystopia. At this point, it is thought that the relationship between the dystopic elements of the pandemic and autocracy has become important, and therefore, will be explained in the next section.

Not only has the global crisis status of the pandemic increased the responsibilities of leaders globally, it has also increased the needs and reliance of the public to political leaders and their governance (Gezgüç & Duman, 2020). Considering the global history of the world, it is known that in each era, the governments have led their populations into peace or chaos. Instead of peaceful utopias, most events of the pandemic have aroused feelings of getting closer to dystopias with chaotic bases. To us, the pandemic period seems closer not to utopias where prosperity is at the center, but to dystopias where disaster is at the center.

The rules that are enforced by governments that aimed to reduce the spread of the virus, seemed to create a paradox between individual freedom and public interest. Paradoxes can lead to individuals having ambivalent feelings, difficulties in

self-control, and a tendency to leave the governments to their own devices. Those people who are living in societies where there is no space for freedom or free-will, are either unaware of their ability to make decisions or lacking the courage to take up such responsibility. An experimental study on the decision-making process of the opposing parties, found that fear reduced engagement in the opposers' actions by 14% up to 77%. Additionally, an understanding and avoidance of the risk have mediated these findings (Young, 2016). Another important finding of this study was that the psychological tendency to feel fear when faced with a threat was a better predictor of political engagement than ideological preferences and access to information. In other words, the public that becomes lonely, afraid and alienated may start to obey and become robotized. It is inevitable for the robotized individuals to be controlled by the authorities and engage with politics in favor of the authorities.

Technology and the adaptation to life with internet has become a vital part of our new reality within the pandemic. While the parents tried to cope with their new realities, their offspring (children and teenagers) started to face different everyday challenges. While they were discouraged from spending too much screen-time in fear of screen-addiction (Lynn & Johnson, 2018) prior to the pandemic, they were encouraged by their parents to spend more screen-time for their education during the pandemic. Before COVID-19, the way to keep children off their screens was to take them to parks and cafes. With curfews and lockdowns, the way to keep children indoors became unlimited engagement with the internet. The need to create curfews for children was lifted off of parents with the governments making such decisions for the whole populations with the support of the public. While excessive cleaning, the fear of getting ill, screen-addiction and not leaving the house were described as pathology (DSM 5) in the pre-pandemic world, they have now become normal, and vital to our survival in the new world. In other words, the line between normal and abnormal behaviour is not as clear now as it was before the pandemic. This transparent line seems to be the preparation for the dystopia that we call the "new normal" or the "new world" that we are rapidly approaching, and these feelings are shared by major parts of the society.

We are quite alike the characters from a distopic novel that represents the inner worlds of the ignored and manipulated masses living in a world where technology has fused with war and biological weapons, and where the masses are tired from the leaderships that are in a race to become the "Lord of the Rings". Novels such as *Brave New World* (Huxley, 1932), *1984* (Orwell), and *Blindness* (Saramago, 2019) highlight the psychosocial impacts of the the despotic realities of their time. In this study, we examined the effects of the changing governance caused by COVID-19, which is constantly the focus of our agenda, on individuals. We aim to begin exploring the impact of such changes on individuals' beliefs, values, and

social and psychological everyday lives. Additionally, we aim to investigate the extent of the impact on people's future expectations in regards to personal, country-wise, and global futures.

Aim of the Study

The year 2020 was the year that associated with the pandemic. The aim of this study was to investigate the impact of this time that left important marks in terms of phenomenological and social aspects. We have sought answers to the questions “what kind of social, psychological and political impacts has the year of the pandemic, 2020 had on the individual?”, “how is the year 2020 regarded by the Turkey public in terms of personal, country-wise, and global aspects?”, “is there a correlation between the impacts of the pandemic on the public and the optimistic or pessimistic future expectations for the near-future?”, and “which impacts promote optimism and pessimism specifically?”.

Method

Participants

139 females (73.9%) and 49 males (26.1%) participated in this study, with an age range of 18-61 ($M=33.35$, $SD=9.58$). The education level of the sample consisted of 86 postgraduates (45.7%), 86 graduates (45.7%), and 16 people with high-school degrees and below (8.5%). In terms of developmental stages, there were 44 people between the ages of 18-25 (23.4%), 103 people between 26-39 (54.8%) and 41 people between 40-61 (21.8%). All participants were informed about the study and volunteered to participate online.

Materials

Demographic information form: Questions prepared by researchers to assess the gender, age, education level, COVID-19 diagnosis, loss of a relative during the pandemic, and economic losses of the participants.

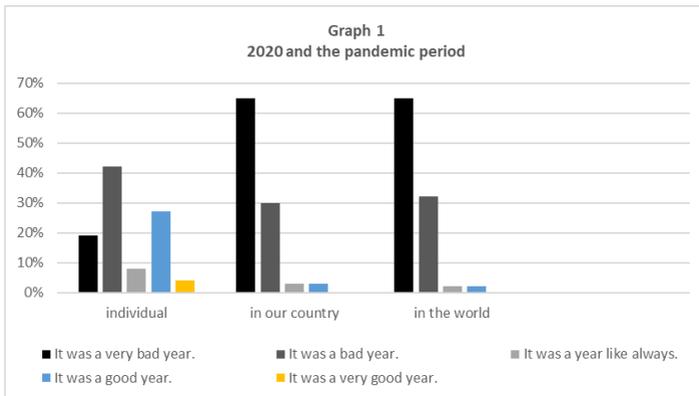
Pandemic adaptation scale: The scale was developed to measure the participants' levels of adaptation to the pandemic. This 21-item scale consisted of positive and negative statements about the psychosocial state of the individual. This scale consisted of four sub-scales: “personal and social adaptation”, “art/technology adaptation”, “free-will and responsibility” and “preparing for the future”. Some sample questions from the scale are “I have tended to my physical and psychological health more”, “My family relations have grown stronger”, “The amount of time I spent on social media has increased”, “My desire to improve my foreign language has increased”, “I have started to think more about death and loss”, “I have made decisions about my future”, and “My interest in universal problems has increased”. A 5-point-likert-scale was used where “1 = Strongly Disagree, 2 = Disagree, 3 = Undecided/ neutral, 4 = Agree, 5 = Strongly Agree”. The overall pandemic adaptation score is calculated by the sum of subscales. The increase in the pandemic adaptation score indicates the increased functional coping with the

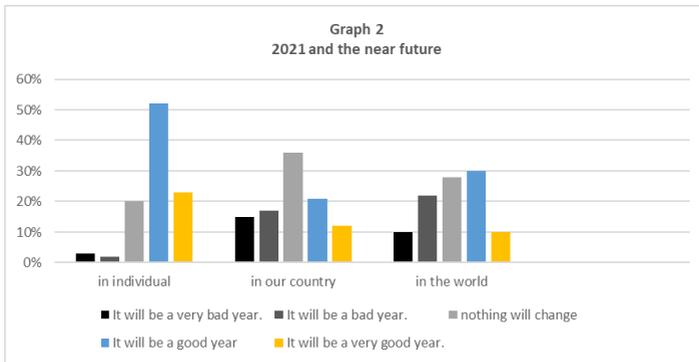
pandemic. The cronbach’s alpha for the scale was .73 and descriptive analyses are performed on both the overall scale scores, and individual items.

Short Question Form: In that form, participants were asked to rate the year 2020 with three seperate items (from personal, country-wise, and international perspectives) on a 5-point-scale where “1 = very bad year, 2 = bad year, 3 = as per usual, no change 4 = good year, 5 = very good year”. They were also asked to rate their expectations from 2021 and the near-future on the same scale. The summation of these 3 items (individual, in our country and in the world) made up the overall assessment score of 2020 and the pandemic. The same procedure was employed to calculate the overall assessment scores of 2021 and the near-future; by summing up the individual, country-wise and international ratings. An increase in overall scores indicates that an increased optimism in their evaluation of 2020, 2021 and the near future.

Results

The results frequency analysis (see Graph 1) indicated that over 60% of the participants evaluated 2020 to be a bad year from an individual perspective. Further, over 90% has evaluated 2020 to be a bad year from both country-wise and an international perspectives On the other hand, the positive future expectations of 2021 (see Graph 2) seem to be much higher when answered from the personal perspective (74.5%) compared to negative expectations (4%). Since the majority of the participants have rated 2020 to be a bad year, we can suggest that “nothing will change” statement for 2021 or the near future can be considered as having negative expectations. Further, when participants were answering the questions from a country-wise perspective, 64.4% rated 2020 as a bad year, and 35.6% expected nothing to change in the near future and 2021. This can be interpreted as having negative expectations from the near future and 2021 for our country.





ANOVA was used to assess the differences between age groups and their evaluations of 2020 and near future expectations. Significant differences were found between the age groups in terms of individual ratings of 2020 ($F(2,188)= 8.46$; $p<.001$). Namely, the 18-25 year olds ($M= 4.05$, $SD=1.06$) rated 2020 to be significantly worse than the 26-39 ($M=3.19$, $SD=1.17$) and 40-61 ($M= 3.46$, $SD=1.18$) year olds did when they evaluated it from a personal perspective. Other than the direct impacts of the pandemic on this young population, this rating could also be explained by the economic instability in our country, the increase in unemployment, and online education at universities. Further, this finding also suggests that the young age group could be at psychological risk due to their pessimistic outlook on life.

A Pearson’s correlation was conducted to explore the relationship between demographics and the scores of “pandemic adaptation scale, and its subscales”, and “expectations of 2021 and near future” (see Table 1).

Table 1
Correlations between variables

		Pandemic adaptation scale	The year of 2020 and pandemic assessment	Expectations of 2021 and near future	
	Demographic variables				
		Gender	-.09	-.02	.01
		Age	.24**	-.10	-.02
		Education	.06	-.01	-.11
		Being diagnosed with covid-19	.18*	-.08	.00
		Losing a relative due to covid-19	-.11	.02	-.02

	Experiencing economic loss in the pandemic	.13	-.25**	-.09
	The subscales of pandemic adaptation scale			
	Individual-social cohesion	.51**	.22**	.18*
	Virtual harmony	.66**	-.14	.04
	Responsibility-will	.72**	-.09	.03
	Preparation for the future	.70**	-.00	.19**
	The year of 2020 and pandemic assessment	-.01	-.01	.26**
	Expectations of 2021 and near future	.17*	.26**	-

* $p < .05$, ** $p < .01$

Note. Correlations of the sub-dimensions of the pandemic adaptation scale with the total scale were included in order to give information about the validity of the scale.

Table 1 shows that age ($r=.24, p<.01$) and being diagnosed with COVID-19 ($r=.18, p<.05$) both have a significant positive correlation with adaptation scores. Further, having had an economic loss during COVID-19, and evaluations of 2020 and the pandemic had a negative correlation. In other words, with increased age or COVID-19 diagnosis, functional coping has increased, as economic losses increased the negative evaluation of 2020 also increased.

Further, a regression analysis was conducted ($n = 188$) to explore the impact of 2020 evaluations and pandemic adaptiveness on the optimism for future. It was found that evaluating 2020 and the pandemic positively ($\beta = .26, t = 3.67, p < .01$), and having high pandemic-adaptiveness ($\beta = .17, t = 2.41, p < .05$) predicted the positive outlook on 2021 and the near future ($R^2 = .09, F_{(2,187)} = 9.55, p < .001$, see Table 2).

Table 2

The predictors of an optimistic assessment of the 2021 and the near future

	R	F _(2,187)	β	t
Optimistic assessment of the 2020 and the pandemic process	.31	9.55***	.26	3.67**
Adaptation to the pandemic			.17	2.41*

* $p < .05$, ** $p < .01$, *** $p < .001$

Discussion and Conclusions

Has the pandemic opened the box of pandora? It seems that while looking for answers to some questions with the current study, we have begun to ask many new questions. With this pilot study conducted in Turkey, it was concluded that the

positive evaluation of the current process and adaptation to the pandemic period are the precursors of being able to look optimistically to the future. As a result of a study conducted in Turkey, it was concluded that as the emotions, thoughts, and behaviors associated with covid-19 increased, psychological symptoms and intolerance to uncertainty increased as well, and psychological resilience decreased (Durak-Batıgün & Şenkal Ertürk, 2020). Another important finding of our study is that there is a negative correlation between economic losses and the positive evaluation of the period. In a longitudinal study conducted on the American society, the level of psychological symptoms caused by the pandemic between March and July were compared. It has been revealed that recovery occurs as time goes on, regardless of the culture. However, it has also been revealed that the measures taken by the administration to minimize the economic loss of the public are effective in this recovery (Daly & Robinson, 2020).

Overall, the pessimistic or future-oriented population seems to be those within the age range of 18-25. However, hope is directly related to the ability of individuals to reunite with societies. Therefore, future research could focus on the factors of the adaptation to the pandemic. Lastly, the small number of sample size and the overcrowded high-education section of this sample have limited the generalisability of this research. However, this study could be inspiring when considered as a small pre-study to initiate further research.

Differently from the previous universal epidemics that have made a mark in history, we are currently in the age of technology. While seeing news about international lockdowns, or international travel for touristic and commercial reasons have increased the negative impacts of the epidemic, the ability to maintain life from home with the help of technology has become the one thing that made adaptation easier. Therefore, the difference between cyber and real life has become the main agenda in the 21st century, and in 2020 specifically, and this seems to be above all else. On the other hand, the pandemic has created a world where “evaluation of reality cannot evaluate deterioration of it” and the only reality has become the world we built around the pandemic-restrictions. This new reality can only be lived in the cyber world, from education to shopping, from work to health and from family to social life.

While the world started living virtually, people are distinct from robots and artificial intelligence in their spontaneity and creativity. However, with the repression of these potentials starting with parents and continuing with teachers, supervisors, and political leaders, the children whose spontaneity and creativity reduce gradually, become robotized (Dökmen, 2017), and lonely. While in the past the potential of creativity and spontaneity of people were diminished by direct human intervention, in the modern world, technology also plays a part in this process. Social isolation that followed the pandemic has made technology out to be a *saviour*.

In his 1917 article “Art as Device,” Shklovsky used the phrase to disrupt the spell of automation that is slowly devouring things, clothes, furniture, our wives, and our fear of war. Shklovsky’s automation was certainly not technology, the savior of our day. However, it is of vital importance for societies, who are no longer “people who do and live” but who have rather become “people watching life” (Dökmen, 2017, p.14), to disrupt the magic of this automation that slowly eats and consumes everything that have become. This should not be seen as a utopian goal. It seems like salvation for people who have been transformed from being “the doers and liverers” into “observers of life” (Dökmen, 2017, p.14). Instead of an uncertain future, choosing to live the worst case scenario or giving up on the value of reality may create a sense of consistency and security. Just the way going back to normal routines after earthquakes or floods gives a sense of safety and relieve the “restrictions” that feel like normal and routine may create the same sense of relief and security. As a result, it must not have been particularly difficult for the autocracies to isolate individuals and make them become lonely and alienated from society. In order to control the COVID-19 pandemic, on social distance rules and restrictions related to “staying at home,” which are established by the administrations, have been applied almost all over the world, in addition, tracking applications via smart phones have become mandatory in our country. A Russian in exile told Stefan Zweig, “In the past, man had only one body and one soul. But now he must also have a passport so he can be treated like a human. Because the years following the First World War were passport years. But how should the years 2020 and beyond be named? Individuals claiming world citizenship had to keep their passports on the shelves for a long time. Not only changing countries, but even going from one street to another became subject to authorization. The same discussion now continues over being vaccinated or not. While anti-vaccine opponents try to gather strength using all their conspiracy theories, those who want to prevent them are trying to impose serious sanctions. It seems difficult for the vaccine to provide a permanent solution in the short term. Especially when there are millions of people who cannot access the vaccine. For this reason, it seems that strict measures will be in our lives for a long time. Worries about how these precautions would impact the vulnerable youths and elderly have followed these restrictions (Luchetti et al., 2020; Miller, 2020). Have the authorities felt the same worry? Isn’t it time for precautions that attempt to protect the psychological wellbeing of the public?

Certain factors that are associated with trauma include a constant feeling of being alert, intense feelings of fear and desire to escape, having intense negative thoughts and feelings, the understanding that the “safe world” has changed and having negative predictions about the future (Horesh & Brown, 2020). Further, the fear and desire to escape the virus are supported by the authorities. The fact that dystopias’ perspectives created with the support of the authorities are now becom-

ing our new reality, points at the existance of societal traumas. Only a psychologically healthy population can adapt to the pandemic, take responsibility with the awareness of free-will, and have an optimistic outlook on the future regardless of the losses.

Umberto Eco targets adults as well as children in “Tre Racconti - Cecü'nün Yer Cüceleri in Turkish” where he says “Our story ends here for now, and we apologise for not being able to tell you everybody lives happily ever after” (Eco, 2020; p. 112). However, by looking at the results of this study, we can have hope that the world can be beautiful again, with the psychological developments/growth of individuals. It seems like the Pandora's box that has opened up with COVID-19 has spread evil out into the world. Sometimes, in order to rise up and take a deep breath, one needs to sink down to the bottom of the ocean. Could it be happiness and hope that will be left behind once all the evil clears out?

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DOI 10.34660/INF.2023.47.50.112

光之实践者：新职业的诞生。 创始人及律师的观点
**LIGHT PRACTITIONER: THE BIRTH OF A NEW PROFESSION.
THE VIEW OF THE FOUNDER AND LAWYER**

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注解。 作者概述了轻型执业作为一种新职业的发展，并从创始人和律师两个不同的角度对其进行了审视。

在文章中，作者彻底分析了轻实践作为一种职业的概念，解释了它的含义。一位作者谈到了他在该领域的经验，强调了轻实践在当今世界日益重要，并预测它可能成为未来最受欢迎的职业之一。

文章的另一部分提出了第二位合著者律师的观点。他分析了照明行业的法律问题并反思了该行业的监管。 本文结合创始人的经验和律师的分析方法，提出了对光从业者这一新职业的看法。 使读者更好地理解 and 体会该专业的意义和前景，熟悉所涉及的主要法律问题

关键词：照明实践、照明从业者、专业、职业分类。

Annotation. *The authors provide an overview of the development of light practice as a new profession and examine it from two different perspectives - the founder and the lawyer.*

In the article, the authors thoroughly analyse the concept of light practice as a profession, explaining what it entails. One author talks about his experience in the field, emphasises the growing importance of light practice in today's world and predicts that it could become one of the most in-demand professions in the future.

The other part of the article presents the point of view of the second co-author lawyer. He analyses the legal aspects of lighting practice and reflects on the regulation of this profession. The paper presents a perspective on the new profession of light practitioner, combining the founder's experience and the lawyer's analytical approach. It enables readers to better understand and appreciate the significance and prospects of the profession, and to familiarise themselves with the main legal issues involved

Keywords: *lighting practice, lighting practitioner, profession, occupational classification.*

Science and technology are the engine of progress and development of society, constantly evolving and creating new opportunities and discoveries. However, at the same time, law is always secondary and follows changes in social relations. It gives some basis to the legal superstructure and is an artificial regulator of natural relations.

Every day life becomes more and more intense, every day the psychological pressure on man, stress, depression increases more and more.

Quantum physics has long ago proved that everything in the world is energy, and all of us are energy and the fastest effective healing on all plans and levels a person gets through working with energies. This aspect has caused the need for specialists of this kind to appear, specialists working with energy.

Excessive overload of information, which surrounds us in abundance, first causes psychological mental problems, and then it is reflected on the physical level - on the human body. Hence, new directions of research appear, which later give rise to new areas of activity, giving birth to entire professions and specialities. It is important to note that light practice is not something related to esotericism, to spiritual practices. Light practice is a technique that allows anyone to learn this profession, to get these opportunities and to be engaged in the restoration of mental and physical health of people.

Many centuries ago people knew that the best, fastest and most environmentally friendly healing is possible through working with energy, with the energy of the person and through working with the spirit, mind and body at the same time. In fact, the spirit is healed initially, then the mind, and only then is the process of restoration and healing reflected in the body, just as it works the other way round in terms of disease.

A light practitioner is a professional who works with light energies, receiving and transmitting light streams through their body and transmitting them to another person.

Light practitioner is a profession that takes place as an independent unit when a person works as a light practitioner, it is also a profession that perfectly complements such professions as psychologist, massage therapist, osteopath, chiropractor.

Energy is everything, and when a person is endowed with energy, he is endowed with abilities and has the opportunity to realise absolutely everything he wants, because it is a manifestation of the harmony of physical psychological health. Light practice is that technique and methodology which first fills, and then it opens, activates the inner potential, and the person accordingly lives a fulfilled life.

Light practice as a profession began to take shape when the respective abilities and capabilities of the founder were discovered and when the needs of modern society arose.

Light practice is a set of knowledge, information, having its own special content and expression in “light practices”, consisting in working with light energy and energy of an individual person and aimed at improving the spiritual, physical and psycho-emotional state of a person.

Speaking about the formation and establishment of a new profession, it should be noted that at the moment when a new need or activity arises in society, at the first stages the law does not yet give it the status of a profession. This is due to the fact that the legal form arises after the formation of the profession and based on the needs of society. Initially, the activity may be informal or unregulated by law.

However, as the activity develops and its position in society is strengthened, it becomes necessary to legislate the new profession and ensure its lawful practice and regulation. This is because the legal form of a profession ensures that the standards, norms and obligations under which the activity must take place are established. It also protects the rights and interests of those who practise the profession and creates a system of accountability for failure to meet the requirements and standards of the profession.

Legal formalisation of a newly formed profession also allows society and government to better monitor and regulate the activity. The establishment of a legal framework for a new profession ensures its recognition and legalisation, which contributes to its development and the maintenance of quality services.

In this way, science and technology develop and shape new needs and activities in society. Law, being secondary and following social relations, formalises these newly formed professions into a legal form, providing regulations, standards and protection of the rights and interests of professionals. Thus, the legal form is important for the sustainable and developed functioning of new professions in society.

Meanwhile, the emergence of new professions is an integral part of the development of society and technology. Together with the emergence of new professions, there is a need for legal regulation and determination of their status and functions.

The legal aspect of the emergence of a new profession is associated with the introduction of legislative norms and rules that define the rights and obligations of workers in the new profession, the requirements for their qualifications and professional skills, as well as the regulation of their activities. This makes it possible to ensure the safety and protection of the rights and interests of all parties - workers, employers and consumers of services of the new profession.

One of the important aspects of legal regulation of the new profession is the establishment of qualification requirements. This makes it possible to ensure a high level of fulfilment of professional duties and protect consumers of services from incompetence and unprofessionalism. An example is the profession of web

designer - the legislation defines the necessary knowledge and skills in the field of design, programming and web technologies that ensure the quality and safety of work.

The legal aspect of the emergence of a new profession regulates aspects such as the protection of workers' rights and interests, including social and labour guarantees, restrictions on part-time work, insurance and remuneration. This helps to establish fair and equal working conditions for all workers in the new occupation and prevents exploitation and violation of labour rights.

Furthermore, the legal regulation of the new profession is important for society as a whole. It is the basis for development and innovation in the field concerned. Legal frameworks help to regulate the relationship between workers and employers, ensuring stability, trust and development of the new profession. They also contribute to the protection of the rights of service users and public safety.

Thus, the legal aspect of the emergence of a new profession is an integral part of its development and successful functioning in society. Professional standards and norms, qualification requirements, protection of labour rights and interests - all these are the basis for sustainable and responsible development of the new profession. Legal regulation ensures the establishment of rules that promote a harmonious combination of economic, social and technological aspects leading to the prosperity of society as a whole.

Light practitioner is the profession of the future, a profession that has formed at the intersection of psychology, quantum physics and spiritual practices.

Future legislation over time should define and recognise the light practitioner as an independent profession that combines elements of psychology, quantum physics and spiritual practices. This would recognise the light practitioner as a competent professional in their field and allow them to practice fully within the legal framework.

DOI 10.34660/INF.2023.79.88.113

中国外交政策的新内容：外交法的棱镜

NEW CONTENT OF CHINESE FOREIGN POLICY: A LOOK THROUGH THE PRISM OF LAW ON FOREIGN RELATIONS

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抽象的。文章探讨了《中华人民共和国外交关系法》的实质内容及其对新时代中国外交政策的影响。本法是反映我国对外政策活动内容和原则的观点体系以及现代国际关系体系，旨在改善我国的国际形象，促进国际社会对我国活动的了解。舞台，包括与外国互动方面。笔者认为，该法为中国外交改革全球治理和全球安全体系、改变世界秩序提供了法律保障。

关键词：中华人民共和国、外交政策、对外关系、世界秩序、全球安全、全球治理。

Abstract. *The article examines the essence of the Law on Foreign Relations of the People's Republic of China and its influence on China's foreign policy for a new era. This Law is to reflect China's system of views on the content and principles of conducting foreign policy activities, as well as the modern system of international relations, and is designed to improve China's international image and promote a clear understanding of the country's activities in the international arena, including in terms of interacting with foreign countries. The author concludes that the Law provides legal guarantees for China's diplomacy in reforming the system of global governance and global security and changing the world order.*

Keywords: *People's Republic of China, foreign policy, foreign relations, world order, global security, global governance.*

The first half of 2023 brought various external challenges for the Chinese government, which, in particular, include the sanctions, imposed by the U.S. Department of the Treasury, that hit Chinese entities and individuals [4; 7]; actions by the United States, Japan, and the Netherlands to tighten export controls of chip manufacturing equipment and technologies to China [1], which significantly impede the country's technological and military development; and the consolidation of anti-China coalition in the Indo-Pacific region, mainly through the expansion of

U.S.-led joint exercises between the U.S. Navy/U.S. Air Force and their regional allies [6]. For the Chinese government, all the above-mentioned challenges pose a real threat to national security.

In order to “provide strong legal guarantee for the major-country diplomacy with Chinese characteristics in the new era” [5] the Law on Foreign Relations of the People’s Republic of China (中华人民共和国对外关系法) [9] was adopted on June 28, 2023, at the third session of the 14th National People’s Congress (NPC) of China and its Standing Committee (NPCSC). It is the China’s first such foreign policy document designed to legally enshrine the goals, priorities, instruments and principles of the PRC’s foreign policy against the backdrop of strained relations with Western countries pursuing policies to contain China’s global ambitions and influence [2].

Content of the Law on Foreign Relations of the People’s Republic of China

In **Chapter I – General Principles** – Article 1 defines the *goals of the PRC’s foreign policy*, among them to safeguard China’s sovereignty, national security and development interests; to build China into a great modernized socialist country; to promote world peace and development; to build a community with a shared future for mankind.

Articles 2 to 7 of the Law set out the *principles China follows in its relations with other countries and international organizations*. These are the five principles of peaceful co-existence, peaceful development, diversity of civilizations, equality and mutual respect, settling international disputes by peaceful means, opposing hegemonism and power politics.

Thus, to date, China’s foreign policy activities have been aimed at promoting common development by building a community with a shared future for mankind – the core principle of Xi Jinping’s thought on diplomacy. Chinese leader believes in so called Prosper-Thy-Neighbour policy, that means the country develop, grow and prosper only in parallel to their neighbors’ development, growth and prosperity. China, on its way to becoming a ‘great modernized socialist country’ in all fields and aspects, is expected to create stability for a rapidly changing world and expand areas of mutually beneficial cooperation with other countries in the region and the world on the basis of multilateralism (多边主义).

Chapter II defines the *functions and powers of the PRC state organs conducted of foreign relations* (see Table 1), as well as diplomatic mission abroad (embassies, consulates, permanent missions to international intergovernmental organizations). Thus, one can see a tendency to strengthen inter-agency coordination under the leadership of the Communist Party of China. In other words, the Party is responsible for providing foreign policy direction, while the relevant state organs appear as executor, acting within the scope of their authority.

Table 1.
*Functions and Powers of the PRC's state organs
for the Conduct of Foreign Relations*

State organs of the People's Republic of China	Functions and Powers for the Conduct of Foreign Relations
The Central Foreign Affairs Commission (中央外事工作委员会)	<ul style="list-style-type: none"> • central leading body for foreign affairs; • formulating the PRC's foreign relations strategy, major principles and policies; • deliberation and coordination relating to the conduct of foreign relations; • coordination of work concerning foreign relations;
The National People's Congress (全国人民代表大会)	<ul style="list-style-type: none"> • ratification or denunciation of treaties and agreements; • conducting and strengthening international exchanges with foreign countries, international and regional organizations;
The President of the People's Republic of China (中华人民共和国主席)	<ul style="list-style-type: none"> • representing the PRC on the international arena; • conducting state affairs;
The State Council of the People's Republic of China (中华人民共和国国务院)	<ul style="list-style-type: none"> • managing foreign affairs; • concluding treaties and agreements with foreign countries;
The Central Military Commission (中华人民共和国中央军事委员会)	<ul style="list-style-type: none"> • organizing and conducting international military exchanges and cooperation;
The Ministry of Foreign Affairs of the People's Republic of China (中华人民共和国外交部)	<ul style="list-style-type: none"> • conducting foreign affairs; • organizing and conducting diplomatic exchanges of Party and State leaders with foreign leaders and so on.

Chapter III – Goals and Mission of Conducting Foreign Relations – reveals the *essence of China's conducting foreign affairs, the main directions and areas of interaction with other countries* in the region and the world, with special attention paid to countries of the Global South.

This Law also enshrines the PRC's desire to participate in international rule-making in the following areas:

- mechanisms of global security governance (*Article 20*);
- sustainable development of the economy, the society and the environment and well-rounded human development (*Article 21*);
- comprehensive and coordinated development of all human rights, sound development of the global cause of human rights (*Article 22*), as well as common values of humanity (*Article 23*);

- global environmental and climate governance, alongside building a fair, equitable, and cooperative global system of environmental and climate governance (*Article 25*);
- maintaining a multilateral and open trading system through the development of the Belt and Road Initiative (*Article 26*);
- assistance to boost economic development and social advances of other developing countries, providing foreign aid (*Article 27*).

In this regard, the legal consolidation of the main modern foreign policy concepts and initiatives of the People's Republic of China, such as the "Community of Common Destiny for Mankind", the Global Security Initiative, the Global Development Initiative, the Global Civilization Initiative, is particularly noteworthy.

Thus, China is assuming the role of a responsible power and a builder of a new world based on the principles of multilateralism. In other words, the Chinese government aims to transform the whole world into a community of common destiny, mainly through the implementation of the Belt and Road Initiative. This represents the most ambitious concept with Chinese characteristics, leading all mankind into a new era.

Chapter IV – The System of Foreign Relations – systematizes the PRC's *ambitions to strengthen legislation in areas related to foreign affairs*, particularly in concluding or acceding to treaties and agreements that "shall not undermine the sovereignty of the State, national security and public interests".

The Chinese government's emphasis on protecting the legitimate rights and interests of Chinese citizens and organizations overseas, as well as on safeguarding China's overseas interests against any threat or infringement, remains unchanged. Thus, China secured the right to take counter measures "against acts that endanger its sovereignty, national security and development interests in violation of international law or fundamental norms governing international relations" (*Article 33*). As stated by Vladimir Petrovskii, Chief Research Associate at the Center "Russia, China, and the World" at the Institute of China and Contemporary Asia of the Russian Academy of Sciences, "we are talking about the legalization of the mechanism of counter-sanctions, and this is an unambiguous signal to the U.S. and other Western countries that impose various restrictions against China under far-fetched pretexts" [3]. Therefore, this should be regarded as means of combating western hegemony.

Possible measures include inter-departmental coordination and cooperation to take appropriate steps, termination of diplomatic and/or consular relations with a foreign country, implementation of sanction resolutions. The Law provides additional legal support to such measures, but they are likely to have limitations because of overlapping with provisions in previously promulgated laws, such as the Anti-Foreign Sanctions Law that was adopted in 2021 [8].

Chapter V regulates *government support for the conduct of foreign relations*, including funding; training, management, service and support of personnel; promoting public understanding of and support for its conduct of foreign relations; expansion of exchanges and mutual learning between different civilizations, etc.

Conclusion

Therefore, the Law on Foreign Relations of the People's Republic of China, on the one hand, reflects the PRC's aspiration to be open to the outside world, to follow the path of peaceful development, to promote the building of a new type of international relations and a community with a shared future for mankind, bringing Chinese wisdom and experience to world politics and relations with other countries.

On the other hand, the Law provides a legal basis for opposing all forms of hegemonism and power politics, unilateral sanctions and interference in internal affairs, which are the main features of the current rules-based international order, or in other words, the U.S.-led ideological liberal world order. Thus, the Chinese government, while providing legal guarantees for its own diplomacy, is directing efforts to reform global governance and global security systems and transform the world order from unipolarity to multipolarity.

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DOI 10.34660/INF.2023.68.41.114

嗜冷微藻和蓝藻的生长特征

FEATURES OF THE GROWTH OF PSYCHROPHILIC MICROALGAE AND CYANOBACTERIA

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Introduction

Currently, the issue of obtaining a complex of biologically active substances from microalgae has gained wide interest. Microalgae, being unicellular photosynthesising microorganisms, convert solar energy into biomass with more efficiently than terrestrial plants [1-3]. The main macroalgae species produced are *Arthrospira platensis*, *Aphanizomenon*; microalgae are *Chlorella vulgaris*, *Dunaliella salina*, *Isochrysis galbana*, *Bannochloropsis salina*, *Phaeodactylum tricorutum*, *Porphyridium cruentum* and *Haematococcus pluvialis*. They find applications in the production of fish and farm animal feeds, organic fertilisers, and valuable extracts of polyunsaturated fatty acids, pigments, nutraceuticals, antioxidants, anti-cancer and antimicrobial agents [4-7].

Microalgae are considered as a new source of valuable chemicals, which led to the development of production technologies (photobioreactors) and processing of microscopic algal biomass [8,9]. The possibilities of utilising microalgae biomass and their metabolites, such as polysaccharides, in biotechnological productions lead to a steady decrease in the cost of biosynthesis products. Eukaryotic and prokaryotic microalgae that produce and release large amounts of polysaccharides into the environment include *Amphora rostrata*, *Amphora holsatica*, *Coscinodiscus nobilis*, *Cylindrotheca closterium*, *Melossira nummuloides*, *Navicula salinarum*, *Navicula subinflata*, *Phaeodactylum tricorutum*, *Botryococcus braunii*, *Chlamydomonas sajabo*, *Dunaliella salina*, *Chlorella pyrenoidosa* and others. Ex-

opolysaccharides are high molecular weight polymers consisting of sugar residues that are secreted by microalgae into their environment and can serve as a barrier between cells and the environment [10-12].

The aim of this study was to investigate morphological features and growth parameters of psychrophilic microalgae and cyanobacteria for the subsequent production of exopolysaccharides.

Objects and methods of research

Microalgae *Scenedesmus obtusiusculus* Chod, *Chlorella* sp. Beijer, *Nannochloris* sp. Naumann, *Ankistrodesmus acicularis* Korsch were obtained from standard samples of the Collection of microalgae and cyanobacteria IPPAS IPP RAS (USI CMC IPPAS IPP RAS) of the Ministry of Education and Science of Russia and sown on liquid nutrient media. Further, microalgae-producers were cultured and screened for biomass accumulation and target products (carbohydrate-mineral complex) suitable for cultivation in laboratory conditions. Microalgae strains were cultured on different media under controlled illumination 8/16 (light/dark) and at temperature 25-30 °C in conical flasks with media volume 250-5000 ml. The rate of growth and biosynthesis of microalgae polysaccharides was determined under changing illumination from 50 to 130 mmol/m²/sec. The duration of the experiment was 12 days. Micronutrients were added in the amount of 1 ml of solution per 1 l of nutrient medium; medium and micronutrients were sterilised at 1 atm. 20 min. The pH range was measured with a laboratory pH-meter model Starter 300 (USA).

Results and their discussion

The biomass of microalgae in the flask in static position, shaker flask and photobioreactor was expressed in units - number of cells and amount of polysaccharides in g/L. Exponential growth showed a straight line when using a logarithmic scale, and the slope of the line indicated a certain rate of growth and polysaccharide biosynthesis of microalgae and/or cyanobacteria (Figures 1, 2).

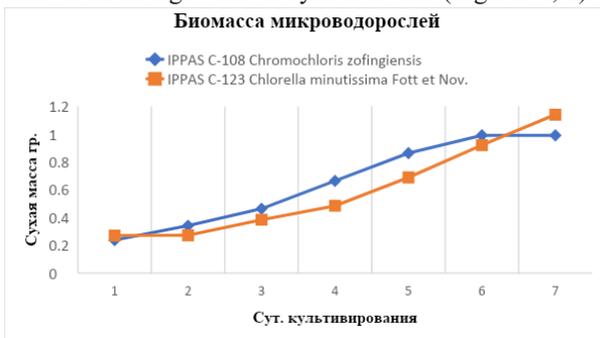


Figure 1. Exponential growth of biomass accumulation

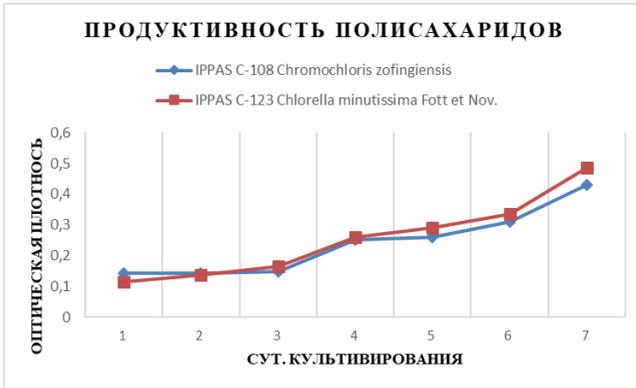


Figure 2. Exponential growth of microalgae and polysaccharide biosynthesis

When considering strain growth in the general case, it is necessary to take into account the processes occurring in the microalgae cell that are not directly related to polysaccharide biosynthesis. Such processes include the mechanism of maintenance of the thallus structure. This mechanism in microalgae is poorly understood. It is known that at low light intensities, the so-called “dark” respiration is clearly observed in cells, accompanied by oxygen uptake and a decrease in cell biomass. Oxygen release and growth of microalgae begin only after increasing light intensity above a certain value (corresponding to the compensatory phase of photosynthesis), at which the rates of oxygen release and absorption are equal. In general, growth and biosynthesis of cell components are the result of two processes: photosynthesis proper and respiration. The respiration costs associated with growth (photorespiration) are proportional to ‘net’ photosynthesis and are difficult to isolate from the overall process; it is usually assumed during microclimate modelling of microalgae growth that ‘net’ photosynthesis already includes this process. Therefore, growth can be considered as the difference of two processes: “pure” photosynthesis and “dark” respiration.

In order to correctly describe the dynamics of microalgae culture productivity, it is necessary to take into account the way of supplying the limiting factor to the culture, i.e. increasing the light intensity from 50 to 130 mmol/m²/sec. The cumulative biomass curve has no inflection point between the acceleration and deceleration phases of microalgae growth. In a closed system, an exponential relationship is used to describe the growth acceleration phase. Thus, there is no pronounced inflection point of the biomass curve, i.e. the culture passes into the phase of growth retardation without a pronounced value of biomass accumulation rise. The increase in productivity is due to the exhaustion of the limiting factor, which does not significantly depress productivity and biomass accumulation. At a

light intensity of 80 mmol/m²/sec, the accumulation curve may lack an exponential growth phase, which indicates the influence of the limiting factor on biomass accumulation and productivity from the initial time point, i.e. the growth retardation phase starts from this point.

Earlier it was noted that under conditions similar to those given above (when cultivated on a shaker), the gross productivity of microalgae increased linearly with increasing illumination in the range of photon flux density (PFD) 50-80 mmol/m²/sec, but at ultrahigh PFD 130 mmol/m²/sec productivity deviated from the linear dependence due to possible photodegradation of pigments and inhibition of photosynthesis in these conditions. In variants with illumination 50-130 mmol/m²/sec, the die-off phase began on the 7th day of the experiment. The sharpest decrease in culture density was observed in the variant with the highest illuminance of 130 mmol/m²/sec. In variants with lower illumination values of 50 mmol/m²/sec, the decrease in growth rate was slower, with a pronounced phase of growth retardation on the accumulation curve. The maximum culture density did not differ significantly under several illumination variants, while the time to reach the maximum biomass differed.

The cultivation of phototrophic microalgae strains is accompanied by active mass transfer. The nutrient medium is characterised by electrochemical parameters: pH and redox potential (Eh). Active proton transport in the electrochemical chain leads to alkalinisation of the medium with the release of low-potential thionine, which reduces the redox potential of the medium, especially during the lag-phase period of microalgae strain development, which is associated with the preparation of the population for cell division and active biomass accumulation [13]. The microalgae showed high biomass accumulation (productivity) under alkalophilic conditions pH - 8.5/8.1 (pH - start/end of cultivation). H-242 *Vischeria punctata* had a productivity of 72.4%; C-1509 *Nannochloris* sp. *Naumann* had a productivity of 72.61%. These eukaryotic algae were actively photosynthesised with pH greater than 8.0 and at 30 °C.

The range of acidophilic pH values 2.0-3.2 at which microalgae show activity and biomass accumulation was found in strain P-520 *Cyanidium caldarium* - 72.3%. The maximum activity at the lag phase level of growth has pH 3.0/3.2 and is 100%. A microalga with an optimum pH for growth between 2.0 and 3.0 adapted to low light intensity of 50 mmol/m²/sec by increasing the concentration of green pigment. Photosynthesis adapted to lower light intensity and inhibited activity at high light intensity. When glucose (1g/l) was added during the dark phase of cultivation, chlorophyll concentration decreased. During further cultivation under light conditions of 50 mmol/m²/sec in the presence of glucose, chlorophyll was not synthesised and heterotrophic growth continued; when glucose was excluded, pigment synthesis occurred and autotrophic growth resumed.

Conclusions

Thus, during microalgae cultivation, it was found that the cell number level for C-8 *Chlorella ellipsoidea* Gern varied in the life cycle-logarithmic growth phase from 1.232, for H-239 *Haematococcus pluvialis* to 1.385. The average cell growth of C-26 *Chlorella pyrenoidosa* Chick was 1.234. Cell levels varied for C-7 *Chlorella kessleri* and C-8 *Chlorella ellipsoidea* Gern also in the life cycle - slow growth phase to 1.507, and for C-26 *Chlorella pyrenoidosa* Chick to 1, 719. The average cell growth for S-317 *Scenedesmus obtusiusculus* was 1, 586. The growth and polysaccharide biosynthesis rates of microalgae were determined when the illumination was varied from 50 to 130 mmol/m²/sec. The microalgae H-242 *Vischeria punctata* showed a high biomass accumulation rate of 72.4% under alkalophilic conditions pH - 8.5/8.1. The productivity of C-1509 *Nannochloris* sp. Naumann was 72.61% at pH greater than 8.0 and temperature 30 °C. Cyanidium caldarium strain P-520 *Cyanidium caldarium* showed activity and biomass accumulation, revealing up to 72.3% in the acidophilic range of pH-2.0-3.2. It was proved that neutrophils can grow at pH below 3.0, this is consistent with the results of experiments with collection strains of microalgae, with a biomass productivity of 27.3%. At alkaline pH 8.3-9.0, biomass productivity decreased from 46.0 to 37.2%. Of particular interest, microalgae biomass productivity increased at alkaline pH values of 7.5 and 8.0, indicating optimal growth conditions in this narrow pH range. The ability of microalgae to produce exopolysaccharides opens up prospects for their use in practical applications.

Funding: the work was financially supported by the Ministry of Science and Higher Education of the Russian Federation (grant of the President of the Russian Federation), project № MK-484.2022.1.4 (agreement № 075-15-2022-393).

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褪黑激素作为溃疡的标志
MELATONIN AS A MARKER OF ULCER

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抽象的。十二指肠消化性溃疡广泛存在，并因严重并发症而闻名，有时甚至与生活不相容。我们研究的目的是根据一年中季节性恶化的情况，通过测定血液中的褪黑激素来优化十二指肠溃疡（DU）的早期诊断。研究使用褪黑激素作为PUD早期诊断和预后标志物的前景。

我们在知情同意的情况下对40名健康志愿者（对照组）和60名十二指肠溃疡患者（主要组）进行了全面检查。采用高效液相色谱-串联质谱法（HPLC-MS）测定一年中不同季节受试者的静脉血（含有EDTA）中褪黑激素的浓度。患者体内吡噪水平低于阈值，褪黑激素谱在一年中不同季节的变化也不同。因此，春夏季节，血液中褪黑素的含量为10 pg/ml以下，而秋冬季节则达到1 pg/ml以下。患者中发现的显著变化使我们建议测定这种吡噪作为预测十二指肠溃疡季节性恶化的生物标志物。

关键词：褪黑激素，十二指肠溃疡，同步失调。

Abstract. *Peptic ulcer of the duodenum is widespread, and is known for serious complications, sometimes incompatible with life. The aim of our study was to optimize the early diagnosis of duodenal ulcer (DU) with the determination of melatonin in the blood, depending on the seasonal exacerbation during the year. To study the prospects of using the hormone melatonin as an early diagnostic and prognostic marker of PUD.*

We carried out a comprehensive examination with informed consent of 40 healthy volunteers (control group) and 60 patients with duodenal ulcer (main group). In the venous blood (with EDTA) of the examined persons, the concentration of the hormone melatonin was determined by high-performance

liquid chromatography with tandem mass spectrometry (HPLC MS) in different seasons of the year. In patients, the level of indole was below the threshold values, and the variation of the melatonin profile in different seasons of the year was different. So, in the spring-summer time, the content of melatonin in the blood was 10 pg/ml or less, while in the autumn-winter period it reached 1 pg/ml or less. Significant changes revealed in patients allow us to recommend the determination of this indole as a biomarker for predicting seasonal exacerbation of duodenal ulcer.

Keywords: *melatonin, duodenal ulcer, desynchronization.*

Relevance. The unquenchable interest of the world scientific community in the problem of DU is due to its wide prevalence, variety of clinical manifestations, as well as the possibility of developing severe complications.

The urgency of the problem is determined by the non-decreasing frequency of gastroduodenal bleeding, as well as high mortality from malignancy of the stomach and duodenum, which is detected in most cases at late stages. Therefore, there is a need for modernization and more active use of diagnostic technologies aimed at predicting the course of peptic ulcer (PU).

To date, various theories of the occurrence of peptic ulcer disease are known, the diverse variations in the pathogenesis of the disease dictate the complexity of therapeutic and prognostic tactics. It is generally accepted that an imbalance of peculiar “weights” leads to peptic ulcer disease, on one side of which there are factors of aggression, and on the other - factors of protection of the mucous membrane of the gastroduodenal zone (H.Shay scales) in the direction of the predominance of unfavorable factors over protection factors [12].

However, it is worth recognizing that none of the existing theories has brought an exhaustive result regarding the cure of ulcerative pathology. We can only regulate the disease into a “sleep mode” for a while. And if in some cases we manage to achieve a long-term remission, in others, the patient has to suffer from year to year, foreseeing a seasonal exacerbation of duodenal ulcer. So why is she coming back? And is it possible to predict its exacerbation at an early stage? How?

In recent decades, the role of melatonin in the pathogenesis of gastrointestinal diseases has been actively studied. The central producer of this indole is the pineal gland. The synthesis of epiphyseal melatonin is circadian in nature and depends on the level of illumination. But it is generally accepted that the constant “basic” level of daily melatonin in the blood is mainly set by the enteral type of hormone [3], the production of which in the digestive organs is directly proportional to the need for it. The unique melatonin has multiple functions. Being a biogenic amine, the strongest antioxidant, it affects all processes in the gastrointestinal tract: motility, secretion, digestion and absorption of nutrients. The role of melatonin in enhanc-

ing the protection of the epithelium by improving microcirculation [4], regulating cell proliferation and increasing the density of interepithelial contacts has been scientifically proven [5, 6].

The study of the role of melatonin in the pathogenesis of DU is a promising area of modern gastroenterology.

A known method for predicting the course of gastric ulcer and duodenal ulcer by determining the content of peptides in gastric juice [7].

The main disadvantage of this method is the impossibility on its basis to predict the exacerbation of peptic ulcer and to make the necessary therapeutic decision in a timely manner.

A known method for predicting the early development of duodenal ulcer by isolating DNA from peripheral venous blood lymphocytes, conducting genotyping of the rs1800872 polymorphism of the IL10 gene by polymerase chain reaction, followed by restriction analysis. When a protective A/A genotype is detected, a low risk of developing DU is predicted in people of Tatar ethnicity under the age of 45 [8]. The disadvantage of this method is its low efficiency in predicting the course of the disease and adherence to the ethnic and geographical landmark.

A known method for predicting the course of peptic ulcer of the stomach and duodenum, including the determination of serum ferritin before treatment and 4-6 days from the start of treatment. The disadvantage of this method is the low accuracy of predicting exacerbation of peptic ulcer of the stomach and duodenum [9].

There is also a method for predicting the exacerbation of the course of gastric and duodenal ulcer associated with *Helicobacter pylori* [10] by determining the biochemical blood constants and indicators of FAT and LT.

The disadvantage of this method is the inability to predict the seasonal exacerbation of duodenal ulcer.

Our aim was to optimize the early diagnosis of duodenal ulcer (DU) with the determination of melatonin in the blood, depending on seasonal exacerbation during the year. To study the prospects of using the hormone melatonin as an early diagnostic and prognostic marker of PUD.

Material and methods. The main group consisted of 60 patients upon receipt of informed consent with DU. All underwent a comprehensive examination, the diagnosis was made on the basis of anamnestic, clinical data, the results of esophagogastroduodenoscopy (EGD) and histological examination of duodenal mucosal biopsy specimens. The groups of examined persons did not differ significantly by sex and age. The study of melatonin in the blood was carried out using the method of high performance liquid chromatography with tandem mass spectrometry (HPLC-MS). The control group consisted of 40 healthy people.

EGD was performed on the basis of the generally accepted technique with Olympus, Exera (cIF160) endoscopes no later than 8.00, on an empty stomach, with

targeted biopsy taking from the affected area of the mucous membrane. The material was delivered to the histopathological laboratory for further study within 1–1.5 hours after sampling.

Blood for the study was taken at the initial contact before the start of treatment, upon receipt of the informed consent of the examined persons. As a comparison, melatonin indices obtained in a group of healthy volunteers were used.

To do this, the patient on an empty stomach, before breakfast no later than 8.00 am, took venous blood (with EDTA) with the implementation of certain recommendations: 1) before donating blood, patients refrained from eating for at least 8 hours; 2) 48 hours before the test, the intake of estrogens and androgens, alcohol was excluded, the day before the analysis - physical and emotional overstrain, at least 10-12 hours before the test, they stopped taking drugs, strong tea and coffee, and smoking 3 hours before. Before the morning blood sampling, you should have a good night's sleep.

After taking the blood, the tube was cooled in a vertical position for about 30 minutes. at room temperature. Before being sent to the laboratory, the blood was stored in a refrigerator at a temperature of $+2 +8^{\circ}\text{C}$; transportation was carried out in a thermal container at an identical temperature.

The determination of venous concentrations of melatonin, a biomarker of enteral immunity and the circadian link, was carried out by high-performance liquid chromatography with tandem mass spectrometry (HPLC-MS) on an Agilent 1200 chromatograph (Agilent, USA) with a Sciex 6500+ Triple Quad mass detector (Sciex, USA). Substance used for calibration and controls manufactured by Sigma Ald.

The reference values of these manufacturers are recommended to consider the concentration of melatonin in the blood in the range of 0.00-200 pg / ml without distinction by sex, age and seasonal periods.

The reliability of the analysis results was assessed by the concentration of the indicator in the control sample.

The obtained data were statistically processed on a computer using the Microsoft Excel 2007 package of special application programs with the calculation of the arithmetic mean (\bar{X}) and the mean error of the arithmetic mean (m). The significance of differences in the groups was judged by calculating the Student's t-test - t and the degree of probability - p . Differences were considered significant at $p < 0.05$.

Results and discussion. Among 60 patients with PUD, there were 36 (60%) women and 24 (40%) men. The average age of the patients was 35 ± 10 years, the largest number was at the age of 20-35 years.

Determination of venous concentrations of the hormone melatonin in healthy individuals in different seasons of the year made it possible to establish the interval of the norm.

In 30 (50%) of the examined patients with DU, the level of melatonin was determined in autumn and winter, the values of the control group were significantly reduced, amounting to lower (1 ± 0.57 pg / ml in 99% ($p < 0.001$), which indicated circadian desynchronization and associated with this development of ulcerative defects in the duodenum. In all the remaining 30 (50%) patients, the hormone concentration was determined in spring and summer and was also significantly reduced relative to the control group, amounting to lower values (10 ± 0.58 mg/l) ($p < 0.001$).

The data obtained showed a decrease in melatonin secretion during exacerbation of DU in the autumn-winter period, 1 pg/ml or less, and in the spring-summer season, 10 pg/ml or less.

1. Patient M., 22 years old, went to the clinic on July 30, 2021. with complaints of pain in the epigastric region that occurs on an empty stomach, 1 hour after eating, hungry and night pains, vomiting at the height of pain, which brings relief. Objectively: the condition is satisfactory. Height 165 cm, body weight 62 kg. The tongue is slightly coated with white. Heart sounds are rhythmic, clear. Pulse 79 in 1 minute. AD 120/80 mm. rt. Art. Vesicular breathing in the lungs. The abdomen is of the correct form, soft, slightly painful in the epigastric region. General blood and urine tests, biochemical blood tests were within normal limits.

An endoscopic examination in the lower wall of the duodenal bulb revealed an ulcerative defect D-0.6x0.5x0.5 cm, deep, with an inflammatory shaft.

The patient's melatonin concentration in the blood was 6.00 pg/ml. Based on the fact that the value of melatonin in the blood was below 10 pg/ml (spring-summer season), the patient was predicted exacerbation of peptic ulcer.

The patient was prescribed appropriate treatment.

2. Patient P., 22 years old, went to the clinic on 2.10.2021. with complaints of aching pain in the epigastric region that occurs 1.5-2 hours after eating, hungry pains, and night pains.

Objectively: the condition is satisfactory. Height 167 cm, body weight 65 kg. The tongue is slightly coated with white. Heart sounds are rhythmic, clear. Pulse 72 in 1 minute. AD 120/80 mm. rt. Art. Vesicular breathing in the lungs. The abdomen is of the correct form, soft, slightly painful in the epigastric region. General blood and urine tests, biochemical blood tests were within normal limits.

An endoscopic examination revealed an ulcer D-0.5x0.4x0.4 cm in the duodenal bulb.

The patient's melatonin concentration in the blood was 0.849 pg/ml. Based on the fact that the value of melatonin in the blood was below 1 pg/ml (autumn-winter season), the patient was predicted exacerbation of peptic ulcer.

The patient was prescribed appropriate treatment.

The revealed changes indicate duodenal mucosal dysplasia, which was confirmed by histological examination of biopsy specimens, and allow these patients to be included in the group of increased risk of ulcer exacerbation.

Summing up, we came to the following conclusion that an exacerbation of peptic ulcer is predicted when the melatonin content in the blood of patients is 10 pg/ml and below. However, the concentration of the hormone in different seasons is different: in the spring-summer period, the concentration of the hormone is 10 pg / ml or less, while in the autumn-winter season it is 1 pg / ml or less. Respectively, with a peptide content of more than 10 pg/ml in spring and summer, and more than 1 pg/ml in autumn and winter, it is judged that the patient does not suffer from peptic ulcer.

Thus, amplitude changes in melatonin in the blood can be used as a laboratory marker of desynchronization associated with the risk of developing acid-dependent diseases, in particular DU.

Conclusion. Based on the results of the study, it was revealed that the melatonin curve changes depending on the season of the year. With its value of 10 pg/ml or less in the spring-summer period and 1 pg/ml or less in the autumn-winter season, a recurrence of duodenal ulcer is predicted.

Thus, melatonin as a marker of seasonal exacerbation of DU can be proposed for use in clinical diagnostic laboratories.

No conflict of interest.

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生物相容性纳米成分对育龄妇女硬牙组织过敏的减敏作用的有效性

**THE EFFECTIVENESS OF THE DESENSITIVE ACTION OF A
BIOCOMPATIBLE NANOCOMPONENT IN HYPERSENSITIVITY
OF HARD DENTAL TISSUES IN WOMEN OF REPRODUCTIVE
AGE**

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抽象的。 牙齿对外界刺激的过敏并不是一种独立的疾病，而只是口腔中许多病理过程所伴随的一种症状，如非龋性病变的牙齿硬组织缺失、牙颈暴露的牙周病、这是因为牙齿硬组织对疼痛的高度敏感。 向纳米结构材料的过渡使得增加活性物质的渗透性和活性成为可能，从而提高减少牙齿过敏的有效性。

关键词：牙齿过敏、生育年龄、牙齿疾病预防、脱敏作用。

Abstract. *Hypersensitivity of teeth to external stimuli is not an independent disease, but only a symptom accompanying many pathological processes in the oral cavity, such as the loss of hard tissues of teeth with non-carious lesions, periodontal disease with exposure of the necks of teeth, which is explained by the high pain sensitivity of hard tissues of teeth. The transition to nanostructured materials makes it possible to increase the permeability and enhance the activity of the active substance, increasing the effectiveness of reducing hypersensitivity of teeth.*

Keywords: *hypersensitivity of teeth, reproductive age, prevention of dental diseases, desensitive effect.*

Introduction

The variety of causes causing dental hypersensitivity also includes periodontal diseases, such as inflammatory and dystrophic diseases, dental caries, dental trauma accompanied by chipping of the tooth crown, as well as iatrogenic factors

(violation of the technology for placing and polishing fillings, consequences after bleaching) [1, 2]. Hypersensitivity of teeth to external irritants is not an independent disease, but only a symptom that accompanies many pathological processes in the oral cavity, such as loss of hard dental tissues due to non-carious lesions, periodontal disease with exposure of the necks of teeth, which is explained by the high pain sensitivity of the receptor apparatus of the teeth, due to with a violation of the integrity of tissues, their thinning or demineralization [3-5].

According to the results of the study by V.A. Zhurbenko most often (84%) women are susceptible to this pathology. Increased sensitivity of teeth causes varying degrees of pain in a person, changing his usual lifestyle, which becomes the reason for visiting a dentist [6]. Many substances included in toothpastes are not able to provide a lasting preventive effect due to their weak ability to affect tooth tissue. The transition to nanostructured materials makes it possible to increase permeability and enhance the activity of the active substance, increasing the effectiveness of reducing dental hypersensitivity [7, 8].

Updating the approach to the prevention of dental hypersensitivity, its course and outcome, actualizes the use of desensitizing oral hygiene products with a bio-compatible nanocomponent, determining the need to monitor the dental status of women of reproductive age.

The purpose of the study was to study the effectiveness of the desensitizing effect of preventive toothpaste based on nanohydroxyapatite to optimize the condition of hard dental tissues in women of reproductive age.

Research methods

On the basis of the Department of Preventive Dentistry of the Federal State Budgetary Educational Institution of Higher Education “Pavlov First State Medical University of St. Petersburg» of the Ministry of Health of the Russian Federation, a diagnostic assessment of hard dental tissues in women of reproductive age was carried out, based on the method of index determination of the desensitivity effect according to the dental sensitivity index L.Yu. Orekhova - S.B. Ulitovsky, which allows monitoring changes in the condition of hard dental tissues under the influence of the desensitizing agents used. To assess pain sensitivity, the NRS digital pain rating scale was used. To assess the condition of hard dental tissues, the cleansing effect of oral hygiene products was determined using the simplified Green–Vermillion hygiene index. The diagnosis of hypersensitivity of hard dental tissues was made on the basis of anamnesis and the results of an objective examination. 59 women of reproductive age took part in the study. The effect of prophylactic toothpaste based on nanohydroxyapatite used in the first group (32 women) was assessed. In the second group (27 women), those examined who observed their usual oral hygiene and did not receive additional recommendations on dental education from a dentist.

Research results

For a long-term study of the state of dental sensitivity in dynamics, under the influence of local use of oral hygiene products, we used a formula for calculating the effectiveness of dental sensitivity. As a result of the study, it was found that the effectiveness of desensitization according to the dental sensitivity index of L.Yu. Orekhova - S.B. Ulitovsky by the end of the study in group 1 reached $59.21 \pm 4.28\%$, and in the control group - $14.72 \pm 0.33\%$ (Table 1).

Table 1

Changes in efficiency indicators according to the tooth sensitivity index L.Yu. Orekhova - S.B. Ulitovsky

Group distribution	Indicators of the effectiveness of desensitization according to the tooth sensitivity index L.Yu. Orekhova - S.B. Ulitovsky (%)			
	Examination period (day)			
	7	14	21	28
1 group	$25,10 \pm 2,55$	$38,29 \pm 3,79$	$53,50 \pm 3,68$	$59,21 \pm 4,28^*$
2 group	$6,72 \pm 0,64$	$10,21 \pm 1,03$	$12,37 \pm 2,47$	$14,72 \pm 0,33$

*P<0.05 compared to group 2

In the 1st group, after a week we observed a significant increase in the effectiveness of the desensitizing action, in contrast to the 2nd group. After 14 days, improvements were detected in group 1, and subsequently we also observed an increase in effectiveness indicators according to the index of tooth sensitivity by L.Yu. Orekhova - S.B. Ulitovsky. By the end of the study in group 1, the indicator of the proposed oral hygiene product in women of reproductive age corresponded to the high effectiveness of the desensitizing effect (Table 1).

Table 2 presents calculated data on changes in dental sensitivity indicators based on diagnostic tests among the studied individuals.

Table 2

Changes in tooth sensitivity indicators according to diagnostic tests in group 1

Diagnostic tests	Indicators of tooth sensitivity according to diagnostic tests (conventional units)				
	Examination period (day)				
	Start	7	14	21	28
LAP	$3,4 \pm 0,38$	$2,7 \pm 0,30$	$2,0 \pm 0,29$	$1,5 \pm 0,19$	$1,2 \pm 0,12^*$
BC	$3,0 \pm 0,20$	$2,5 \pm 0,26$	$1,2 \pm 0,11$	$1,0 \pm 0,07$	$0,9 \pm 0,09^*$
WI	$5,8 \pm 0,62$	$5,6 \pm 0,57$	$4,2 \pm 0,33$	$3,1 \pm 0,34$	$2,0 \pm 0,22^*$
SAJ	$4,7 \pm 0,51$	$3,5 \pm 0,44$	$2,4 \pm 0,36$	$1,9 \pm 0,20$	$1,5 \pm 0,17^*$
DAJ	$5,7 \pm 0,69$	$5,2 \pm 0,41$	$4,6 \pm 0,27$	$3,3 \pm 0,25$	$2,4 \pm 0,23^*$

*P<0,05

Positive dynamics of dental sensitivity indicators based on diagnostic tests was observed throughout the entire study period. A decrease in the hypersensitivity of hard dental tissues in group 1 was determined after 14 days of the study; the indicators of diagnostic tests decreased: according to the assessment of tactile sensitivity of teeth using linear advancement of the probe along the tooth surface (LAP) - from 3.4 ± 0.38 conventional units. . up to 2.0 ± 0.29 conventional units; according to the assessment of tactile sensitivity using a ball of cotton (BC) – from 3.0 ± 0.20 conventional units. up to 1.2 ± 0.11 conventional units; according to the assessment of the thermometric sensitivity of teeth using water jet irrigation (WI) - from 5.8 ± 0.62 conventional units. up to 4.2 ± 0.33 conventional units; according to the assessment of the thermometric sensitivity of teeth using side air jet (SAJ) treatment - with 4.7 ± 0.51 conventional units. up to 2.4 ± 0.36 conventional units; according to the assessment of the thermometric sensitivity of teeth using direct air jet treatment (DAJ), the indicator changed from 5.7 ± 0.69 conventional units. up to 4.6 ± 0.27 conventional units (table 2).

Table 3 summarizes the results of the cleansing effect among the studied population depending on the distribution into groups.

Table 3
Changes in the cleaning effect according to the simplified Green–Vermillion index

Group distribution	Indicators of the cleansing effect according to the Greene-Vermillion index (%)			
	Examination period (day)			
	7	14	21	28
1 group	$19,38 \pm 2,71$	$26,88 \pm 3,92$	$39,12 \pm 4,63$	$51,29 \pm 5,03^*$
2 group	$11,40 \pm 1,82$	$15,33 \pm 3,03$	$17,24 \pm 3,28$	$18,73 \pm 3,64$

*P<0.05 compared to group 2

Table 3 shows that after a week of the study, the results of the cleansing effect in group 1 were $19.38 \pm 2.71\%$, but by the second week of the study they increased to $26.88 \pm 3.92\%$, and at the end of the study they became almost 2 times higher than the initial indicators, in contrast to the control group (Table 3).

Conclusions

Based on the results of a study of the effectiveness of preventive care for dental hyperesthesia in women of reproductive age, the following conclusions were obtained: an increase in the effectiveness of desensitization according to the sensitivity index of L.Yu. Orekhova - S.B. Ulitovsky by the end of the study in group 1 was $59.21 \pm 4.28\%$, and in the control group - $14.72 \pm 0.33\%$ (P<0.05); a decrease in the hypersensitivity of the hard tissues of the teeth was established according

to diagnostic tests in women of reproductive age in group 1: the decrease in the hypersensitivity of the teeth according to the assessment of tactile sensitivity of the teeth using linear advancement of the probe along the surface of the tooth was 1.2 ± 0.12 conventional units. The indicator of tactile sensitivity using a cotton ball decreased and amounted to 0.9 ± 0.09 conventional units; according to the assessment of thermometric sensitivity of teeth using water jet irrigation - 2.0 ± 0.22 conventional units; according to the assessment of the thermometric sensitivity of teeth using the treatment of a lateral air jet - 1.5 ± 0.17 conventional units. Assessment of the thermometric sensitivity of teeth using direct air jet treatment also showed high efficiency and amounted to 2.4 ± 0.23 conventional units; the cleansing effect indicators according to the Green-Vermillion simplified hygienic index in women of reproductive age in group 1 were $51.29 \pm 5.03\%$, in contrast to the control group, where the cleansing effect indicator reached $18.73 \pm 3.64\%$.

The high efficiency of the desensitizing effect of preventive toothpaste based on nanohydroxyapatite has been determined, which determines an increase in the level of dental preventive measures and optimizes the condition of hard dental tissues in women of reproductive age.

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牙科保健员学生的职业选择方向
**ORIENTATION IN CHOOSING A CAREER FOR DENTAL
HYGIENISTS STUDENTS**

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抽象的。 本文研究了在医学院学习的牙科保健员学生的职业抱负。 研究对象为巴甫洛夫第一国立医科大学护理教育学院全日制三年级学生46名, 年龄18至20岁。 结果显示, 学生的主要职业愿望是未来工作的社会意义、稳定性以及在专业和个人领域的自我实现愿望。 受访者注意到专业沟通技巧的重要性, 但他们担心学习过程中的沟通。 许多人缺乏在所选专业领域形成专业思维和技能的重要性的认识。

关键词: 职业选择、职业形象、职业定位、中等医学教育、牙科。

Abstract. *This paper studies the career aspirations of dental hygienist students studying at a medical school. The study subjects were 46 students of the third year of full-time study at the Institution of Nursing Education of the Pavlov First State Medical University, aged 18 to 20 years old. The results showed that the main career aspirations of students are the social significance of future work, stability and aspiration for self-realisation, both in professional and personal spheres. Respondents note the importance of professional communication skills, but they are concerned about communication in the learning process. Many lack awareness of the importance of forming professional thinking and skills in the field of the chosen speciality.*

Keywords: *career choice, profession image, career orientation, secondary medical education, dentistry.*

The most important component of a person's professional path is his or her idea of his or her personality in the process of professional self-realisation, the so-called professional "self-concept", which everyone embodies in life in a series of career decisions. Among the factors reflecting the influence of the self-concept process on success in professional activity, a number of authors highlight self-efficacy [1; 2; 3; 4].

Carrying out career choice, professional preference and career type, a personality proceeds from his/her talents, motivations, motives and values, general personal concept. Thus, career orientation or "career anchor" (the term comes from American social psychology) is a system of value orientations, social attitudes towards work, interests, socially conditioned motivations for activity, formed on the basis of a person's past experience and in the process of socialisation. Career orientations serve to manage, stabilise and integrate individual career [5;6;7;8;9].

In this regard, the problem of studying the career orientations of personality and their relationship with self-efficacy at the stage of training of dental hygienist students at the Institute of Nursing Education seems particularly relevant.

The aim of the study is to determine the career orientations of dental hygienist students. Материалы и методы

On the basis of the Department of Preventive Dentistry, a study was conducted to investigate the career orientations of dental hygienist students. Based on the "Career Orientations Index" by E. Schein (1976), we compiled an author's questionnaire, which included such "career anchors" as professional competence, management, autonomy, job stability, job stability, place stability, service, challenge, integration of lifestyles, entrepreneurship, as well as ideas about the norms and requirements of the profession. The study involved third-year students of the medical school of the Federal State Budgetary Educational Institution of Higher Professional Education of Pavlov State Medical University in full-time education, aged 18 to 20 years, in the number of 46 people.

Results and Discussion

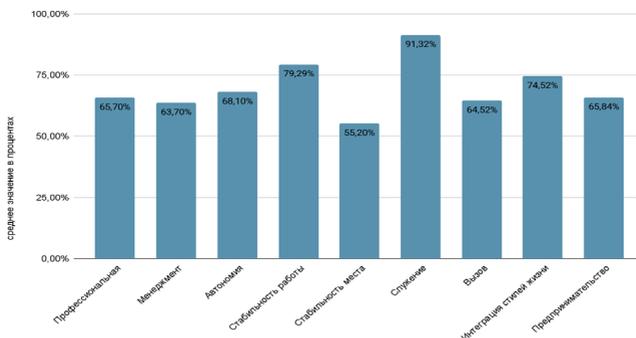


Figure 1. Presents data based on the nine major career orientations

Figure 1. Career orientations of dental hygienist students

Based on the data obtained, we were able to reveal that 91.32% of the respondents chose to work with people, to serve humanity, to help people. 79.29% preferred to work in an organisation that provides a certain period of service, has a good reputation, takes care of its employees, pensioners and pays a large pension, and 74.52% integration of lifestyles, a person values his life as a whole, not a particular job or firm. 68.10% chose autonomy, and 65.84% chose entrepreneurship, where the main thing is to create their own business. 65.70 per cent chose professional competence. 64.52% chose competition, overcoming others and overcoming obstacles, and 63.70% chose management. Stability of residence was chosen as the leading career orientation by only 55.20%.

Figure 2 presents data on the problems dental hygienist students encounter during their studies in the speciality.

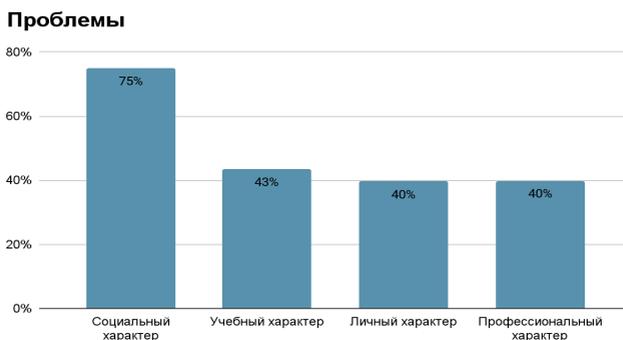


Figure 2. Diagram of data on the nature of dental hygiene students' problems encountered in the process of speciality training

Social problems cause difficulties for 75% of respondents. Students are concerned about the manifestation of subjectivity, neglect of teachers and difficulties in interaction with the dean's office. 43.3% of students' problems are related to educational moments as such: lack of interest, lack of confidence in their abilities, procrastination. Almost equally personal (39.6%) and professional (39.8%) moments also affect the choice of further development in the chosen profession.

Professionally important qualities for dental hygienists students name: benevolence, empathy, competence, purposefulness, empathy, sympathy, justice, mercy, responsibility, tactfulness, sociability, poise and honesty.

The most significant knowledge and skills students consider: first aid, psychology of communication with patients, general anatomy, anatomy of the oral cavity, conducting professional oral hygiene, knowledge of dental diseases, somatic diseases affecting the oral cavity, microbiology.

The dental hygienist is attributed skills such as being communicative and possessing basic practical skills.

To summarise, we can say that, firstly, dental hygienist students working with people consider their profession as socially important. They also want to feel confident and stable. Life balance, professional and personal awareness are of great importance. However, orientation towards professional compactness is relatively low for this group. Students recognise the importance of communication skills, but there is no expression of the need to master professional skills. There is an interest in social interaction in the learning process, but there is a lack of orientation towards the development of professional thinking. In the future, students should be oriented to a holistic understanding of the profession, including both the value of service and the requirement for professionalism of a specialist.

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DOI 10.34660/INF.2023.25.71.118

增殖和凋亡标志物在早期乳腺癌进展中的预后价值
**PROGNOSTIC VALUE OF PROLIFERATION AND APOPTOSIS
MARKERS IN EARLY BREAST CANCER PROGRESSION**

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抽象的。为了阐明乳腺癌病程的预后，我们确定了 Ki67 和 mP53 表达的相关标准。疾病复发的风险变得具有统计学意义 (Ki67 \geq 23、mP53 \geq 31 的相关标准)。计算癌症复发的相对风险显示，Ki67增殖标志物表达高于阈值3时为2.351 (CI 1.484 \div 3.724)，214 (CI 1,857 \div 5,565)，但发现疾病复发发展的OR最高 当研究 Ki67 和 mP53 的组合表达高于阈值时 - OR 5,368 (CI 2,377 \div 12,127)。我们建议利用这些结果来确定乳腺癌患者术后治疗和动态随访的方法。

关键词：乳腺癌，增殖和凋亡标志物，预后。

Abstract. *To clarify the prognosis of breast cancer course, we determined the associated criterion of Ki67 and mP53 expression. The risk of disease recurrence became statistically significant the associated criterion for Ki67 \geq 23, for mP53 \geq 31. Calculation of the relative risk of cancer recurrence development showed that it was 2.351 (CI 1.484 \div 3.724) for Ki67 proliferation marker expression above the threshold values, 3, 214 (CI 1,857 \div 5,565), but the highest OR of disease recurrence development was found when studying the combined expression of Ki67 and mP53 above the threshold values - OR 5,368 (CI 2,377 \div 12,127). We recommend to use these results in determining the approach to postoperative treatment and dynamic follow-up in patients with breast cancer.*

Keywords: *breast cancer, markers of proliferation and apoptosis, prognosis.*

Introduction

In 2020, 2.261.000 women were diagnosed with breast cancer, with 685.000 deaths from the disease worldwide. At the end of 2020, there were 7.8 million women alive who had been diagnosed with breast cancer in the past five years, meaning that this type of cancer is the most common cancer in the world. Breast cancer occurs worldwide in women of all ages after puberty, but the incidence rate increases at older ages [1, 2].

One of the mechanisms of tumour transformation and progression is the disruption of cell cycle regulation with inhibition of apoptosis and activation of proliferation [3]. In this regard, the study of proteins regulating the cell cycle and initiating proliferation, such as the proliferation marker Ki-67, as well as p53 blocker proteins is of particular importance [4]. Immunohistochemical determination of the proliferative index is by far the best method because the markers detect not only cells in mitosis but also cells in the process of preparation for division and thus show the proliferative potential of the tumour. Proliferative activity in breast tumor as recommended by Fitzgibbons et al (2000) is assessed by gradations ($\geq 1\%$, $\geq 10\%$, $\geq 20\%$ of tumour cells) and therefore Ki-67 expression in more than 20% of tumour cells is considered as an unfavorable factor. Accumulation of mutant p53 (mP53) indicates aggressive behaviour of this form of cancer, shorter recurrence-free period and worse prognosis. mP53 can be used as an independent prognostic marker in a comprehensive study of breast cancer, especially in patients with intact lymph nodes, and can help to select patients potentially sensitive to chemotherapy or radiotherapy [3,4,5].

Purpose

To determine the prognostic value of proliferation marker Ki-67 and apoptosis marker mP53 for early progression of breast cancer stage 1-3.

Methods

The material for the study was selected from the archives of pathological anatomy departments of the N.N. Aleksandrov Scientific and Practical Centre of Oncology and Medical Radiology and Gomel Regional Clinical Oncological Dispensary from 2003 to 2008. The object of the study was 73 women with infiltrating stage I-III breast cancer. The patients were divided into 2 groups: those with no progression of the disease by the end of follow-up and those with early (within 3 years) progression of breast cancer. Disease progression was defined as recurrence or death from the underlying disease. There were 45 patients in the first group and 28 patients in the second group.

In our work, we analysed the expression level of Ki67 and mP53-oncoprotein in invasive breast cancer. Material fixation was performed using neutral 10% formalin immediately after material collection [3]. Sections 4-5 μm thick were applied to silanised glasses. Further procedure was carried out according to the

technology and requirements in the specification for each marker. DAB (diaminobenzidine) was used as a chromogen. After immunohistochemical reactions, slices were additionally stained with Mayer's haematoxylin. Antigenic determinants to Ki67 and mP53 were located intranuclearly, so only those results with intense nuclear reactions were considered positive [6,7].

To assess the nuclear expression of Ki67, the percentage of tumor cells with positively stained nuclei was calculated from the total number of tumor cells in the areas with the highest content. Expression was analysed at microscope magnification (objective 40). In each preparation 1000 cells in 5-7 fields of view were counted. A reaction with brown staining of more than 10% of tumor cell nuclei was considered positive. The proliferative activity of the tumor was estimated as the percentage of Ki67-positive cells [6].

To assess the nuclear expression of mP53, the method described above was used. A reaction with brown staining of more than 5% of tumor cell nuclei was considered positive, with weakly positive at 6-30%, moderately positive at 31-70% and strongly positive at 71-100% of cells [6].

Processing and statistical analysis of the studied data were performed using Microsoft Office Excel spreadsheets, Statistica 13.0 (free trial), GraphPad Prism 8.0, MedCalc 20.0 To assess the significance of the considered parameters, the relative risk (RR) of disease progression was calculated.

Results

Figures 1a,1b show the results of comparative analysis of proliferation and apoptosis marker expression in patients with different disease outcomes.

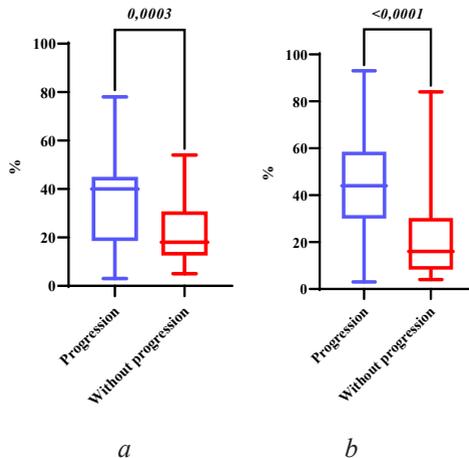


Figure 1. *a.* Expression of the proliferation marker Ki-67; *b.* Expression of apoptosis marker mP53

As shown in Figure 1a, the median Ki67 expression in the group of patients with disease progression was 40 [18.50; 45.0] compared with 18 [12.50; 30.75] in patients without disease progression, $p=0.0003$.

We obtained similar results when we examined mP53 expression (Figure 1b). Patients with disease progression had almost two times higher marker expression, 44 [30; 58.50], than patients without progression, 16 [8.25; 30.25], $p<0.0001$. It should be noted that low expression for Ki67 marker (less than 10%) was 8.22% (6 cases), for mP53 such low rates were 23.29% (17 cases).

At the next stage of the study the sensitivity and specificity of the studied markers were determined using ROC-analysis (Fig. 2a, 2b).

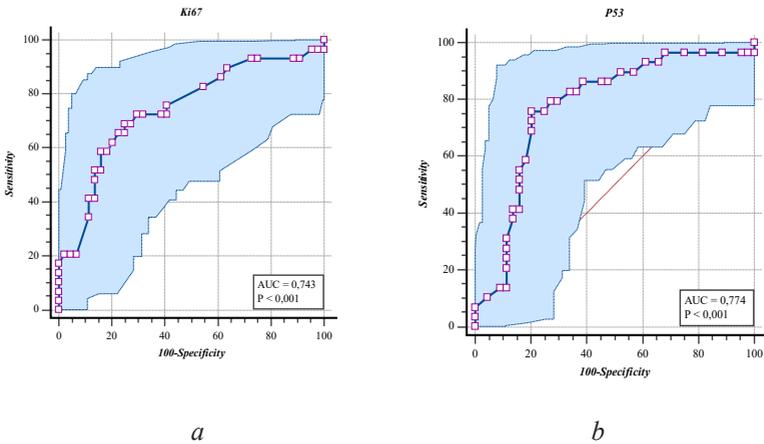


Figure 2. Sensitivity specificity of proliferation and apoptosis markers. **a.** Proliferation marker Ki67; **b.** Apoptosis marker mP53.

When studying the proliferative activity of the diagnostic marker Ki67, the area under the ROC curve was 74.3% (CI 1.47÷4.08). The sensitivity was 72.41% (CI 52.8÷87.3) and specificity was 70.45% (CI 54.8÷83.2). The associated criterion of $Ki67 \geq 23$ reflected the probability of early recurrence (Figure 2a).

When the apoptosis marker mP53 was examined, the area under the ROC curve was 77.4% (CI 2.00÷6.88). The sensitivity was 75.86% (CI 56.5÷89.7) and specificity was 79.55% (CI 64.7÷90.2). The associated criterion of $mP53 \geq 31$ reflected the probability of early recurrence (Figure 2b).

The next stage of the study was to evaluate the threshold values of proliferation and apoptosis markers for the development of relapse depending on the outcome of the disease. In the group of patients with $Ki67 \geq 23\%$ proliferation marker expression (more than the associated criterion) relapse of the disease was detected

in 23 cases, which made 60,53%, no relapse occurred in 15 cases (39,47%). In the group of patients with Ki67<23 % (less than the associated criterion), disease recurrence was detected in only 7 cases (18.42%), and no recurrence occurred in 31 (81.52%) patients. The RR of relapse was 2.351 (CI 1.484÷3.724), which reflected the prognostic value of this marker in determining the outcome of the disease.

In the group of patients with the expression of apoptosis marker mP53≥31% (more than the associated criterion) relapse of the disease was registered in 22 patients, which made 66,67 %, in 11 patients no relapse was detected, which made 33,33 %. In the group of patients with mP53 expression<31%, relapse occurred in only 15.0% of patients (6 cases), and 85.0% (34 cases) had no relapse. The RR of recurrence was 3.214 (CI 1.857÷5.565), which was higher compared with Ki67.

In the next phase of the study, we combined patients with rates above threshold for Ki67 and mP53. In the group of patients with scores above the associated criterion Ki67 ≥ 23% and p53 ≥ 31%, disease recurrence was detected in 17 cases (77.27%), no recurrence occurred in 5 cases (22.73%). When we studied the co-expression of markers below the associated criterion (Ki67<23 and mp53<31), recurrence of breast cancer was found in 2 cases (7.41%), no recurrence in 25 cases (92.59%). The RR of developing recurrence was the highest and was 5.368 (CI 2.377÷12.127).

Conclusion

This study showed the significance of proliferation and apoptosis markers for the prognosis of the disease. We used the Ki67 and mP53 expression thresholds to clarify the prognosis of breast cancer. The risk of disease recurrence became statistically significant at threshold values for Ki67≥23, for mP53≥31. Calculation of the RR for the development of the recurrence of breast cancer showed that it was 2.351 (CI 1.484÷3.724) for Ki67 proliferation marker expression above the threshold values, and 3.214 (CI 1.857) for mP53 above the threshold values, 214 (CI 1,857÷5,565), but the highest OR of disease recurrence development was found when studying the combined expression of Ki67 and mP53 above the associated criterion – RR 5,368 (CI 2,377÷12,127). We recommend to use these results in determining the approach to postoperative treatment and dynamic follow-up in patients with breast cancer.

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前庭神经炎新冠病毒感染后病程的特点
**FEATURES OF THE POSTCOVID COURSE OF VESTIBULAR
NEURONITIS**

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抽象的。前庭神经元炎是一种“排除性诊断”，通常发生在急性脑循环障碍的掩盖下，并且仍未得到诊断。由于不同专业的医生对这种疾病的认识较低，诊断错误和随后的治疗错误很常见。及时诊断前庭神经元炎并尽早开始前庭康复可改善预后并缩短患者的康复时间。因此，有必要明确前庭神经元炎与其他类似疾病的临床表现、病程及鉴别诊断的特殊性。目前，患有这种疾病的患者数量急剧增加，这与病毒载量增加有关。本文考虑了接受 Covid-19 治疗的患者前庭神经元炎并发症的临床病程和诊断的特殊性。

关键词：前庭神经元炎、眩晕、Covid-19。

Abstract. *Vestibular neuronitis is a “diagnosis of exclusion”, often occurs under the mask of acute cerebral circulatory disorders and remains undiagnosed. Due to low awareness of doctors of different specialities about this disease, errors in diagnosis and, subsequently, in treatment are quite common. Timely diagnosis of vestibular neuronitis and early start of vestibular rehabilitation improve the prognosis and reduce the patient’s recovery time. Therefore, it is necessary to know clearly the peculiarities of clinical picture, course and differential diagnostics of vestibular neuronitis with other similar nosologies. Currently, the number of patients with this pathology has sharply increased, which is associated with increased viral load. In this article the peculiarities of clinical course and diagnostics of complications of vestibular neuronitis in patients who underwent Covid-19 are considered.*

Keywords: *vestibular neuronitis, vertigo, Covid-19.*

Introduction

Vestibular neuronitis is an inflammation of the vestibular root of the VIII pair of the cranial nerves (prevertebral-cochlear nerve), according to various authors it is the third most common pathology of the peripheral part of the vestibular analyzer after benign paroxysmal positional vertigo (BPPV) and Meniere's disease [1,2,3,4]. The classical cause of its development is viruses, less frequently allergic reaction or intoxication: domestic or occupational. The debut of the disease often follows acute respiratory viral infection, after herpetic infection, manifested by sudden acute systemic dizziness, nausea, vomiting, unsteadiness in walking and peripheral nystagmus.

Aim of the study: to describe the features of the clinical course of vestibular neuronitis in Covid-19.

Materials and methods of the study:

82 patients were examined on the basis of the Clinic of FSBEI HE Tver SMI of the Ministry of Health of Russia from 01.09.2020 to 10.02.2023: 56 patients (68.3%) with the diagnosis of vestibular neuronitis that developed after Covid-19 (group 1), 26 patients (31.7%) with vestibular neuronitis that developed after acute respiratory viral infections (group 2).

The age of the subjects ranged from 28 to 57 years. Repeated examination of the patients was carried out in a month from the initial admission.

Patients with focal neurological symptoms and with risk factors of cerebrovascular pathology were excluded.

Patients of the first group were examined in the period from 7 to 14 days of symptoms onset, which is associated with the severity of the course of the underlying disease, patients of the second group - on the 4th-5th day of the disease.

All the results of the study of patients were entered into the developed questionnaire, including data on the patient's complaints, history of the disease, data of otorhinolaryngological examination, audiological studies (audiogram and tympanogram), examination of the oculomotor system (nystagmus and its characteristics; Halmagi test; vertical eye divergence test, smooth tracking and saccades); stato-coordinator and statokinetic tests (finger-nose test, Unterberger test, Romberg test (simple and sensitised), straight line walking.

If pathology of neurological genesis was suspected, patients were examined by a neurologist.

Head-Shake Test, which was excluded in the acute period of the disease due to pronounced vestibular symptomatology, was additionally performed at the repeated appointment.

In the clinical picture of benign paroxysmal positional vertigo (BPPV), diagnostic tests were performed: Dix-Hallpike, Pagnini-McClure, Yacovino; if the disease was confirmed, therapeutic positional manoeuvres were performed depend-

ing on the affected semicircular canal: Epley manoeuvre, roll manoeuvre (Lempert manoeuvre), Yacovino manoeuvre.

All patients were individually developed a vestibular rehabilitation plan, and betahistine dihydrochloride was prescribed in a dosage of 24 mg 2 p/day for 3 to 6 months.

Results and discussion

During the analysis of clinical symptomatology in the examined patients vestibular neuronitis started acutely: a sudden attack of “rotational vertigo”, lasting about a day, accompanied by oscillopsia, nausea, vomiting. According to the patients’ words, there were no disturbances of auditory function. During the first three days, the patients could not get out of bed due to severe unsteadiness and nausea that increased with movement. At the time of the initial examination, all patients were moving with support.

Patients in the first group noted the occurrence of an attack of systemic vertigo during Covid-19 disease. Patients of the second group 11-15 days after the acute respiratory viral infection.

At standard otorhinolaryngological and audiological examinations no pathology was revealed.

The results of clinical examination of neurological status during the first few days were completely exhausted by signs of acute unilateral vestibular insufficiency:

- spontaneous horizontal nystagmus, with a small rotatory component, towards the healthy ear, increasing in intensity in Frenzel glasses (nystagmus of depression);
- positive Halmagi test (impaired vestibulo-ocular reflex on the affected side);
- vertical eye divergence test, smooth tracking and saccades - no peculiarities;
- Unterberger’s test - rotation to the affected side more than 45°;
- Romberg test (simple) - deviation, with a tendency to fall, towards the affected ear;
- straight walking - rotation to the affected side more than 45°.

Fifty-four patients had no complaints of systemic vertigo at the follow-up appointment.

At the repeated appointment 28 patients out of 82 (34,2%): from group 1 - 22 patients out of 56 (39,3%), from group 2 - 6 patients out of 26 (23,1%), complained of short attacks of pronounced systemic vertigo, from 10 seconds to 2 minutes, when turning in bed from side to side and getting out of bed. Between attacks, patients felt well. Disturbances of auditory function were absent.

26 (46.4%) patients of the first group complained of a change in the characteristics of dizziness: “non-rotational dizziness, a sensation of rotation of something in the head, in the absence of a sensation of rotation of surrounding objects”, they

noted an increase in symptomatology with increasing visual stimuli (in shopping centres).

During detailed questioning, all patients complained of short-term dizziness at sharp turns of the head and instability during fast walking.

Results of clinical examination of patients with vestibular neuronitis one month after the initial admission:

- spontaneous horizontal nystagmus - absent;
- in Frenzel glasses, spontaneous nystagmus to the healthy side in 23 patients;
- Head-Shake Test - nystagmus lasting several seconds in the unaffected side;
- positive Halmagi test (impaired vestibulo-ocular reflex on the affected side);
- vertical eye divergence test, smooth tracking and saccades - no peculiarities;
- Unterberger's test - rotation to the affected side from 35 to 45°;
- Romberg's test (simple) - no peculiarities; Romberg's test (sensitised) - deviation towards the affected ear;
- straight walking - rotation to the affected side from 20 to 45°.

Posterior semicircular canal BPPV on the affected side developed in 27 patients out of 82 (32.9%) (group 1 - in 21 patients out of 56 (37.5%), group 2 - in 6 patients out of 26 (23.1%)).

One patient of the first group had polycanicular BPPV on the side of the posterior and horizontal semicircular canal lesion, which was apparently related to the patient's independent performance of Brand-Daroff exercises.

BPPV of the anterior semicircular canal was not observed in this sample of patients.

When a neurologist examined patients with vestibular neuronitis after Covid-19, 26 (46.4%) were diagnosed with persistent postural perceptual vertigo (PPPV).

It should be noted that this disease requires long-term prescription of antidepressants up to 3-6 months, which worsens the possibilities of vestibular rehabilitation of neuronitis. This complication was not detected in patients of the second group.

Conclusions

1. The increase in the number of patients with vestibular neuronitis in Covid-19 is due to the fact that the cause of lesions of the vestibular root of the VIII pair of the cranial nerves is both the virus itself and drug treatment aimed at saving the patient's life, but, unfortunately, often having ototoxic effect.

2. Coronavirus vestibular neuronitis has pathogenetic features and appears in the acute period of the disease, the consequence of which is its late detection, as the life-threatening situation forces doctors to throw

all efforts to treat the underlying disease. This greatly complicates the possibility of timely diagnosis, and, accordingly, the selection of the necessary therapy.

3. Patients with coronavirus infection are sedentary, which completely negates the possibility of starting rehabilitation treatment as soon as possible.

4. BPPV of the posterior semicircular canal on the affected side in vestibular neuronitis develops more frequently in a percentage of patients with Covid-19 than in patients with acute respiratory infections.

5. A complication of vestibular neuronitis, postural perceptual persistent vertigo, is frequently observed in patients who have had Covid-19.

6. Treatment of vestibular neuronitis in patients who have undergone Covid-19 complicated by PPPV requires a multidisciplinary approach:

- doctor of neurology (vestibular rehabilitation, medication therapy);
- a doctor of psychotherapy (cognitive-behavioural therapy);
- an otoneurologist (vestibular rehabilitation, drug therapy).

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子宫和卵巢良性肿瘤不孕患者的临床和既往史标志物
**CLINICAL AND ANAMNESTIC MARKERS OF INFERTILE
PATIENTS WITH BENIGN NEOPLASMS OF THE UTERUS AND
OVARIES**

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抽象的。 研究目的: 确定患有子宫和卵巢良性肿瘤的不孕患者的临床和记忆特征, 并评估其生活质量、抑郁和焦虑程度。

材料和方法。 该研究涉及 498 名患有子宫和卵巢良性肿瘤的不孕患者: 第一组包括 202 名患有子宫肌瘤的患者; 第二组包括 202 名患有子宫肌瘤的患者。 第二组——256 名患有良性卵巢肿瘤的女性。 对照组由 40 名具有生育能力的患者组成。

结果。 对患有子宫和卵巢良性肿瘤的不孕症患者的病史分析揭示了许多降低生殖功能和生活质量的临床和病史因素: 首次性行为过早、盆腔器官的炎症性疾病; 性传播感染; 痛经、月经过多、性交痛、慢性盆腔疼痛、抑郁和焦虑。

关键词: 子宫良性肿瘤、卵巢良性肿瘤、不孕症、临床和既往特征、抑郁症。

Abstract. Purpose of the study: to identify clinical and anamnestic features, as well as assess the quality of life, degree of depression and anxiety in infertile patients with benign neoplasms of the uterus and ovaries.

Materials and methods. The study involved 498 infertile patients with benign tumors of the uterus and ovaries: group I consisted of 202 patients with uterine fibroids; Group II – 256 women with benign ovarian tumors. The comparison group consisted of 40 fertile patients.

Results. Analysis of the anamnesis of infertile patients with benign neoplasms of the uterus and ovaries revealed a number of clinical and anamnestic factors that reduce reproductive function and quality of life: early sexual debut, inflammatory diseases of the pelvic organs; sexually transmitted infections; dysmenorrhea, hypermenorrhea, dyspareunia, chronic pelvic pain, depression and anxiety.

Keywords: benign neoplasms of the uterus, benign neoplasms of the ovaries, infertility, clinical and anamnestic features, depression.

Relevance

Procreation and the implementation of reproductive function are a natural human need. Infertility is a serious obstacle for married couples and remains a pressing medical, social, mental and demographic problem [1].

Infertile couples, compared to fertile ones, are more likely to experience depression, anxiety, loss of self-esteem and dissatisfaction with their sex lives. 50% of couples suffering from infertility have higher levels of stress, anxiety, depression, lower scores on scales of psychological well-being, satisfaction with quality of life: women with infertility have adaptation disorder in 50% of cases, mild depression in 12–54% and anxiety disorders in 12–23% of cases [2,3].

Factors influencing the prevalence of infertility are well known to experts: a woman's age, lifestyle, environment, sexually transmitted infections, medical abortions, and the quality of medical care [1]. In most cases, the woman has a concomitant gynecological pathology for the above reasons, which also prevents pregnancy, and the problem becomes multifactorial in nature [4-8].

Objective: to identify clinical and anamnestic features, as well as assess the quality of life, degree of depression and anxiety in infertile patients with benign neoplasms of the uterus and ovaries.

Materials and methods

The study presents the results of a comprehensive clinical and laboratory examination and treatment of 498 infertile patients with benign neoplasms of the uterus and ovaries. Group I included 202 patients with benign uterine tumors (uterine fibroids of type 3-6 according to the FIGO [International Federation of Gynecology and Obstetrics] classification, the minimum size of the leading node is more than 4 cm, the maximum is 12 cm) and infertility. Group II included 256

patients with benign ovarian tumors (serous cystadenomas and mature teratomas) and infertility. The control group consisted of 40 fertile women (tubal-peritoneal, uterine, endocrine, endometriosis-associated, male infertility factors were excluded).

Exclusion criteria: history of oncological diseases of the reproductive organs, previous surgical interventions for adnexal masses and uterine fibroids, nodular adenomyosis, endometrioid ovarian cysts, blood anti-Mullerian hormone (AMH) value less than 1.2 ng/ml.

Anamnesis, general clinical examinations, and ovarian reserve indicators were studied before and after surgical treatment. To study indicators of depression and anxiety, the WHOQOL-BREF (The brief version of Quality of Life) questionnaire, a shortened version of the WHO questionnaire (2004), was used.

Before surgery, all women underwent an ultrasound examination using an expert-class device Voluson S10 Expert GE Healthcare with a vaginal sensor with a frequency of 3.6–8.8 MHz, on days 5-7 of the menstrual cycle to assess ovarian reserve indicators: the number of antral follicles was counted (NAF) and assessment of vascularization parameters (Vascularization Index [VI] and Blood Flow Index [BI]). In patients of group I, the size, location, and characteristics of the blood supply to the pseudocapsule and fibroid nodes were determined. In group II, the topography of the formation was visualized, the size was determined, and the vessels involved in its blood supply were specified.

Surgical treatment for all women in group I was carried out in the form of laparoscopic myomectomy, in group II – laparoscopic cystectomy. All patients underwent intervention using preoperative 3D modeling and surgical navigation [9,10].

For statistical analysis of the results, IBM SPSS Statistics 21.0.0.0 and Statistica 10.0 for Windows programs were used. To assess differences in qualitative indicators, the Chi-square test was used. The work calculated the odds ratio and 95% confidence interval using the Wilson method. Differences between groups were considered statistically significant at $p < 0.05$.

All women signed informed voluntary consent to participate in the study.

Results

In the studied groups, no statistically significant differences in age were detected ($p > 0.05$). The average age of the patients was 32.3 ± 3.2 years. The age of the patients ranged from 19 to 40 years.

The analysis showed that patients of groups I and II were comparable to each other and the control group in terms of such parameters as body mass index, indicators of menstrual function (age at menarche, regularity and duration of the menstrual cycle), smoking, alcohol consumption, the presence of occupational hazards, diseases heart and blood vessels, cancer in 1st and 2nd degree relatives ($p > 0.05$).

Patients of all groups were also comparable in terms of obstetric and gynecological history (age at menarche, non-inflammatory diseases of the cervix, cesarean section, history of childbirth) ($p>0.05$).

Statistically significant differences in groups I and II compared with the control group were identified in the following indicators: early sexual debut, history of inflammatory diseases of the uterus and appendages (HIDUA), sexually transmitted infections (STIs), frequency of intrauterine interventions (for endometrial pathology and endocervix [hyperplasia and polyps], failed miscarriage, abortion) ($p<0.05$).

Patients with uterine fibroids and infertility more often complained of dysmenorrhea and hypermenorrhea compared to the control group and patients with ovarian masses ($p<0.05$). The frequency of dysmenorrhea and chronic pelvic pain (CPP) in groups I and II compared to the control group was also increased ($p<0.05$).

According to the WHOQOL-BREF questionnaire, the frequency of depression and anxiety was significantly increased in patients of the study groups ($p<0.05$).

A comparative analysis of diagnostically significant parameters is presented in Table 1, Table 2.

Table 1.
*Clinical, anamnestic and socio-biological parameters in the study groups, benign neoplasms of the uterus compared with the control group**

Options	Group I (benign neoplasms of the uterus, n=202)		
	Odds ratio	95% CI	p
Early sexual debut	2,12	1,1-3,86	0,017
HIDUA	2,84	1,28-4,95	0,013
History of STD	2,96	1,24-5,14	0,007
Dysmenorrhea	5,25	1,29-21,92	<0,001
Hypermenorrhea	5,74	1,18-22,64	<0,001
Dyspareunia	3,12	1,07-9,81	<0,001
CPP	3,21	1,08-12,46	<0,001
Intrauterine manipulation	2,9	1,31-11,88	<0,001
Depression/Anxiety	2,92	1,24-6,51	<0,001

Note * $p<0.05$ differences are statistically significant.

Table 2.

*Clinical, anamnestic and socio-biological parameters in the study groups, benign ovarian cysts compared with the control group**

Options	Group II (benign neoplasms of the uterus, n=256)		
	Odds ratio	95% CI	p
Early sexual debut	2,01	1,2-3,74	0,015
HIDUA	2,50	1,32-4,61	0,002
History of STD	2,47	1,39-4,5	0,002
Dysmenorrhea	2,32	1,21-5,11	<0,001
Hypermenorrhea	2,51	1,28-4,2	0,013
Dyspareunia	3,23	1,94-5,87	<0,001
CPP	1,62	0,92-4,52	0,013
Intrauterine manipulation	2,91	1,34-6,12	<0,001
Depression/Anxiety	2,86	1,24-6,74	<0,001

Note * $p < 0.05$ differences are statistically significant.

Conclusions

Clinical and anamnestic features of women with benign neoplasms of the uterus and ovaries are: early sexual debut, depression and anxiety, HIDUA and STIs, hypermenorrhea, dysmenorrhea, dyspareunia, chronic pelvic pain, frequency of intrauterine interventions. All of the above data are significantly different from the control group ($p < 0.05$).

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医生的职业倦怠
PROFESSIONAL BURNOUT AMONG DOCTORS

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抽象的。医生是国民服务群体的重要组成部分。然而，随着Pridnestrovie（摩尔多瓦不被承认的部分）医疗保健的改革和发展，对医生的要求越来越高。他们在专业工作中逐渐表现出倦怠。本文通过对当地综合诊所医生职业倦怠的调查分析和研究，提出预防和减少职业倦怠、提高医疗质量的措施。

关键词：倦怠、原因、措施。

Abstract. *Doctors are an important part of the national service group. However, with the reform and development of health care in Pridnestrovie (unrecognized part of Moldova), the requirements for doctors are becoming higher and higher. They have gradually shown burnout in their professional work. This paper analyzes and studies the causes of job burnout among doctors of the local polyclinic through the survey conducted, and proposes measures to prevent and reduce burnout and promote health care quality.*

Keywords: *burnout, causes, measures.*

When choosing a profession, it is crucial to weigh all its advantages and disadvantages. A lot of people are attracted by professions related to communication with people, as they seem interesting and uncomplicated. Undoubtedly, professions in the social sphere which are characterized by communicative activity appeal more than those connected with automation because they involve live communication, a variety of situations at work, and the absence of monotony. However, they cannot be called easy.

If you are constantly in contact with people and this is your job, quite high requirements are placed on you: you should always be polite and courteous, without showing your personal attitude; try to find an approach to anyone, regardless of

likes or dislikes; be restrained; your behavior, appearance and speech are constantly in the spotlight. Not everyone is able to meet such requirements, not everyone is able to contact dozens of people every day for decades and, nevertheless, treat everyone with involvement maintaining interest in work.

Human services workers (teachers, doctors, psychologists, managers, etc.) very often experience a state of emotional exhaustion [2, 3, 4]. In this article we will talk about problems related to medicine workers. To begin with, it is worth understanding what emotional exhaustion is, or should we refer to it as professional or mental burnout.

As a metaphor for the draining of energy, burnout refers to the smothering of a fire or the extinguishing of a candle. It implies that once a fire was burning but the fire cannot continue burning brightly unless there are sufficient resources that keep being replenished. Over time, employees experiencing burnout lose the capacity to provide the intense contributions that make an impact. If they continue working, the result is more like smoldering – uneventful and inconsequential – than burning. From their own perspective or that of others, they accomplish less. In summary, the metaphor describes the exhaustion of employees' capacity to maintain an intense involvement that has a meaningful impact at work [1, p. 205].

The origin of the term goes back to the time when people used it to describe an experience before scientific psychology identified it as a phenomenon worthy of study. Freudenberger (1974) borrowed the term from the illicit drug scene where it colloquially referred to the devastating effect of chronic drug abuse. He used the term to describe the gradual emotional depletion, loss of motivation, and reduced commitment among volunteers of the St Mark's Free Clinic in New York's East Village that he observed as a consulting psychiatrist. Such free clinics for drug addicts and homeless people had grown out of the counter-movement against the establishment. Not unimportantly, Freudenberger himself fell victim to burnout twice, which increased his credibility in spreading the message of burnout. His writings on the subject were strongly autobiographical and his impact is illustrated by the fact that in 1999, he received The Gold Medal Award for Life Achievement in the Practice of Psychology at the APA Convention in Boston [1, p. 205].

Independently and simultaneously, Maslach and her colleagues came across the term in California when interviewing a variety of human services workers. As a social psychological researcher, Maslach was interested in how these workers coped with their emotional arousal using cognitive strategies such as detached concern. As a result of these interviews she learned that these workers often felt emotionally exhausted, that they developed negative perceptions and feelings about their clients or patients, and that they experienced crises in professional competence as a result of the emotional turmoil. These practitioners referred to this syndrome as "burnout". In a thorough process of interviews, observation, and

psychometric development, Maslach and her colleagues developed a method for assessing burnout as a multidimensional construct that went beyond mere exhaustion. At the outset, burnout was predominantly identified within the human services: “Burnout is a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with people in some capacity”. However, by the late 1980s, researchers and practitioners began to recognize that burnout occurred outside the human services, for instance, among managers, entrepreneurs, and white- and blue collar workers. Thus, the burnout metaphor was extended from the intense requirements of client service to other work requiring creativity, problem solving, or mentoring. In this more general form, burnout was defined as “...a state of exhaustion in which one is cynical about the value of one’s occupation and doubtful of one’s capacity to perform”. The term burnout, then, was transferred from a literal reference to a depletion of physical resources supporting combustion to the psychological domain [1, p. 206].

The profession of a doctor does belong to the emotional sphere. In modern conditions, the work of a doctor is full of factors that cause professional burnout. They include: a large number of social contacts per day, underestimation of professional significance on the part of management, patients, colleagues, high demands, necessity for continual development, the need to be in good shape, to say nothing about loads of administrative burden (electronic health record optimization, sharing clinical notes with patients, building bridges with administration) and above all low payment.

Of course, professional burnout occurs after a certain work experience as a response and defensive reaction to accumulated problems, and it is divided into three components: emotional, exhaustion, depersonalization and reduction of professional accomplishments [2, p. 83].

Emotional exhaustion is felt as emotional tension, emptiness, exhaustion of emotional resources. An employee cannot dedicate wholeheartedly to work as before but feels disheartened, dull, on the edge and is prone to breakdowns.

Depersonalization is a tendency to develop a negative, soulless attitude towards stimuli. Social contacts become impersonal and formal. Negative attitudes though disguised, however, under the influence of inner growing discontent may burst out into visible irritation and conflict situations.

Reduced personal accomplishment stands for a decrease in the sense of competence in one’s work, dissatisfaction with oneself, loss of value of professional activity, as well as negative self-perception. Current sense of guilt for inappropriate behavior, decrease in professional and personal self-esteem, the growing complex of inferiority result in indifference to work in general.

During the field trip in the polyclinic in the city of Rybnitsa we conducted a survey among the doctors of the institution, aimed at identifying the signs of professional burnout among doctors and its stage. It should be noted that the polyclinic has been renovated, payment raised but even in such conditions professional burnout takes place.

Each stage of burnout was subdivided into levels: low, medium, high. Thus the interviewed revealed:

1. Emotional exhaustion
 - a) low level – 44%
 - b) medium level – 51%
 - c) high level – 5%
2. Depersonalization
 - a) low level – 44%
 - b) medium level – 51%
 - c) high level – 5%
3. Reduced personal accomplishment
 - a) low level - 18%
 - b) medium level – 22%
 - c) high level – 60%

At the same time, it should be noted that only 7% of doctors have a low level in all the three components, while the rest 93% experience at least one stage of burnout at its medium or high level. The reduction of personal accomplishment is characteristic of all the interviewees; the remaining signs of burnout are felt either at medium or high level. No doubt, doctors experience exhaustion, which is observed in doctors of different ages, from 30 to 60 years old.

The next question to consider is the reasons why this is happening, why there are so many doctors prone to emotional, physical and professional burnout. First of all, this is due to the peculiarity of the occupation itself, its communicative bias and some other features mentioned above. However, there are other factors that lead to a burnout. These are individual factors, i.e. character traits of the individual. There is a relationship between such of them like personal endurance, anxiety, as well as a “locus of control”, which determines whether a person takes responsibility for what is happening or shifts it to any other factors. Those who are most prone to burnout tend to take responsibility (with an internal locus of control) accompanied by a high degree of anxiety and a low degree of personal endurance; the so-called workaholics who place excessive high demands on themselves, taking everything too close to heart [5]. Besides, of great importance are the working conditions, the number of working hours, the atmosphere in the team, the relationships with the colleagues and patients, the attitude of the administration [4, 5]. In fact, burnout is a protective reaction of the body to the problems that a person

faces. It is not at all surprising that it occurs in the health care service abundant with the situations negatively affecting its workers.

Another question is if we can prevent or somehow deal with burnout. We, definitely, can. Moreover, the success of this depends both on the personality of a worker and on the organization which provides certain working conditions. The administration should completely motivate its employees, fairly assess their accomplishments, create a warm, friendly atmosphere, favorable working conditions, and motivate in the form of pay rise and bonuses. A lot depends, as it has been stated, on the personality of a doctor, who should develop the ability to withstand stressful situations, relax and rest, as well as keep emotions under control. Family support is also important.

In conclusion, we would like to claim that management forces should take into account the importance of the burnout issue and work out a system of measures to prevent its development. The profession of a doctor is one of the most important in our society; they have a great impact on the formation of a healthy image of all generations. The state in its turn should pay due attention to the erosion of psychological and emotional state of doctors which may translate into burnout.

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兽用制剂曲美汀加的组合物
**COMPOSITION OF THE VETERINARY PREPARATION
TRAMETIN PLUS**

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抽象的。为了预防和治疗幼年家畜相关的胃肠道和呼吸道疾病，我们提出了一种新的兽药 Trametin Plus，它是利用生物技术方法从松养真菌的基础上获得的。以微生物和真菌为基础获得的生物产品的特性取决于构成其成分的生物活性物质。在文献中，关于木材破坏真菌合成的脂肪生成特征和脂肪酸组成的信息零散。本文提供了脂肪酸定性和定量组成研究的数据，以及药物挥发性极性和非极性有机化合物的定性分析。已确定脂肪酸的总浓度为 70 $\mu\text{g/g}$ 制剂。其中，50.0%为游离脂肪酸，其酯化酸占脂肪酸总质量的50.0%。Trametin Plus 的主要非极性挥发性成分中，角鲨烯最为引人注目。甘氨酸、精氨酸、 β -丙氨酸等小分子量有机脂肪族氨基酸是曲美汀+的次要非极性挥发性成分。分析数据证实了该药物的多组分性质，这决定了其多种生物学特性，即抗菌、抗病毒、抗氧化和免疫刺激活性，这决定了兽药 Trametin Plus 的高治疗和预防功效。

关键词：松材植物，兽药，脂肪酸，甲酯，色谱质谱法。

Abstract. *For the prevention and treatment of associated gastrointestinal and respiratory diseases in young farm animals, a new veterinary drug Trametin Plus is proposed, obtained on the basis of xylotrophic fungi using biotechnology methods. The properties of biological products obtained on the basis of microorganisms and fungi depend on the biologically active substances that make up their composition. In the literature, there is scattered information about the features of lipogenesis and the composition of fatty acids synthesized by wood-destroying fungi. The paper presents data on the study of the qualitative and quantitative composition of fatty acids, a qualitative analysis of volatile polar and non-polar organic compounds of the drug. It has been established that the total concentration of fatty acids is 70 $\mu\text{g/g}$ of the preparation. Of these, 50.0% are free fatty acids, the esterified acids of which account for 50.0% of the total mass of fatty acids. Among the dominant non-polar volatile components of Trametin Plus, squalene can be noted. Organic aliphatic amino acids such as glycine, arginine, β -alanine with*

a small molecular weight are presented as minor non-polar volatile components of Trametin plus. The analysis data confirm the multicomponent nature of the drug, which determines its various biological properties, namely, antibacterial, antiviral, antioxidant and immunostimulating activity, which determines the high therapeutic and prophylactic efficacy of the veterinary drug Trametin Plus.

Keywords: *xylophages, veterinary drug, fatty acids, methyl esters, chromatomass spectrometry.*

INTRODUCTION

Improving the system of measures to reduce the sickness rate of young farm animals includes the use of new therapeutic and prophylactic drugs. As such a preparation, the new Trametin Plus is proposed, obtained on the basis of the culture liquid during liquid-phase cultivation of the producer *Trametes pubescens* (Shumach. Fr.) Pilat. strain 0663 from the Collection of BIN RAS L.L. Komarov [1-5].

In the literature, there is information about the features of lipogenesis and the composition of lipids of lower fungi, algae, while for higher fungi, in particular, for basidiomycetes, similar data are rather scattered. The composition of free fatty acids of the genus Basidiomycetes is poorly studied. Research is limited to single works on the study of lipids of *mycothallus* [6-16]. However, it is well known that fatty acids have pharmacological activity in relation to various nosologies in both humans and animals. The aim of this work was to study the qualitative and quantitative composition of fatty acids, qualitative analysis of volatile polar and non-polar organic compounds of the veterinary drug Trametin Plus.

The work was carried out with the financial support of the Federal state budgetary institution "Foundation for the Promotion of the Development of Small Forms of Enterprises in the Scientific and Technical Sphere".

EXPERIMENTAL PART

The determination of fatty acids was carried out according to the method of A.A. Nikonova et al. [17].

1. Extraction of lipids from Trametin Plus

Lipids were extracted from parallel weighed portions with a Folch mixture (chloroform–methanol, 2 : 1, by volume) in plastic Eppendorf tubes with a capacity of 2 ml, shaking and keeping them in an ultrasonic bath (1.2 ml × 3 × 5 min). The extracts were combined in glass tubes for centrifugation, 1.2 ml of water was added, emulsified, and centrifuged at 3000 rpm. Prior to the extraction of lipids from sponges, 100 μL of 8% H₂SO₄ in water was added to weighed portions (wet weighing 0.02 g at 97% humidity), and after the color changed from green to yellow, lipids were extracted after 2 min. Extraction of lipids from sponges was carried out 1 time, 350 μl of water was added to the extract.

2. Acid esterification of fatty acids and production of methyl esters of fatty acids (total content) of Trametin Plus

The chloroform layer of the extract (bottom) was transferred into glass penicillin flasks with a capacity of 10 ml, evaporated to dryness in a flow of argon, 4.5 ml of 2% H₂SO₄ in methanol was immediately added, tightly covered with foil, and placed in a thermostat at 55°C for 1.5 h. After methanolysis fatty acid solutions were cooled to room temperature, 0.8 ml of n-hexane was added. FAMES were extracted from the resulting solutions with n-hexane (3 mL × 2 × 2 min). Before the second extraction, 1 ml of water was added to the solutions. The extracts were concentrated to 1 ml in an argon flow and dried over anhydrous Na₂SO₄. The extracts were analyzed by GC-MS.

3. Separate production of methyl esters of esterified and free fatty acids under conditions of changing the pH of Trametin Plus

To weighed portions of isolated lipids (0.2 g wet weight) were added 2 ml of 0.4 M NaOH solution in methanol, placed in an ultrasonic bath for 5 min. The resulting MEs of esterified FAs were extracted with n-hexane (3 ml × 2), washed with water, dried over anhydrous Na₂SO₄, and concentrated in an argon flow to a volume of 1 ml. Extracts of ME FEA were analyzed by GC. To the remaining alkaline solution 3 ml of water and 0.15 g of copper(II) sulfate ground in a porcelain mortar were added, and then shaken for 5–10 min until the blue color of Cu₂SO₄ turned into green, Cu(OH)₂ (up to pH 6.0), without overkeeping the solution to avoid the transition of Cu(OH)₂ to black CuO, which can oxidize FA. Free FAs were extracted with n-hexane (3 ml × 2). Hexane was evaporated and the acid esterification of FFA was carried out. The extracts were analyzed by GC-MS.

4. Analysis of fatty acid methyl esters (qualitative) by gas chromatography with mass spectrometric detection of extracts

The extracts were analyzed on a 6890B GC System, 7000C GC/MS Triple Quad chromatomass spectrometer (Agilent, United States) with an Optima-17 column (30 m × 0.25 mm, 0.25 μm) from Macherey-Nagel (Germany). Injector temperature 280 °C; quadrupole temperature 150 °C; ion source temperature 230 °C; type of ionization - electron impact; ionization energy 70 eV; sample volume 2 μl in splitless mode; temperature of the GC-MSD interface unit 310 °C; column flow 2.54 ml/min. Chromatography was carried out under conditions of heating the column from 80°C (hold 0.5 min) to 290°C at a rate of 2°C/min and then heating to 310°C (hold 5 min) at a rate of 5°C/min. Total analysis time 115 min. Peaks were detected in the m/z range of 40–500. Mass spectra were identified using the NIST Mass Spectral Search Program for the NIST Mass Spectral Library (V. 2.2) software.

5. Quantitative determination of FAME fatty acids by GC-MS

Quantitative determination of FAMES was carried out by the internal standard method, for which 50 μL of a standard solution of didecyl ether (C₂₀H₄₂O)

in n-hexane (1 mg/mL) was added to the extracts before analysis. The detector was calibrated in the Σ FAME range from 40 to 540 μg per sample using standards (Supelco, USA) “35 F.A.M.E. Mix, C4–C24, 100 mg neat” and “Methyl cis-4,7,10,13,16,19-Docosahexaenoic ester, 10 mg/mL in heptane” (70–1000 μg per sample). Calibration factors have been determined for individual acids and for groups of acids (saturated, monounsaturated, polyunsaturated).

6. Extraction of non-polar organic components of Trametin Plus

Extraction of non-polar components of the sample was carried out from 1.0 g weighed portions of Trametin. The portion of the preparation was placed in a glass vial and extracted with 3 ml of n-hexane three times (1 min). The extracts were combined, washed with distilled water, dried over anhydrous sodium sulfate, concentrated in an argon flow to a volume of 0.5 ml, and analyzed by GC-MS in the full scan mode of the mass spectrum using the NIST Library of Mass Spectra software and the Mass Spectral Search Program for the NIST Mass Spectral Library (V. 2.2).

7. Extraction of polar organic components of Trametin Plus

Method 1. Extraction of the polar components of the sample was carried out from weighed portions of Trametin Plus weighing 1.0 g. ml), methanol (5 ml) and distilled water (10 ml) under vacuum. The elution of the sample concentrated on the cartridge was carried out with ethanol (5 ml) under vacuum. The extract was concentrated in a flow of argon to a volume of 0.5 ml and analyzed by GC-MS in full mass spectrum scanning mode using the NIST Mass Spectral Library software and Mass Spectral Search Program for the NIST Mass Spectral Library (V. 2.2).

Method 2. Extraction of the polar components of the sample was carried out from weighed portions of Trametin Plus weighing 1.0 g. Hydrochloric acid HCl was added to the weighed portion of the preparation to pH 2.0. Extraction was carried out with 3 ml of methylene chloride three times for 1 min. The extracts were combined, washed with distilled water, dried over anhydrous sodium sulfate, concentrated in an argon flow to a volume of 0.5 ml, and analyzed by GC-MS in the full scan mode of the mass spectrum using the NIST Library of Mass Spectra software and the Mass Spectral Search Program for the NIST Mass Spectral Library (V. 2.2).

8. Qualitative analysis of polar and non-polar components of samples by gas chromatography with mass spectrometric detection

The extracts were analyzed on a 6890B GC System, 7000C GC/MS Triple Quad chromatomass spectrometer (Agilent, United States) with an Optima-17 column (30 m \times 0.25 mm, 0.25 μm) from Macherey-Nagel (Germany). Injector temperature 280 $^{\circ}\text{C}$; quadrupole temperature 150 $^{\circ}\text{C}$; ion source temperature 230 $^{\circ}\text{C}$; type of ionization - electron impact; ionization energy 70 eV; sample volume 2 μl in 5:1 split mode. Division 12.691 cm^3/min . Temperature of the GC-MSD

interface unit 310 °C; column flow 3.02 ml/min. Chromatography was carried out under column heating conditions from 45°C (hold for 3 min) to 310°C (hold for 15 min) at a rate of 7°C/min. Total analysis time 56 min. Peaks were detected in the m/z range of 40–500. Mass spectra were identified using the NIST Mass Spectral Search Program for the NIST Mass Spectral Library (V. 2.2) software.

Table 1

Shows the masses of samples of the drug Trametin Plus. The extractants, sample preparation method, analyzed sample components are indicated.

Sample number	Preparation, mass, g	Analyzed components	Extractant	Features of sample preparation		
1.1	0.996	Common FAs	Folch mixture for lipid extraction and n-hexane for FAME extraction	Acid hydrolysis of OFA		
1.2	1.006					
2.1	1.013	Free FAs		Folch mixture for lipid extraction and n-hexane for FAME extraction	Alkaline esterification of FFA and extraction of ME FFA with n-hexane	
2.2	1.024					
3.1	1.013	Esterified FAs			Folch mixture for lipid extraction and n-hexane for FAME extraction	Transesterification of FFAs at pH = 6 and extraction of ME FFAs with n-hexane
3.2	1.024					
4	5.031	Non-polar components	<i>N-hexane</i>			Liquid-Liquid Extraction
5	5.025	Polar components	Ethanol			SPE on cartridges with RP-sorbent C18 and elution with ethanol
6	5.032	Polar components	Methylene chloride	Liquid-liquid extraction at pH 2.0		

THE DISCUSSION OF THE RESULTS

When analyzing free fatty acids (FFA), esterified fatty acids (EFA) and total fatty acids (TFA) of the veterinary drug Trametin Plus in the form of their methyl esters (ME). Among them, saturated fatty acids (SFAs), monounsaturated fatty acids (MUFAs) and polyunsaturated fatty acids (PUFAs) were analyzed.

On the chromatograms of ME FFA extracts, 15 fatty acid peaks were identified, of which all 15 peaks were identified. On the chromatograms of extracts of ME FFA, 18 peaks of fatty acids were identified, of which all 18 peaks were identified. The chromatograms of extracts of ME OFA showed 18 fatty acid peaks, of which all 18 peaks were identified. In total, 18 fatty acids were identified in the samples of the veterinary drug Trametin Plus. Of these, 12 saturated fatty acids, 5 monounsaturated fatty acids and one polyunsaturated essential ω -6 polyunsaturated linoleic acid, presented in minimal quantities. Chromatographic characteristics

of identified acids are presented in Table 2, qualitative composition and quantitative composition - in Table 3.

The share of esterified acids, that is, acids that are in the preparation in a bound form as acid residues of triglycerides and phospholipids, accounts for 45.0% of all fatty acids of the preparation. The share of free unbound fatty acids accounts for 55.0% of all fatty acids of Trametin Plus (Table 3).

Table 2
Retention time tR and calibration coefficients k of identified FAs

Seq. No	FA Formula	IUPAC name (and trivial name)	t _R , min	k
1	12:0	Dodecanoic acid (lauric)	27.603	1.2149
2	13:0	Tridecanoic acid (tridecyl)	33.433	1.2416
3	iso-14:0	Iso-tetradecanoic acid	36.662	1.3677
4	a/iso-14:0	Anti-iso-tetradecanoic acid	36.950	1.3677
5	14:0	Tetradecanoic acid (myristic)	39.098	1.3677
6	iso-15:0	Iso-pentadecanoic acid	42.492	1.3842
7	a/iso-15:0	Anti-iso-pentadecanoic acid	42.975	1.3842
8	15:0	Pentadecanoic acid (pentadecylic)	44.562	1.3842
9	16:1	Cis-11-hexadecenoic acid	48.364	1.2873
10	16:1	Cis-9-hexadecenoic acid (palmitoleic)	48.522	1.2873
11	16:0	Hexadecanic acid (palmitic)	49.880	1.6130
12	17:0	Heptadecenoic acid (margaric)	52.928	1.1129
13	18:2	Cis, cis-9, 12-octadecadienoic acid (linoleic)	57.902	1.2477
14	18:1	Cis-11-octadecenoic acid (cis-vaccenic)	58.240	1.5533
15	18:1	Cis-9-octadecenoic acid (oleic)	58.535	1.5533
16	18:0	Octadecanoic acid (stearic)	59.686	1.7802
17	20:0	Eicosanoic acid (arachidic)	68.757	1.8832
18	22:1	cis-13-docosenoic acid (erucic)	76.026	1.6634

The main share of all fatty acids of the drug (82.0%) falls on saturated fatty acids. The share of monounsaturated fatty acids accounts for 16.0% of all acids, the share of polyunsaturated fatty acids is 2.0% (Table 3). There is a redistribution in the composition of fatty acids depending on the degree of their saturation between free and bound acids. So, for free acids, the share of saturated fatty acids is 67.0%, and the share of unsaturated acids is 33.0%; for bound acids, saturated fatty acids account for 82.0%, while unsaturated acids account for 18.0%. The predominance of unsaturated acids in the free non-esterified form was noted (Table 3).

Table 3 shows that the average concentration of fatty acids in the drug Trametin plus is about 70.0 mcg/g of the veterinary drug. The concentration of saturated fatty acids is about 57.0 mcg/g. The concentration of unsaturated fatty acids is

about 12.0 mcg/g. The concentration of free fatty acids is about 41.0 mcg/g, the concentration of esterified fatty acids is about 34.0 mcg/g of the preparation.

Table 3

Qualitative and quantitative (mcg/g) composition of fatty acids of Trametin Plus

FA Formula	The content of fatty acids in the preparation, mcg/g of the preparation									
	Sample numbers						Average content			
	1.1	1.2	2.1	2.2	3.1	3.2	TFA ¹	EFA	FFA	TFA ²
12:0	0.099	0.098	0.091	0.127	0.031	0.709	0.099	0.109	0.370	0.478
13:0	0.122	0.121	0.000	0.000	0.045	0.145	0.121	0.000	0.095	0.095
iso-14:0	0.444	0.439	0.226	0.237	0.280	0.696	0.441	0.232	0.488	0.720
a/iso-14:0	0.234	0.232	0.299	0.274	0.067	0.146	0.233	0.287	0.106	0.393
14:0	3.317	3.284	1.107	1.031	0.890	3.325	3.301	1.069	2.108	3.177
iso-15:0	3.835	3.797	6.659	5.886	0.132	0.451	3.816	6.272	0.291	6.564
a/iso-15:0	6.221	6.159	10.26	9.481	0.252	0.984	6.190	9.871	0.618	10.49
15:0	1.642	1.626	0.290	0.320	0.363	1.238	1.634	0.305	0.800	1.106
16:1	2.951	2.921	0.852	0.810	1.601	3.397	2.936	0.831	2.499	3.330
16:1	1.090	1.079	1.629	1.287	0.426	0.621	1.085	1.458	0.524	1.982
16:0	28.57	28.29	8.270	7.760	7.33	23.57	28.428	8.016	15.45	23.46
17:0	1.077	1.066	1.365	1.061	0.193	0.164	1.071	1.213	0.179	1.392
18:2	1.161	1.150	0.555	0.505	0.932	1.771	1.156	0.530	1.352	1.881
18:1	6.047	5.987	2.038	1.878	4.801	10.37	6.017	1.958	7.586	9.544
18:1	0.550	0.544	0.318	0.289	0.367	0.830	0.547	0.304	0.598	0.902
18:0	10.71	10.60	1.691	1.580	3.330	9.605	10.65	1.636	6.468	8.103
20:0	0.735	0.727	0.000	0.000	0.177	0.413	0.731	0.000	0.295	0.295
22:1	0.589	0.583	0.000	0.000	0.834	1.288	0.586	0.000	1.061	1.061
Total	69.39	68.70	35.65	32.53	22.05	59.72	69.05	34.09	40.88	74.97
SFA	57.00	56.44	30.26	27.76	13.09	41.44	56.72	29.01	27.26	56.27
MUFA	11.23	11.11	4.838	4.265	8.030	16.51	11.17	4.551	12.27	16.82
PUFA	1.161	1.150	0.555	0.505	0.932	1.771	1.156	0.530	1.352	1.881

Note: TFA¹ is the total content of fatty acids (free and esterified) obtained by a direct method (see point 2); TFA² is the total content of fatty acids (free and esterified), obtained by summing the values of the contents of FFA and EFA in the samples obtained according to point 3.

The percentage of fatty acids is shown in Table 4.

Qualitative analysis of volatile polar and non-polar organic compounds of the veterinary drug Trametin Plus was carried out using the NIST Database mass spectrum library. A very complex composition of the components is noted. In particular, this applies to hexane and ethanol extracts of the drug. A significant

portion of the peaks in the chromatograms are inhomogeneous peaks that cannot be identified by simple comparison with the NIST mass spectra libraries. A significant part of the peaks is recorded as homogeneous peaks, but also cannot be identified by comparing the mass spectra of these peaks with the library ones, since the mass spectra of the peaks of Trametin Plus and the library spectra have significant differences.

Table 4
Qualitative and quantitative (% of the total) composition of the fatty acids of Trametin Plus

FA Formula	composition of FA in the preparation, % of the amount of FA in the sample									
	Sample numbers						Average content			
	1.1	1.2	2.1	2.2	3.1	3.2	TFA ¹	EFA	FFA	TFA ²
12:0	0.14	0.14	0.25	0.39	0.14	1.19	0.14	0.32	0.90	0.64
13:0	0.18	0.18	0.00	0.00	0.20	0.24	0.18	0.00	0.23	0.13
iso-14:0	0.64	0.64	0.63	0.73	1.27	1.17	0.64	0.68	1.19	0.96
a/iso-14:0	0.34	0.34	0.84	0.84	0.30	0.24	0.34	0.84	0.26	0.52
14:0	4.78	4.78	3.11	3.17	4.04	5.57	4.78	3.14	5.15	4.24
iso-15:0	5.53	5.53	18.7	18.1	0.60	0.76	5.53	18.40	0.71	8.75
a/iso-15:0	8.96	8.96	28.8	29.2	1.14	1.65	8.96	29.0	1.51	14.0
15:0	2.37	2.37	0.81	0.98	1.65	2.07	2.37	0.90	1.96	1.47
16:1	4.25	4.25	2.39	2.49	7.26	5.69	4.25	2.44	6.11	4.44
16:1	1.57	1.57	4.57	3.96	1.93	1.04	1.57	4.28	1.28	2.64
16:0	41.2	41.2	23.2	23.9	33.2	39.5	41.2	23.5	37.8	31.3
17:0	1.55	1.55	3.83	3.26	0.88	0.27	1.55	3.56	0.44	1.86
18:2	1.67	1.67	1.56	1.55	4.23	2.97	1.67	1.55	3.31	2.51
18:1	8.71	8.71	5.72	5.77	21.8	17.4	8.71	5.74	18.6	12.7
18:1	0.79	0.79	0.89	0.89	1.67	1.39	0.79	0.89	1.46	1.20
18:0	15.4	15.4	4.74	4.86	15.1	16.1	15.4	4.80	15.8	10.8
20:0	1.06	1.06	0.00	0.00	0.80	0.69	1.06	0.00	0.72	0.39
22:1	0.85	0.85	0.00	0.00	3.78	2.16	0.85	0.00	2.60	1.42
Total	100	100	100	100	100	100	100	100	100	100
SFA	82.2	82.2	84.9	85.3	59.4	69.4	82.2	85.1	66.7	75.1
MUFA	16.2	16.2	13.6	13.1	36.4	27.6	16.2	13.4	30.0	22.4
PUFA	1.67	1.67	1.56	1.55	4.23	2.97	1.67	1.55	3.31	2.51

Most likely this is due to the complexity of the object and the uniqueness of the biological compounds that make up its composition, some of which may yet be simply unknown to science. Detailed identification of the components of the drug requires serious long-term scientific research, thorough and detailed sample

preparation for each class of compounds, study of the structure of compounds using various methods of chromatography, mass spectrometry, nuclear magnetic resonance, etc. A number of peaks of volatile components in the chromatograms of these extracts can be identified with a probability of $\geq 70.0\%$. These compounds are presented below (Tables 5, 6).

Non-polar volatile components of the sample, soluble in n-hexane, are represented by compounds with small molecular weights $M_r \leq 350$ (Table 5). Among them are pyrans, furans, alcohols, aldehydes, ketones, heterocyclic compounds, saturated aliphatic hydrocarbons (saturated n-alkanes), unsaturated diene hydrocarbons, including squalene, aromatic compounds, indole (Table 5).

Table 5
Non-polar organic components of the drug Trametin Plus according to the NIST library

Seq. No	t_R , min	Formula	Name according to NIST mass spectrum library
1	2.089	$C_6H_{10}O$	Furan, tetrahydro-2,5-dimethyl-
2	2.204	$C_6H_{10}O$	2H-Pyran, tetrahydro-2-methyl-
3	2.239	C_7H_{14}	Cyclohexane, methyl-
4	2.647	$C_6H_{14}O$	3-Pentanol, 3-methyl-
5	2.941	C_7H_8	Toluene
6	3.336	$C_6H_{10}O$	3-Methyl-1-penten-3-ol
7	3.409	$C_6H_{14}O$	2-Hexanol
8	3.723	$C_6H_{12}O$	3-Hexanone
9	5.427	$C_7H_{16}O_2$	2-Pentanol, 5-methoxy-2-methyl-
10	5.507	$C_6H_{14}S$	2-Pentanol, 5-methoxy-2-methyl-
11	5.950	$C_9H_{18}O_3$	2-Ethoxyethyl 3-methylbutanoate
12	6.443	$C_6H_{10}O_2$	Ethanone, 1-(3-ethyloxiranyl)-
13	7.654	$C_{17}H_{30}O_4$	Oxalic acid, cyclohexyl nonyl ester
14	9.123	$C_{13}H_{26}$	Heptylcyclohexane
15	10.239	C_8H_8O	Benzeneacetaldehyde
16	12.882	$C_{11}H_{16}O$	Benzene, 1-methoxy-4-methyl-2-(1-methylethyl)-
17	14.478	C_7H_5NS	1,2-Benzisothiazole
18	15.691	$C_{10}H_{12}O$	Anethole
19	15.776	C_8H_7N	Indole
20	17.211	$C_{14}H_{30}$	Tetradecane
21	21.004	$C_{16}H_{34}$	Hexadecane
22	21.477	$C_{17}H_{34}O$	1-Penten-3-one, 4-methyl-1-phenyl-
23	22.957	$C_{13}H_{16}O$	1-Hexen-3-one, 5-methyl-1-phenyl-
24	25.027	$C_{17}H_{34}O_2$	i-Propyl 12-methyl-tridecanoate
25	25.600	$C_{18}H_{38}O$	1-Octadecanol

26	26.382	C ₁₆ H ₃₂ O ₄	Diisobutyl phthalate
27	27.515	C ₁₇ H ₃₆	Tetradecane, 2,6,10-trimethyl-
28	27.929	C ₁₆ H ₃₂ O ₄	Dibutyl phthalate
29	28.711	C ₂₀ H ₄₀	1-Eicosene
30	31.553	C ₂₂ H ₄₆ O	Behenic alcohol
31	35.434	C ₂₄ H ₃₈ O ₄	Diisooctyl phthalate
32	37.738	C ₃₀ H ₅₀	Squalene
33	38.435	C ₂₇ H ₄₃ NO	trans-13-Docosenamide

The polar volatile components of the sample, soluble in ethyl alcohol, are represented by compounds with small molecular weights $M_r \leq 310$ (Table 6). Among them, acetic acid, acetoin - one of the products of butanediol fermentation, acetic anhydride, furfural - a product of xylose dehydrogenation (Table 6), heterocyclic compounds furanone and pyranone, aldehydes, including phenylacetaldehyde, peptides, ketones, simple sugars and amino acids, aromatic compounds.

Table 6
Polar organic components of the drug Trametin plus according to the NIST library

Seq. No	t _R , min	Formula	Name according to NIST mass spectrum library
1	2.586	C ₂ H ₄ O ₂	Acetic acid
2	3.485	C ₄ H ₈ O ₂	Acetoin
3	4.09	C ₄ H ₁₀ O ₂	2,3-Butanediol, [S-(R*,R*)]-
4	4.489	C ₄ H ₆ O ₃	Acetic anhydride
5	5.156	C ₅ H ₄ O ₂	Furfural
6	8.046	C ₄ H ₄ O ₂	2(5H)-Furanone
7	8.616	C ₆ H ₆ O ₂	2-Furancarboxaldehyde, 5-methyl-
8	10.255	C ₈ H ₈ O	Benzeneacetaldehyde
9	10.932	C ₅ H ₁₀ N ₂ O ₃	Glycylsarcosine
10	11.711	C ₆ H ₈ O ₄	Pyranone
11	12.161	C ₁₇ H ₁₄ N ₄ O ₄	2-Vinyl-9-[3-deoxy-β-d-ribofuranosyl]hypoxanthine
12	12.97	C ₂₅ H ₄₄ N ₂ O ₅ S	2-Myristinoyl pantetheine
13	13.712	C ₆ H ₁₄ N ₄ O ₂	Arginine
14	14.534	C ₆ H ₆ O ₃	5-Hydroxymethylfurfural
15	14.863	C ₈ H ₁₄ O ₇	6-Acetyl-β-d-mannose
16	15.785	C ₈ H ₇ N	m-Aminophenylacetylene
17	20.963	C ₁₉ H ₁₅ N ₃ O	Imidazo[1,2-a]pyridine-6-carbonitrile, 1,2,3,5-tetrahydro-7-methyl
18	24.782	C ₅ H ₄ N ₄ O ₃	Uric acid

19	28.693	$C_{14}H_{22}N_2O_2$	5,10-Diethoxy-2,3,7,8-tetrahydro-1H,6H-dipyrrolo[1,2-a:1',2'-d]pyrazine
20	31.316	$C_{15}H_{14}N_2O_5$	2,5-Piperazinedione, 3-methyl-6-(phenylmethyl)-
21	31.714	$C_{11}H_{12}N_2O_5$	2,5-Piperazinedione, 3-(phenylmethyl)-
22	33.951	$C_{15}H_{20}N_2O_5$	Cyclo-(l-leucyl-l-phenylalanyl)
23	34.714	$C_{14}H_{16}N_2O_2$	Pyrrolo[1,2-a]pyrazine-1,4-dione, hexahydro-3-(phenylmethyl)-

Volatile amino acids of Trametin Plus are presented as minor components of the sample. Among them are glycine and sarcosine in the form of the dipeptide glycylsarcosine, where sarcosine is a methyl derivative of the amino acid glycine, arginine and β -alanine, presented in the form of an amide of the amino acid β -alanine and pantoic acid (group B vitamin).

Among these compounds, there are compounds that have undeniable and sufficiently strong biological activity. Activity is manifested as anti-inflammatory, antibacterial, antiviral, antioxidant, enveloping, immunomodulatory, antitumor effect. At the same time, a number of compounds have undoubted toxicity in animal experiments, according to the literature data, including hepatotoxicity, carcinogenicity, general toxic effect, and neurotoxicity.

Conclusion

A quantitative analysis of fatty acids of the veterinary drug Trametin Plus was carried out. It is shown that the total concentration of fatty acids is 70 $\mu\text{g/g}$ of the preparation. Of these, 50.0% are free fatty acids, most of which have a powerful antibacterial, antiviral, antitumor effect, while esterified (bound) acids, which account for 50.0% of the total mass of fatty acids, to a greater extent, have an enveloping effect. and anti-inflammatory action. At the same time, essential polyunsaturated fatty acids are practically absent in the preparation. According to the literature, a high content of free fatty acids can be characteristic of a number of algae [6], micellar fungi [7], and their analysis plays an important role in diagnostic medicine [8].

Among the dominant non-polar volatile components of the drug Trametin Plus there is a triterpene compound - squalene $C_{30}H_{50}$ (reliability of determination by GC-MS method $\geq 95.0\%$). This substance has a powerful antioxidant, immunostimulating, enveloping surface-active effect, protecting the mucous membranes of the body.

The simplest organic aliphatic amino acids such as glycine ($M = 75 \text{ g/mol}$), arginine ($M = 174 \text{ g/mol}$), β -alanine ($M = 89 \text{ g/mol}$) with a small molecular weight are presented as minor non-polar volatile components of Trametin plus.

The remaining organic components of the drug are able to have a complex effect on the body. The toxicity of some components to animals may be considered to establish the doses and timing of the use of the drug Trametin Plus.

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科学出版物

上合组织国家的科学研究：协同和一体化

国际科学大会的材料

2023 年 9 月 8 日。中国北京

编辑A. A. Siliverstova

校正A. I. 尼古拉耶夫

2023 年 9 月 8 日。中国北京

USL。沸点：98.7。 订单253. 流通500份。

在编辑和出版中心印制

无限出版社

