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## **ECONOMICS**

### **STATE OF BUDGET SECURITY OF UKRAINE**

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**Annotation.** *Methodical approaches for estimating budget security of the state are specified in the part of definition of normalized indicators and establishment of values intervals of the integral index, which correspond to the optimal, pre-crisis and crisis state of safety. Most important factors of budget security are determined and sensitivity of the integrated security budget index to the change of indicators is assessed. Dynamics of the integral index of fiscal security of Ukraine is analyzed.*

**Key words:** *fiscal security, integral index, indicators, normalized values, sensitivity factor.*

**Relevance of the research topic.** Budget security is a prerequisite for the implementation of an effective state financial and economic policy as a basis for achievement of national interests. Rational use of the budget as the financial basis of state regulation of a market economy should ensure regulation of economic and social processes in the interests of society, create preconditions for economic development of the country. Therefore, an important direction of economic policy is achievement of economic balance in the financial sphere of the state as a prerequisite for a stable economic growth and realization of national interests.

Budget policy as one of the driving forces of Ukraine's development implies further stabilization of public finances, ensuring economic growth and developing a competitive economy, raising living standards to support a balanced development of the state [1].

Effectiveness of government projects and programs implementation to a certain extent reflects the level of budgetary security. The relevance of the assessment of budgetary security of Ukraine as the basis for formation of strategic directions of state policy in the financial sphere is conditioned by the above-mentioned information.

**Analysis of recent research and publications.** Among Ukrainian and Russian researchers, significant contribution to the development of the modern theory of fiscal security as a component of national, economic and financial security was made by O. Baranovskyi, O. Bilorus, V. Heyets, V. Gorbulin, G. Darnopyh, I. Binko, M. Yermoshenko, Y. Zhalilo, G. Ivashchenko, L. Kisterskyi, G. Kozachenko, O. Lisovska, V. Martyniuk, V. Muntiyani, E. Oleynikov, G. Pasternak-Taranushenko, S. Pyrozhkov, V. Predborskyi, A. Sukhorukov, V. Shlemko and others.

The purpose of the study is justification of methodological approaches to assessing the level of budgetary security of the state and determining sensitivity of the indicators to the level of the integral index.

**Research results.** Budget security is a state of providing solvency and financial stability of the state, taking into account balance of incomes and expenditures of state

and local budgets, and efficiency of using budget funds in order to maximize meeting social needs.

Budget security implies implementation of a state policy aimed at fulfilment of the national economic interests of the country, in particular ensuring sustainable economic growth and the necessary level of investment for the development of productive forces in the long-term period, supporting and protecting national producers, enhancing development of high-tech sectors of the economy, conducting social policy aimed at raising the standard of living of the population and meeting basic social needs [2]. In accordance with these tasks of the budget policy, a list of budget security indicators is created, which enable to assess the level of implementation of the revenue side and the balance of revenue as well as the expenditure of the budget, the ratio of the rates of increase of budget revenues and GDP growth rates, the degree of financial decentralization in the country and differentiation of regions in terms of budget expenditures.

In order to solve the problem of quantification of the state budget security of Ukraine, we will apply the indicative method and calculate the integral indicator of budgetary security using the following indicators:

1. level of GDP redistribution through consolidated budget (excluding pension fund revenues) in %;
2. ratio of deficit, state budget surplus to GDP (%);
3. ratio of expenditures of the State budget to incomes (deficit ratio, %);
4. deficit / surplus of budgetary and extrabudgetary funds of the state-owned sector (% to GDP);
5. ratio of aggregate payments for servicing and repayment of state debt to the state budget revenues (%);
6. share of local budgets in the consolidated budget of Ukraine, %.

The first step is to calculate the statistical values of the indicators (Table 1) according to the proposed list.

For further calculations it is necessary to switch from absolute to normalized values of indicators, which vary from 0 to 1. In this case, in order to ensure the same information orientation of indicators, they are divided into boosters and disincentives.

Taking into account the type of indicator: booster, disincentive, indicator of mixed type, we set the normal value according to the table 1: for boosters - maximum values for the analyzed 11 years, for disincentives - the minimum, and for indicators of mixed type, which during the analyzed period were negative, and which, as a result, can be considered as disincentives, - also the minimum values. Based on the determined data we calculate the normalized values and fill them out into the table 2,

The integral budget security index has a form of linear convolution. Using the model of the main components of the “Statistics” program, we calculate weighting factors that determine the degree of contribution of each indicator to the integral budget security index.



Table 1

**Dynamics of Budget Security Indicators of Ukraine \***

Year	Level of GDP redistribution through consolidated budget, %	Ratio of the state budget deficit to GDP, %	Deficit (surplus) of budget and extrabudgetary funds in the sector of state administration, in % to GDP	Ratio of aggregate payments for maintenance and repayment of state debt to the state budget revenues, %	Ratio of expenditures of the state budget to incomes, %	Share of local budget revenues in the consolidated budget, %
2006	22,9	-0,7	-0,37	9,8	1,03	24,3
2007	30,5	-1,4	0,26	5,9	1,05	28,4
2008	30,7	-1,3	-0,44	4,2	1,04	26,3
2009	32,0	-3,9	-2,02	19,6	1,16	26,5
2010	32,0	-5,6	-0,71	17,5	1,26	26,0
2011	30,3	-1,8	-0,87	21,9	1,06	21,7
2012	31,8	-3,8	-0,53	26,4	1,14	22,6
2013	30,4	-4,4	0,53	32,9	1,19	23,8
2014	29,1	-4,9	-2,25	47,7	1,20	22,2
2015	32,9	-2,3	-0,11	38,9	1,08	18,5
2016	33,1	-2,9	0,13	31,1	1,11	21,8
Limit value	not more than 30	not more than 3	not more than 1	not more than 7	not more than 1	not less than 30
Normative value	22,9	-0,7	-0,11	4,2	1,03	28,4

\* Calculated by: [3; 4]

Dynamics of the integral index (Table 2) indicates deterioration of the budget security situation in Ukraine.

Thus, the integral index of fiscal security in 2016 decreased to 0.552 in comparison with the pre-crisis 2006 (0.784). Besides dynamics of the integral index, the degree of its approach to the security center, which is determined by the limits of optimal values, as well as the level of influence of individual indicators on the value of the integral index of budgetary security, is important.

In order to establish limits of the intervals of the level of budgetary security, we use the values of optimal, pre-crisis, crisis conditions for each indicator of budgetary security, defined in the Methodology for Calculating Economic Security of Ukraine and with the help of expert analysis (Table 3).

Using the expert and normative values of the indicators (Table 3), we will calculate the normalized thresholds and the optimal lower and upper values of the indicators. Also,

we will define the integral index of budgetary security at the threshold and optimal lower and upper values of the indicators (Table 4), while using the same weighing coefficients as for the calculation of the integral index of budgetary security based on the actual values of indicators (Table 2).

Table 2

**Integral Budget Security Index of Ukraine in 2006-2016\***

Year	Level of GDP redistribution through consolidated budget, %	Ratio of the state budget deficit to GDP, %	Deficit (surplus) of budget and extrabudgetary funds in the sector of state administration, in % to GDP	Ratio of aggregate payments for maintenance and repayment of state debt to the state budget revenues, %	Ratio of expenditures of the state budget to incomes, %	Share of local budget revenues in the consolidated budget, %	Integral Budget Security Index
	Normalized indicator values						
2006	1	1	0,2973	0,4286	1	0,8556	0,784
2007	0,7508	0,5000	0,4231	0,7119	0,9810	1	0,725
2008	0,7459	0,5385	0,2500	1	0,9904	0,9261	0,766
2009	0,7156	0,1795	0,0545	0,2143	0,8879	0,9331	0,485
2010	0,7156	0,1186	0,1549	0,2400	0,8175	0,9155	0,476
2011	0,7558	0,3889	0,1264	0,1918	0,9717	0,7641	0,531
2012	0,7201	0,1842	0,2075	0,1591	0,9035	0,7958	0,479
2013	0,7533	0,1591	0,2075	0,1277	0,8655	0,8380	0,472
2014	0,7869	0,1429	0,0489	0,0881	0,8583	0,7817	0,441
2015	0,6960	0,3043	1	0,1080	0,9537	0,6514	0,567
2016	0,6918	0,2414	0,8462	0,1351	0,9279	0,7676	0,552
weighing coefficients	0,191	0,198	0,112	0,210	0,168	0,121	
Sensitivity ratios	0,230	0,039	0,101	0,146	0,219	0,285	

\*Calculated by the author

As a result of the calculations, we have obtained the values of the integral index, which allow identifying intervals of values with crisis, pre-crisis, optimal level of budget security:

- the lower limit state is characterized by the crisis situation in the budget sphere and the values of the integral index in the range from 0 to 0,156 ;
- the lower threshold state for values of the integral index in the range from 0.157 to 0.411 indicates a pre-crisis state of budgetary security;

- limits of the optimal state are determined by the values of the integral index from 0.412 to 0.542;
- the upper threshold state (pre-crisis) is observed at the values of the integral index from 0.543 to 0.967;
- upper limit state (crisis) - at values exceeding 0.968.

Table 3

**Limit States of the State Budgetary Security\***

Indicator	Expert indicator values				
	Normative value	Lower threshold, $X_{nop}^H$	Lower limit, $X_{opt}^H$	Upper limit, $X_{opt}^B$	Upper threshold, $X_{nop}^B$
Level of GDP redistribution through consolidated budget, %	22	23	25	28	30
Ratio of the state budget deficit to GDP, %	0,7	-3	0	0	3
Deficit (surplus) of budget and extrabudgetary funds in the sector of state administration, in % to GDP	0,11	-1	0	0	1
Ratio of aggregate payments for maintenance and repayment of state debt to the state budget revenues, %	4,2	0	2	5	7
Ratio of expenditures of the state budget to incomes, %	1,03	0	0,3	0,6	1
Share of local budget revenues in the consolidated budget, %	28,4	30	37	43	50

\*Consolidated by: [5; 6]

It should be noted that the upper threshold and limit states in terms of safety are considered to be slightly better than the lower threshold and limit states. The most desirable is the optimal state of budgetary security, since it is achieved at the values of indicators that are within the lower and upper limits.

As we can see from Table 2, since 2009, the declining dynamics of the integral index indicates a deterioration in the state of budgetary security. Some hope for strengthening fiscal security gives the increase of the integral budget security index in 2015. However, the state of fiscal security of Ukraine in 2006-2008 and 2015-2016 can be characterized as pre-crisis, and in the period of 2009-2014, as optimal.

Analyzing the dynamics of statistical indicators and their normalized values, it

can be assumed that negative changes in the level of fiscal security occurred due to deterioration of such indicators as the ratio of the state budget deficit to GDP, the level of GDP redistribution through the consolidated budget, the ratio of the amount of aggregate payments for servicing and repayment of public debt to the state budget revenues, as well as a partial worsening of the ratio of expenditures of the state budget to incomes and the share of local budget revenues in the consolidated budget. In particular, the indicator of the ratio of aggregate payments for servicing and repayment of state debt to the state budget revenues in 2016 exceeded its level by 3.2 times in 2006 and by 4.4 times the marginal value. The level of redistribution of GDP through the consolidated budget in 2016 exceeded the limit of 10.3%, the ratio of the state budget deficit to GDP increased by 4.1 times over the analyzed period.

Table 4

**Value of the integral index of state budget security in accordance with the limit states \***

Indicator	Normalized indicator values				
	Normative value	Lower threshold, $x^{\text{r}}_{\text{nop}}$	Lower limit, $x^{\text{r}}_{\text{ont}}$	Upper limit, $x^{\text{r}}_{\text{ont}}$	Upper threshold, $x^{\text{r}}_{\text{nop}}$
Level of GDP redistribution through consolidated budget, %	0,191	0,763	0,818	0,916	0,996
Ratio of the state budget deficit to GDP, %	0,198	-0,233	0,000	0,000	0,233
Deficit (surplus) of budget and extrabudgetary funds in the sector of state administration, in % to GDP	0,112	-0,110	0,000	0,000	0,110
Ratio of aggregate payments for maintenance and repayment of state debt to the state budget revenues, %	0,210	0,000	0,600	0,840	2,100
Ratio of expenditures of the state budget to incomes, %	0,168	0,000	0,291	0,583	0,971
Share of local budget revenues in the consolidated budget, %	0,121	0,568	0,660	0,768	0,947
Integral Budget Security Index	-	0,156	0,411	0,542	0,967

\* Calculated by the author

**Conclusions.** Strengthening of the fiscal security should be given adequate attention. Based the calculations it is evident that strategic directions of the state policy in the financial sphere with the aim of strengthening budgetary security should be: optimization of the state budget due to reduction of its expenditure part, in particular, minimization of expenses for public administration; reduction of volumes of external borrowings and

reduction of their volumes for financing of the consolidated budget deficit; state support for the development of high-tech export-oriented industries and import-substituting production as the basis for strengthening of the international competitiveness of domestic enterprises and improvement of the foreign trade balance of Ukraine.

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## ИНТЕЛЛЕКТУАЛЬНЫЙ РЕСУРС КАК ФАКТОР ЭКОНОМИЧЕСКОГО РАЗВИТИЯ В УСЛОВИЯХ ГЛОБАЛИЗАЦИИ

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**Annotation.** *The article affects the problem of becoming of economy of knowledge and questions of the rational use of intellectual resources related to her, their role and value as a key factor for a height and development of national economies on the modern stage of globalization of world economy.*

**Key words:** *economy of knowledge, intellectual resources, objects of intellectual property, commercialization of objects of intellectual property, products and services, expenses.*

Интерес мировой научной общественности к проблеме интеллектуальных ресурсов связан с переходом наиболее развитых стран мира к постиндустриальной экономике (экономике знаний или экономике изобилия), которая отличается следующими чертами:

- *во-первых*, значительную часть добавленной стоимости в такой экономике формируют знания, определяющие рост наукоемкости продукции и услуг. Наукоемким становится производство даже многих потребительских товаров – например, до 70% стоимости легковых автомашин образуют дизайн и другие интеллектуальные компоненты. По образному выражению одного из американских экспертов – «автомобиль сегодня не колеса с чипами, а чип с колесами».. С каждым днем растет наукоемкость продукции таких отраслей, как добыча полезных ископаемых, производство нефти, станко- и приборостроения, даже зерна (75%) и др. По мнению известного американского ученого-экономиста П.Друкера нынешнее сельское хозяйство в высокоразвитых странах мира просто «нафаршировано» биотехнологиями, генетикой, вычислительной техникой. Сегодня это одна из самых наукоемких отраслей экономики [3].

- *во-вторых*, самую серьезную роль стал играть процесс развития и использования знаний. Возникла настоящая «индустрия образования». Она играет ключевую роль в экономике наряду с обороной, здравоохранением, социальной защитой населения. Считается, что за весь период профессиональной деятельности человек должен не менее 5-8 раз повышать свою квалификацию. Национальный научный фонд США рекомендует специалистам выделять не менее 10 часов в неделю на изучение специальной литературы и 40-80 часов в год на участие в какой-либо форме непрерывного образования [9].

- *в-третьих*, идет бурный процесс превращения работников умственного труда в доминирующую группу занятых. В промышленно развитых странах эта

группа по своим размерам составляет уже до 1/3 занятых. В США эта категория работников (более 30%) получила название «креативный класс», В Японии 94% промышленных рабочих имеют степень бакалавра и т.д [3].

В чем причина таких серьезных перемен? – одни ученые считают, что все дело в истощении природных и трудовых ресурсов; другие – в итоге развития НТП; третьи – в изменениях, внесенных информационными технологиями и т.д. В каждом из этих мнений есть доля истины. Но общей основой выступают, на наш взгляд, изменения в характере и масштабах конкуренции. Они вызваны глобализацией мировой экономики, ростом числа ТНК, их экономической экспансией, информационно-технологической революцией наших дней.

В этих условиях важнейшим условием реализации товаров стала их *конкурентная способность*. Если раньше одним из главных условий успеха считалось грамотное планирование, (долго- и среднесрочное), то теперь – только скорость реакции производства на изменения рыночной конъюнктуры. Перемены сегодня столь быстротечны, что прогнозирование становится практически невозможным. Один из руководителей европейского филиала компании Nokia сказал недавно в своем интервью: «Все идет к тому, что утром мы будем представлять новое изделие, а вечером его придется уже снимать с производства». Такова экономика знания (экономика изобилия) и законы, ей присущие [1].

Главными *инструментами* конкуренции стали: а) ориентация на личность потребителя, самый полный учет его предпочтений; б) постоянный контроль за действиями конкурентов; в) непрерывное обновление своего ассортимента с целью сохранить рыночные позиции в быстро изменяющейся конъюнктуре рынка.

Сказанное позволяет определить одно из *качественных отличий* постиндустриальной экономики (экономики знаний), а именно - экономическую роль *транзакционных издержек*. Эта новая экономическая категория, введенная в научный оборот лауреатом Нобелевской премии Р.Коузом, связана не с традиционными затратами производства (расходы на сырье, материалы, оплату труда и т.д.), а с затратами на поиск информации, маркетинговые исследования рынка, заключение контрактов, защиту прав объектов интеллектуальной собственности и т.д. /Сегодня в США на транзакционные издержки приходится до 50% общих затрат производства и реализации товаров. Сложилась ситуация, при которой товар проще и дешевле произвести, чем продать! И разумеется, в разы возросли требования к сбору и обработке информации, изучению спроса, проведению маркетинговых исследований рынка, к рекламе, публич-рилейшенз и т.д. Другими словами в такие виды интеллектуальной деятельности, где основным ресурсом выступает знание.. Сегодня транзакционные услуги образуют особый сектор экономики в промышленно развитых странах мира, значение которого непрерывно растет – например, в США он занимает уже более 50% [8].

В условиях ужесточающейся конкуренции и бурного развития НТП люди оказались перед необходимостью приобретать новые знания в течение всей своей трудовой жизни. Фактически более 30% занятых в развитых странах



мира ежегодно вынуждены приобретать новую профессию или более высокую квалификацию, проходить переподготовку, постоянно обучаться. Все шире растут такие формы занятости, как самозанятость, частичная занятость, виртуальные формы организации труда и др.

Одновременно возникают новые формы организации экономической деятельности, порожденные в целом информационной и коммуникативной технологиями (электронная торговля, электронные деньги и др.). Это существенно меняет хозяйственную и экономическую практику и выводят проблему роста интеллектуальных ресурсов на первый план. По мнению П.Друкера в будущем не будет стран неразвитых, будут страны, неосведомленные, а сами эти понятия превратятся, по-видимому, в синонимы [3].

Исторически процесс развития постиндустриальной экономики прошел уже три этапа:

1. Этап накопления мощного интеллектуального потенциала
2. Этап высокой интенсивной интеллектуальной деятельности
3. Этап активной коммерциализации ее результатов.

Из этих этапов решающим является третий, т.е. этап коммерциализации. Мировая практика использует многие показатели для оценки эффективности коммерциализации. Выделим 4 наиболее значимых:

- доля лиц с высшим образованием; доля государственных и частных затрат на сферу НИОКР; доля высокотехнологичных отраслей в расходах на НИОКР; доля высокотехнологичных отраслей в расходах на интеллектуально-коммуникационные технологии (далее везде - ИКТ); количество патентов и торговых марок на 1 млн. населения

Совокупность этих показателей определяет успех коммерциализации результатов интеллектуальной деятельности (далее везде – РИД) путем оценки их рыночной стоимости и возможности экспорта при всей важности таких стадий как стадия учета РИД (внесение на баланс организации), стадия их финансирования (затраты на инновационную деятельность) и стадия разработки (абсолютные и относительные показатели количества патентов).

Кроме того, просто необходимо учитывать культурно-нравственные ценности, национальный менталитет, социальную стабильность и др. Это нематериальные понятия. Экономический результат напрямую они не дают. Но они играют колоссальную роль в процессе развития интеллекта. формирования интеллектуальных ресурсов и интеллектуального потенциала страны.

Пока интеллектуальный ресурс рассматривается ограниченно, главным образом как совокупность воплощенных в товарах и технологиях «научных идей и разработок» (В.П.Горегляд, Т.Я.Хабриева); или как «результат интеграционного сотрудничества бизнеса с научными учреждениями в интересах повышения наукоемкости производства и повышения конкурентоспособности» (Ю.Ф. Шамрай) и др. Подобная трактовка интеллектуального ресурса, на наш взгляд, достаточно узка, что искажает его сущность, ограничивает его потенциальные



возможности в общественном развитии [4,5,6].

Более глубокую трактовку находим у А.Н. Татаркина, который считает, что интеллектуальный ресурс есть система отношений по поводу производства новых или обогащенных знаний и интеллектуальных способностей индивидуумов, коллективов и общества в целом, с помощью которых происходит расширенное воспроизводство национального богатства на интенсивной основе [4].

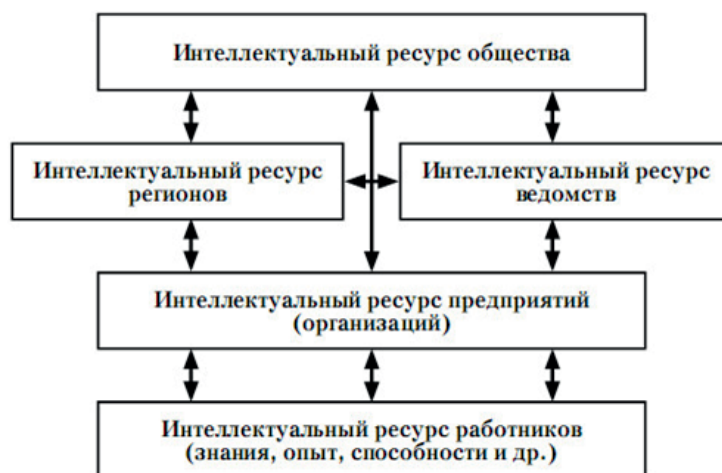


Рис. 1. Классификация интеллектуального ресурса по его носителям (субъектам)

Приведенная классификация интеллектуального ресурса по его носителям позволяет сделать два вывода принципиального характера. С одной стороны, существующее на практике разграничение полномочий между субъектами по формированию знаний у работников и навыков их использования позволяет утверждать, что основа национальной инновационной системы в России и Беларуси создана.. Задача состоит лишь в том, чтобы наполнить отдельные ее формы и институты инновационным содержанием и подключить рыночные институты развития инновационной системы, нацелив их на конечный результат (общественный, социальный, коммерческий).

Последнее обстоятельство важно, поскольку до настоящего времени проблема учета конечного результата функционирования инновационной системы и использования интеллектуального ресурса обсуждается и оценивается лишь на уровне сравнительных результатов (доля инновационно-активных предприятий, доля инновационной продукции в объемах производства, экспорте и др.).

Реальные конечные результаты субъектов инновационного процесса в форме дохода работника, обладающего интеллектуальным ресурсом, коммерческого дохода коллектива, активно использующего интеллектуальный ресурс и возможности собственного производства, либо не учитываются государственными структурами, либо учитываются лишь на уровне статистических сравнений и без

включения их в инновационную систему.

С другой стороны, интеллектуальный ресурс – особый ресурс, который формируется и наиболее эффективно используется лишь в том случае, если есть результат усилий государства и его органов по созданию условий для реализации инновационных проектов на практике, через процесс их коммерциализации.

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## SOCIO-ECONOMIC CONSEQUENCES OF THE IMPACT OF SCIENCE ON THE DEVELOPMENT OF SOCIETY

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**Annotation.** *The article deals with the problems of influence of scientific on social development. Positive and negative effects of this influence in the context of system analysis are studied.*

**Key words:** *science, socio-economic system, progressive development.*

**Introduction.** In the early 21st century, science and knowledge became the decisive factors ensuring progressive socio-economic development. The scientific-technological progress share contained currently in innovative goods and services, in education sector, in the scientific organization of industrial production, amounts to 85-90% of GDP growth in highly developed countries of the world [1]. Science as a system of knowledge, by nature, is able to significantly influence the socio-economic development rate, to change the quality of all the components of the socio-economic system: political, legal, environmental, socio-cultural, etc. It is able to have a transformative impact on the relevant elements, by changing their quality, and creating prospects for their usage as a factor of progressive socio-economic development. At the same time, this impact is accompanied by certain consequences, which can be not only of positive, but also negative character in regard to particular components of the social system contradicting to progressive development characteristics. In this regard, society faces the task of leveling down the main threats generated by the influence of science on the social system and the acceleration of positive trends caused by the progress of science.

**Problem definition and objectives.** The purpose of the article is to analyze the process of correlation of science and its development within the context of determining the main contradictions violating the social system balance. The solution of this task will allow to develop a mechanism for enhancing positive and leveling down the negative effects of the science on social development in order to provide it with a form of progressive socio-economic development.

**Last achievements and publications.** The issue of accelerating socio-economic development, and the role of science therein, is the subject of investigation conducted both by the classicists of economic theory and scientology, such as: J. Bernal, J. Schumpeter, T. Kun, including the works of many contemporary domestic and foreign scholars, such as: A. Chukhno, V. Inozemtsev, A. Halchynskyi, S. Afontsev, V. Kutsenko and others. However, these scientific works mostly contain an analysis of the impact of science on the development of individual components of the social system, i.e. economic, social, legal, institutional, ecological, etc. Such a focus on the analysis of individual components of the social system and the mechanisms of their impact on development overlooks the

fact that society is a complex system in which each component has an equal impact on development and performs a specific function in public life. The economy is an open, complex system that is capable of self-organization under the influence of exacerbation of contradictions, and the institutions of other systems serve as an external environment for it, namely sociocultural, environmental, political and legal systems, etc. Therefore, it is wrongfully to investigate development factors, confining themselves to economic or any other sphere [2].

**Research methods.** An effective analysis of the consequences of the impact of science on progressive social and economic development is possible with the transition to the interdisciplinary methodological research principles which allow to highlight the objective interconnections, interpenetration and mutual influence caused by various spheres of the social organism on each other, that is, to use a systemic and institutional approach, as well as the dialectic principles.

**Research results.** Since the goal of progressive social and economic development is the maximum satisfaction of the present and future human needs, ensuring the realization of the personality and harmonizing the relations «human – nature – society – future generations» [3] and taking into account the complexity of the social system, in order to carry out a deeper analysis of the consequences of influence science for social development, we examine the effect of the science transformational impact on each of the components of the social system, i.e. economic, environmental, political and legal, sociocultural from the point of view of realizing the goals of progressive social and economic development.

Consequently, the consequences of science impact on the ecological subsystem, consisting of nature and the environmental management subjects, are manifested in the following: nature is a basis for the production system, and it also represents the sphere of existence of human as a bioagent. On the one hand, the intensification of the natural resources management process with the help of science can contribute both to enhancing their use and to mitigating global environmental problems, being significantly exacerbated over time. In other words, the use of high technologies allows us to better satisfy the needs of society under the conditions of more sparing effect on the environment, inherent to the growing profitability of the final products production.

Application of scientific approach when involving natural resources into the production makes it possible to widely use more effective methods of natural resources management. Scientific advances point the way to the priority use of waste-free environmental technologies and improve the methods to dispose the harmful wastes of economic and life activity, which can contribute to the normalization and conservation of the ecosystem state. For example, geotechnology development allows to carry out the raw extraction of raw materials using method of underground leaching, which makes it possible to dramatically increase the efficiency of mineral resources exploitation. The use of gas instead of oil products for motor vehicles saves annually up to 10 million tons of motor fuel (that is, about 20 million tons of oil) while the toxicity of the exhaust gases is two to four times less than that of gasoline or fuel oil [4].

In addition, the use of scientific achievements can contribute to the restoration of biodiversity, which has suffered a negative impact caused by the devastating human economic activity of the past; this creates prospects to restore the ecosystem balance. For example, the introduction of permaculture methods into agriculture and forestry will help to obtain food products with minimal damage to ecosystems.

Therefore, the development of science creates prospects to overcome or mitigate environmental threats, as evidenced by statistics: if the amount of carbon dioxide emissions into the atmosphere has increased by approximately 3% annually during the beginning of this millennium, then this indicator began to decline starting from the year 2012 (decrease happened due to reduced demand for coal by reason of its replacement by the renewable energy sources [5]).

However, on the other hand, it should be noted that the current stage of the scientific and technological revolution, unfortunately, is unable to solve the entire complex of environmental problems that have accumulated since the beginning of the industrial revolution, and have caused colossal and even devastating consumption of natural objects. Thus, the Global Footprint Network organization determined that the world economy annually consumes 50% more resources than the Earth can regenerate [6]. According to the experts, the negative changes in the Earth's ecosystem characterizing the Anthropocene epoch include a marked acceleration of the erosion and precipitation rates, large-scale chemical disturbances in the cycles of carbon, nitrogen, phosphorus and other elements, significant changes in the global climate and sea level, as well as biotic changes. Many of these changes are practically irreversible [7].

Rapid destruction of biological diversity in soil, and with it the content of humus, due to the constant use of agrochemistry leads to an annual loss of 10-15 million hectares of agricultural land on the planet [8]. Consequently, the scientific progress influence on the ecological subsystem of the social system aimed at realization of the progressive development goals requires regulation in terms of leveling down these negative manifestations.

The transformative effect of science progress on the sociocultural subsystem, which in general terms consists of a person with the knowledge, skills, needs and motivations, of a civil society and culture, is manifested in the following:

First, science contributes to an increase in life expectancy and improvement of public health. These trends are most clearly manifested in countries where the pace of scientific and technical progress is the fastest. For example, if the average age of the population in Nigeria and Mali is 15-16 years, and life expectancy for these countries is 54.3 and 54.6 years, respectively, then the average life expectancy is at least twice as high in almost all countries belonging to the first 15 countries in terms of GDP volumes (according to PPP (purchasing power parity) per capita; in European countries life expectancy exceeds 80 years [9]).

The number of elderly people increases annually by 2% according to the global dimension; The World Bank estimates in 1990 showed that 18% of the population of the developed OECD countries were people over 60 years old, in the year 2009 this number

amounted to 20%. This figure will increase by 27% before 2020, and by 30% before 2030. The proportion of people older than 60 years in Latin America and Asia before 2030 will double and will be 16% of the population [10]. This trend certainly deserves a positive assessment in terms of ensuring the goals of progressive development, because its goal is to meet the needs and realization of human capabilities. In addition, from the standpoint of the effectiveness of the human resources use in production, the growth in life expectancy leads to an improvement in the labor quality due to the accumulation of significant labor, moral and intellectual potential of the individual, and can be used to ensure achievement of the progressive development goals.

However, the reverse side of an increase in life expectancy is a significant increase in labor market tension and in the pension maintenance sphere, resulting in a continuous deterioration of the support coefficient – an indicator being the basis of the solidarity pension system as the ratio between the number of pensioners and the employed population (from 3.5 employees per pensioner in 1950s of the 20th century, up to 2.5 – in 1990s, and in the near future a further deterioration is forecasted - up to 2 employees per pensioner), which forces states that have faced this problem, to increase contributions to the pension system [11].

Another important manifestation of the influence of science on the socio-cultural sphere is the level and quality of education, which forms the basis for both to increase the labor productivity and the ability of people to protect themselves from information economy threats, namely unemployment, information noise, digital rupture and the like.

The positive influence of science on the education system is manifested by an increase due to the use of the scientific method to research the quantity and quality of knowledge, its systematization, the improvement of educational methods, their adaptation to the individual characteristics of the student, etc. The use of the latest achievements in the educational process facilitates an access to educational services, especially for people with disabilities, it also contributes to the democratization of the education process and enhances its overall level. This is confirmed by statistical data: for example, the world indicator of the adjusted net enrollment of children of the corresponding age in primary education for the period from 2000 to 2015 increased from 85.0 up to 91.2% [12].

It should be noted that in modern conditions it is the educational level that largely determines the economic entity income level as a basis to meet its needs, demonstrates the important role of knowledge from the point of ensuring the goals of progressive development. For example, if the real income was practically unrelated to the educational level in the USA in the 1960s of the 20th century, then the difference in earnings between people with incomplete secondary education and college graduates reached 49% in 1980s, and in 1990s it approached 90%. Bachelors increased their incomes by an average of 30% during the period from 1987 to 1993, and the doctor's degree helped people to double their salary [13]. This, in its turn, changes the person's attitude to information and knowledge, towards which consumption is shifted, and stimulates the development of the educational and scientific industry.

Moreover, information, besides all its other qualities, has the selectivity property:



not everyone can dispose it in favor of himself/herself (for example, a bank's financial report or a computer program). The specific abilities of a person, the intellect, and the educational level are the main factors limiting the opportunities for exposure to these resources. Therefore, significant knowledge is concentrated in a relatively narrow circle of people that forms a new dominant class in a post-industrial society. It was called «knowledge-class» in Western sociology (English version: «intellectual class»). According to the Russian economist-sociologist V.L. Inozemtsev, the main identifying feature of the «intellectual class» is a substantial excess of its educational level above the level that is inherent in the majority of the total workforce, and the last class will remain in the minority, and its borders will never be able to expand to the scale of society as a whole [14]. These trends can not be ignored by society on the path to progressive development.

The consequences of scientific progress, which are manifested in the economic sphere of public life, are as follows. At the present stage of scientific progress, known as the information age, information and communication technologies penetrate into all spheres of human activity, and their effective use becomes the main source of competitive advantages both at the level of company and at the level of the national economy. The information and cyberspace, which have reached the global level, contribute to a more efficient and faster dissemination of information and to improvement of its accessibility. The progress of communications provides a person with freedom in both the economic and cultural-spiritual spheres through facilitating the process of movement in space, the possibility of distance work and study, the expression of personal opinion, the development of democracy, etc. This process can be viewed from two perspectives: on the one hand, free access to information is one of the basic human rights. It contributes not only to the satisfaction of human curiosity, but also to the use of information in economic activities for profit obtaining, training and the comprehensive human development. For example, the current US online sales volume has exceeded 300 billion dollars, which is equal to the US sales volume within the vehicle manufacturing industry. The Internet was the only reason for creating more than 400 thousand new jobs in the beginning of the XXI century. The development of the information sector will create at least 2,500,000 workplaces in Japan in the next 15 years, and more than 6 million workplaces in Western Europe [15].

On the other hand, informational support creates a number of specific threats, one of which is the so-called «information noise», digital dependence and information overload, which occurs as a result of the information explosion of recent decades. In addition to moral exhaustion, these processes lead to the erasing of individuality: street advertising and other media persistently impose the desirable norms and standards of conduct on the citizens, resulting in peoples' gradual turn into an anonymous faceless mass, which leads a sharp drop in the quality of human life. With good reason, the progress of technology in capitalist countries have been criticized by representatives of Neo-Marxism, in particular, G. Marcuse, who believed that due to the technologies characteristic, industrial («late capitalist») society has painted itself into a corner of totalitarianism. According to the

scientist, technology in the conditions of capitalism contributes to the suppression of individuality and freedom; there is an alignment of people according the level of their «averaging», which facilitates the exercise of power and the domination of some over others [16]. Thus, society cannot but be concerned about such negative consequences on the way to realize the progressive development goal.

Being manifested in the political and legal sphere, the progress of science also generates a number of specific consequences. On the one hand, the improvement of technologies promotes an increase in the degree of transparency of the public system, democratization and freedom. For example, modern scientific achievements allow to conduct fair and transparent elections, control the activities of government structures by civil society and at the same time to reduce the costs of state administration financing. The latest scientific achievements can contribute to the legalization of shadow capitals and the improvement of the system of control over the public funds distribution. Automation and informational support of any economic processes (for example, the system of electronic public procurement) is able to prevent or minimize illegal business transactions, increase the transparency of the capital allocation, the use of goods and services of any origin and, thereby, to reduce the share of the of the shadow economy. For example, today possibilities for money laundering resulting from cybercrime are limited due to the need of transfer of funds stolen online to the «physical» world. According to Cisco, the ratio of the possibility of stealing and laundering illegal profits is 10,000: 1 [17].

On the other hand, science by means of digital technologies is able to provide the ruling circles with too dangerous tools for regulating the economic and political behavior of individuals; this can act as a means to manipulate the public opinion and can be used in the interests of the ruling elite. The threat of incorrect use of scientific achievements is growing significantly in authoritarian countries, where political and economic power is almost unlimited and concentrated in the hands of a narrow circle of people.

In addition, widespread dissemination of modern information technologies in the world has led to growing problem of cybercrimes, and one of the most dangerous economic forms of it is the violation of copyright law.

The importance of the effective legal protection of intellectual property is manifested in the fact that it is primarily a financial incentive necessary for investing capital in technological development. Accordingly, countries with underdeveloped copyright can not attract significant amounts of investment and technological flows, which, as a consequence, strengthen the stratification of countries in terms of production and sales of high-tech products.

The problem of copyright protection in the most pronounced form is manifested in the Internet, which is due, first of all, to the simplicity and speed of information placement in the worldwide network, in the absence of the need for mandatory authorization, openness an access to the use of electronic resources by virtually unlimited individuals. In such a way, the Internet network is gradually turning into a virtual market for the turnover and sale of products with copyright infringement. Today, the most common forms of copyright infringement are offenses related to the illegal distribution of counterfeit copies



of programs and works in digital form [18, 9], known as «computer piracy», which hinders the development of the world economy, IT innovations and the creation of new jobs. The average level of piracy in the world amounts to 42%, with the highest rates for developing countries [19], while US and Japan figure does not exceed 25-37%. Thus, the high level of economic development, significant scientific and technical potential, and the mechanism for legal protection of intellectual property is regulated, although it does not lead to avoidance of «piracy» as it allows to keep it at a sufficiently low level.

**Conclusions.** The above-mentioned analysis makes it possible to note that science as a factor of socio-economic development contributing to radical changes in all without exception the components of the social system, generates the following positive and negative consequences: comprehensively multiplies the productive forces of society, contributes to improvement of the management process, increases the level and quality of life, harmonizes the relationship of man with nature; at the same time, science and its development exacerbate a number of economic, social, political, environmental problems. In this regard, society faces the task of eliminating of the main threats generated by the influence of science on the social system and the acceleration of positive trends caused by the progress of science.

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## ENGAGEMENT IN THE SELECTION AND EVALUATION OF SUPPLIERS<sup>1</sup>

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**Annotation.** *The industry is constantly developing and the companies whether they are in the supplier or customer status have to face new challenges day by day. There are supplier companies that are struggling to keep up with this changing world. To most of the problems, the selection of the right supplier partner means the solution, but finding and selecting these partners often causes problems. The range of suppliers in today's world is quite wide and colorful. There are only a few who can satisfy all customer requirements. The question, however is who or which persons are in the background of the process. The study examined the topic of engagement during the selection and evaluation of suppliers according to the size of the enterprises.*

**Key words:** *selection, acquisition, engagement.*

**Introduction.** Recently, customer requirements have been changing, are changing and will change as the industry continues to evolve. The goal is not just only the delivery of the requested and ordered goods in time and providing them with the buyer, but also to fulfill some “small requirements” as well, which are associated with these demands. Today, it is not enough for the customers to be satisfied with the products or services. As the population's consumption habits become increasingly demanding, companies have to provide increasingly high-quality services (EYHOLZER and MÜNGER, 2004, LENTNER AND ANDRASSY, 2006.). The concept of supplier management can be defined through the supplier's relationships of a company, the development and management of the supplier base, and ultimately the efficient design of the supplier base (SIBBEL and HARTMANN, 2005).

Even some years ago, the supplier was considered as a potential opponent and were often circumvented during the constant price negotiations, which had negative consequences on the reliability of suppliers and finally resulted in high costs. Nowadays, more and more companies claim that price is only one of the many important criteria. However, it is primarily about the total performance of the suppliers. It is getting more and more important to choose the best and the most reliable supplier, it is as important as building a long-term and business relationship. To do this, the evaluation of suppliers is an essential tool (EYHOLZER, 2003).

**The process of suppliers selection.** The selection of the right suppliers is a strategic

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matter for the companies. In most cases, it is possible to make the suppliers competing, as usually several companies can produce the required product or service. The fact that every supplier could be replaced can force suppliers to produce a product that fully satisfies the needs of the buyers. From the point of view of the buyers, this competitive situation may also lead to the decrease of the purchase prices. (BEDZSULA et al., 2013). In a selection of the suppliers, the price is not the only decisive factor. It also has a significant importance that in the supplier's products the quality of the delivered product or service is realized, that is why further selection factors must be considered as well, such as for example, the competence of the organization, the development ability, the quality commitment, the quality system and its practical application. Based on their research, FAWCETT and MAGNAN (2002) also argue that besides the price, many other factors, such as the delivery volumes or deadlines should be taken into consideration, or in the case of existing suppliers, their previous performance could also be decisive (LUSCH and DUNNE, 1990) (LENTNER, Cs. 2015). What is more, we think, on comprehensive way the ability to continuous business operation is also important (LENTNER, 2013). The customer expects the organisation to have its own defined qualitative goals and in order to realize them, a continuous improvement in their system and organisation is required, because without the lack of goals there is no development.

For the domestic companies, obtaining the role of supplier means several advantages: they can acquire customers who are willing to order in large volume, pay correctly, and in some cases also provide technical assistance. However, it is not easy to obtain the supplier role: the quality is not a question of bargain, the customers have extraordinary requirements in the production/delivery schedules, flexibility, and the suppliers have to prove their suitability as well as the high level of their quality management system even before the order is placed. The lasting success cannot be based on the low prices of the suppliers, since the component-level suppliers can be replaced any time. From previous experiences, it can be seen that it is time-consuming to build up a stable supplier relationship: in the case of automotive industry investments, according to industry opinions, at least 1-2 successful years have to pass following the start of the productions, before domestic suppliers can join - today there are only a few domestic companies which can wait such long period - especially if their product range and partnership are not sufficiently diversified. While designing their new production site, several international car manufacturing companies plan to set up their own supplier park, where their partners have a chance to build their own plants, however, this is still not the general practice of most international companies which are looking for suppliers. So, most of the companies looking for potential partners have to rely on their own resources. According to the international and national experiences, the companies which employ at least 50 people, and their revenue reach the annual 500 million forints. have a chance to reach major supplier positions. However, in Hungary, in 2008, the last year before the crises, there were only 773, and 607 of them were found to have positive operating result, and 199 of

them were exclusively foreign-owned (KOZMA et al., 2001).<sup>2</sup>

**The goals and problems of the selection process.** It is getting more and more important for companies to find reliable partners for the long-term strategic cooperation. The task of purchasing in this case is, in conjunction with the quality, to select and monitor the performance of their respective suppliers and to continuously monitor and improve their performance. The customer expectations are in the centre of the quality and logistics, as well as the factors determining the competitiveness of products and services, such as price, quantity, delivery accuracy, choice, additional services related to the product, marketing features, customer satisfaction. (GYNGE-KOZMA, 2005)

The improvement, and the enhancement of the quality stand in the centre as main goal, such as cost reduction between the company and its supplier within the co-operation network. In order to achieve this, the processes between them need to be synchronized and coordinated. Regardless of the industry, the customer is always the most important partner of the company, and it will remain in the future as well. Long-term business success can only be achieved if the customers are satisfied and this is only possible, if concerted efforts are made to build and maintain good customer relationships. Customer Satisfaction and Customer Relationships are increasingly the subject of discussion (VOETH et al., 2005). The process of becoming a supplier lasts from one to one and a half year. In the current automotive industry, this process can be divided into two major lines. One of them is the German and the other one is the English line. In addition to standard ISO / TS 16949: 2009, the VDA volumes provide guidance in Germany, while the English version includes the relevant QS9000 volumes, in addition to ISO/TS 16949: 2009, although the specification itself has been abolished (CSÖKE, 2011). Customers' requirements are further enhanced by these.

At the beginning of the 90s, Suzuki was looking for suppliers on its own, but today it is changed and the potential suppliers are coming to Suzuki, where the automotive industry reference is an indispensable aspect (MÉSZÁROS, 2009).

The number of suppliers has risen sharply over the past 15 years. While at the end of the 90s Suzuki only had 38 suppliers, this number has reached 73 by 2010. This represented around 20% of the supplier's circle (KEMENCZEI, 2010). It can be seen that the companies seek to establish long-term strategic relationships with their suppliers, so selecting an optimal supplier requires serious responsibility and therefore a serious decision, since even a small mistake can lead the organization to a negative direction. The selection of the right supplier as a process involves qualitative and quantitative questions as well. In today's world, we have several suppliers who produce thousands of products for their customers, but there are also some suppliers who cannot meet the customers' expectations. In the light of these, a buyer can only meet their needs with multiple suppliers.

According to KEREPSZKI (2002), the selection has basically two problems (Figure

<sup>2</sup> The survey was carried out by Kopint Konjunktúra Research Foundation and Commerzbank and the Noer and Partners Office, which was created with the professional support of the German Chamber of Industry and Commerce (DUIHK) and its member companies.

1). On the one hand, it is a problem if all the suppliers are able to fulfil the requirements (quality, quantity, delivery, deadline, etc.) of the customer, since in this case the customer has only one task: to make a decision on the best supplier. So, if there is no limitation, there will be many „candidates” from which one has to be selected with which long-term business success can be achieved.



**Figure 1: Selection problems**

*Source: : Research of the author, 2017*

On the other hand, it may also cause some problems if there are limitations on the supplier side. In this case, it can happen that not one of the supplier is able to meet the requirements of the client, so the buyer must find and contract with another supplier to cover the needs. Researchers raised the possibility of co-operations to overcome this difficulty, which in their opinion means the possible merger of companies wishing to apply for the supplier status. Nowadays, expectations are harder than before, have become more severe, and in addition to this, the support provided by the multinational corporations has become less extended. Decades ago, it was easier to win a supplier status than it is nowadays. Companies who plan to become supplier companies are now thoroughly evaluated, tested and can only become partners if they can fully meet all the requirements. The level of requirement is characterized by German precision, Japanese quality and Chinese prices, which is difficult to meet, but many small and medium-sized enterprises can only imagine this way in order to survive (KÁLMÁN, 2007). There is a greater chance in the market for companies that have already proven their professional ability.

During the crisis, the number of suppliers changed considerably. Several companies went bankrupt, which resulted in important changes. The automotive factories have now more problems with the suppliers after the selection process. In addition to the previously discussed problems comes the challenge of transport, but they also have a lot of problems in the field of quality. In the background of the quality problems, in most cases there is the not proper understanding and the insufficiently thorough study of the requirements. In terms of requirements, suppliers do not pay attention to the fact that it is not only the technical drawing, which is important as the description of the customer requirements. The suppliers need to pay more attention to the specifications and their changes. Thus, it is well-known that buyers, especially car factories have their own internal regulations (e.x.: Q-Lastenheft), and their modifications are usually not followed by the suppliers, generating several problems this way.

**Case study.** Before presenting the research results, we considered it important to present the reasons and goals of the supplier selection process, thus providing an insight into a complex multi-stage process. However, the question is still who are standing in the background, who are setting up the criteria system, and who decide on the fate of a supplier company. The case study summarizes the result of 212 companies grouped by company size, which means that the research extended to 149 large companies, 42 medium-sized enterprises and 21 small companies. In the study, the names of the positions are presented as given by the respondents in the evaluation.<sup>3</sup>

**Large enterprises subsample's results.** In the study, 149 large companies participated nationwide. The positions mentioned in the Table 1, are provided by the companies, so on the level of this size of enterprises the positions of material management, purchase manager, strategic purchaser, commodity leader, project manager, SQA can be mentioned, and last but not least the area of supplier development, which plays a role to a smaller or greater extent in the suppliers' evaluation or selection.

Table 1

#### Positions important for the selection of suppliers for mid-size companies

Position of the companies	Respondents (N)	Division (%)
Material management	6	4
Procurement, purchasing	78	52,4
Strategic purchasing + SQD	28	18,8
Commodity leader and Supplier Development	1	0,6
Project manager	11	7,4
SQA	15	10,1
Supplier development	10	6,7

Source: Research of the author (2016), N= 149

According to the Table 1. the procurement is dealing with the 52,4% of the suppliers, meaning that they take care of the evaluation and the selection of suppliers. In many cases, it is often heard that the purchasing is responsible for the delivered quality, and the suppliers' performance, since they had the power to choose the supplier. Approaching the topic from this point of view, it can be seen that the quality assurance as a partner plays a role in the process. The percentage may be high, and in more than half of the companies it works like that, but this is not the optimal solution (start-up procurement + SQD). Group evaluation and selection takes place for only 18,8 percent of the companies, which means – following the above line of thought – that the strategic purchaser – who “selected” the given supplier – collaborates with the quality assurance manager of the

<sup>3</sup> Question: Is there a department/person in your company who deals with the selection and evaluation of suppliers? If so, what type of position does he/she have?



supplier, and is – because if the delivered products - on a day-to-day contact with the supplier.

Let's think about what it means exactly. This can also cause the basis of the suppliers' problems. The purchaser's job is to find the appropriate supplier for the company. What he will consider first is not the product quality but the existence of certificates, price, delivery time, geographic location and that the supplier is able to produce the product(s) requested by the buyer company. Let's suppose that the supplier has met all the criteria and entered the desired supplier base. The phase of initial collaboration begins, the orders come in, the buyer continually orders more and more quantities that the supplier's capacity could no longer accomplish and, due to this, some product quality issues may arise. The quality assurance or the supplier development were not involved in the process of the supplier selection, and therefore they are struggling with the progress of the process instead of the procurement. Altogether 4,7% of the respondents stated that procurement is responsible for the selection of the appropriate supplier, but quality is also involved in the process.

During the evaluation of the results it was surprising to read that for around 7% of the responding companies, the project manager is responsible for evaluating and selecting suppliers. Until now, there is no exact answer for the 'Why', since we have not encountered such a study in the domestic and in the international literature. Based on the results, we can say that for more than 52 percent of the large companies it is the procurement which deals with the evaluation and selection of suppliers.

**The result of the partial sample of mid-size enterprises.** Based on the evaluation, we can state that there is not much agreement concerning whose and which department's responsibility it is to select and evaluate the suppliers. Based on the results of the research, we can say that 33,3 percent of the respondents in this enterprise size listed this as the task of the purchase department. Almost similar results were recorded for the group what we call "SQ, QC, Q engineers", since there was no option to select this position in the questionnaire. We did not want to limit the question, so we gave free hand to the respondents, and let them decide the name of the positions. This group was given 28,6 percent from the 42 mid-size companies in the research (see Table 2.). Within this group, 8 companies (19,4 percent) reported that in the case of suppliers/products of critical significance in terms of quality, the QC manager or QC engineer deals with the issue, in the case of other suppliers, it is rather the purchase manager. The almost similar results can be explained by the fact that most probably, the professionalism necessary for fulfilling the task is lacking. We are speaking of mid-size enterprises. During the research, we did not ask specifically about the revenues of the companies, but our presumption is that it is of significant importance.

Unfortunately only a very low percentage of respondents reported on the involvement of the purchasing manager or SQE (11,9%), although this would be ideal, since the task of the purchasing department would be the selection of the adequate supplier, and the Q department (named with different positions) would be involved in the decision. One of the reasons for this is that for the new suppliers wishing to be included in the suppliers'



base, the audit will most probably not be conducted by the purchasing department but rather the quality management. Naturally, during the audit, aspects of quality management, purchasing and logistics must be considered. In the case of some mid-size enterprises (11,9%), it is the task of the commercial/logistics manager. Last but not least, the role of technical managers should also be mentioned, since a higher percentage (14,3%) was given to this position that the pair of purchase manager/SQE as listed to be the most important. Based on the results we can conclude, that in the case of mid-size enterprises, opinions greatly vary on the position, no outstanding results were recorded for any of them.

Table 2

### Positions important for the selection of suppliers for mid-size companies

Company position	Respondents (N)	Share in %
Purchasing	14	33,3
SQ, QC manager, QC engineer	12	28,6
Purchase manager + SQE	5	11,9
Technical director	6	14,3
Commercial/Logistics manager	5	11,9

Source: Research of the author (2016), N= 42

**Results of the partial sample of small enterprises.** The respondents from the small enterprises sector gave a clear answer to the question, since 19 % of them reported that it is the role of the dispatcher to select and evaluate suppliers. Let us not forget that we are dealing with companies of 10-49 persons. In this category we also included the family companies, or the start-up enterprises which grew out literally from a garage, and managed to reach a supplier status with outstanding product quality and logistics. Since we are speaking of small enterprises, the professionalism is not always 100% guaranteed, especially in the case of family enterprises where often adult-age offsprings also contribute with their workforce.

Table 3

### Positions important for the selection of suppliers for small enterprises

Company position	Respondents (N)	Share in %
Dispatcher	4	19
CEO	11	52,4
Business development manager	6	28,6

Source: Research of the author (2016), N= 21

As second in importance, the business development manager was mentioned (28,6%), which is easy to understand even by the name of the position. We probably speak here of a position similar to the purchasing manager in larger enterprises. 52,4 percent of the respondents in this sector reported that it is the role of the CEO to fulfill this task. (Table 3.).

**The role of purchasing in the selection of the suppliers.** The purchasing is a process which extends well beyond the simple buying of products or services. It also includes the planning and strategy of purchasing. The task of purchasing is the selection of the appropriate supplier, the conclusion of the contract, the continuous control and enhancement of the suppliers as well as the coordination with the various other departments of the company. The purchasing contributes to the results of the company through these activities. (MAJOROS, 1999). By purchasing we mean all activities, whose goal is to provide an organization with all the goods it needs to sustain its operations and is unable to produce itself. The task of the purchasing is also to guarantee the provision of various materials, equipments and services necessary for the operation of the company. An average industrial company spends 55-60 of its revenues on input materials, while in the case of a food processing company, this ratio can reach even the level of 75-80 percent. We can differentiate among the various materials purchase according to their use: production, service purchases or purchases for everyday use.

Among the task of the purchasing department, we can also mention, the enhancement of the performance of the logistical system through the punctual and quick provision, the improvement of the quality, the cost reduction opportunities. It also can have an important role in the innovation, since the appearance of a new material or component can make the products of company more innovative in the market.

The purchasing department can also serve as an important source of information, since it can provide information on new potential suppliers, new technologies and the competition characterising the suppliers' market. Besides the external information, the purchasing can also shape the image of the company: in the case of liquidity problems and issues with timely payment of suppliers' invoices, the suppliers might be reluctant to enter into contract with the company.

Table 4. shows the importance of the purchasing in the selection of the suppliers of the company (based on the results of the respondents)

Table 4

**The involvement of the purchasing according to company size**

	Small enterprises	Mid-size companies	Large enterprises
Purchasing	0	33,30%	52,40%
Purchasing together with th Quality management	0	11,90%	18,80%

Source: Research of the author (2016), N=212

As we could see in the case of the small enterprises, the purchasing has no specific role in the selection. The bigger the company size, the larger the involvement of the purchasing: in the case of mid-size enterprises, the importance of the involvement of the purchasing already reaches almost 33 percent, which means that for 33 percent of the mid-size enterprises, the purchasing department manages the evaluation and the selection of the suppliers. In the case of this company size, only 12 percent reported the involvement of the quality management together with the purchasing. In the case of large enterprises, the value is higher. For more than 52 percent, the role is fulfilled uniquely by the purchasing and for only 18.8 percent together with the quality management.

**Conclusions.** During the evaluation of the results, it became clear that with the decrease of the company size, we can record a decrease in the number of names of positions, meaning that in the case of large enterprises, 10 different names were given to the position<sup>4</sup>, in the case of mid-size enterprises, the number dropped to 5 and in the case of small companies and enterprises only 3 names were recorded in the questionnaire.

The goal, however, is the same in each cases: to find the most appropriate supplier. In the process of the selection of the supplier, the purchasing plays an important role. As mentioned above, the bigger the company size, the larger is the involvement of the purchasing department, but experiences also show that – even if it characterizes only a small proportion of the companies - the ideal would for the purchasing department to fulfill this task together with the quality management, avoiding the problems that might arise later.

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## THE ANALYSIS OF THE ACCOUNTING PRINCIPLES OF A GOING CONCERN THROUGH THE HUNGARIAN MUNICIPAL COMPANIES

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**Annotation.** *The role of the local governments is to produce public goods and to provide public services for the population. The local authorities can delegate the production of public goods to municipality-owned companies. The municipality-owned companies are managing, holding and developing municipal assets and they provide services that are essential for the people. With the help of three bankruptcy models (the models of Altman, Springate and Miklós Virág) the study examines what percentage of the municipality-owned companies would have come to bankruptcy during the years of 2006, 2011 and 2013 under normal market conditions. In the course of the research the bankruptcy models were applied to the budgetary business entities instead of the usual profit-oriented companies. Although making profit is not the goal of the municipality-owned companies, they also have to ensure that they meet the requirements of the sustainable management in order to fulfil public service duties.*

**Key words:** *local government, municipal management, municipality-owned companies, bankruptcy models, public service duties.*

**Introduction.** According to the Fundamental Law of Hungary the properties owned and managed by local governments shall be national assets (Lentner, Cs. 2014a). The municipal property solely serves for the performance of the compulsory duties of the local government, meaning that their elements are partially non-marketable and partially restrictedly marketable (Gasparics, E. et al., 2015). The local governments are obligated to maintain their assets and to ever increase the level of services they provide. The local governments can be characterized by a non-profit cost management, and if we intended to classify these organizations based on their typical form of management and match them to the types described by the professional literature then we would have to establish that due to their special activities the local governments do not belong to any of the basic types (Zéman, Z. 2017). During their operation the local governments cannot produce a loss (Zéman, Z. 2015).

When evaluating the performance of the companies it is important to consider whether an enterprise will be able to maintain its operation in the future. The principle of a going concern is also particularly taken into consideration by standard 1 of the International Accounting Standards (IAS), which is part of the European Union legislation. On top of that the International Standards of Auditing pay serious attention as well to this accounting doctrine, since this provision is meant to support the survival

of the enterprises. The objective measurability of the principle's effectiveness is based on the financial reporting of the enterprise, which issues a certificate regarding the enterprise being able to fulfil its obligation to make payments both in the short and long term. These indicators can be derived from the annual reports and operational parameters of the companies through advanced measuring methods with the help of bankruptcy models and via objective analysis. In the case of the enterprises operating in the public sector the principle of a going concern is also important to determine whether they are capable of carrying out their public service duties or not (Lentner, Cs. 2015a). If the budgetary business entities and the companies performing public service activities cease to be a going concern, it could have an adverse effect on strong and direct social interests because they were established to provide public services and to produce public good (Lentner, Cs. 2014b). In the municipal system developed following the end of communism the local authorities were given flexibility in the organizational solutions of how to administer their public obligations. The local governments of towns with county status entrusted their assets and the execution of organizing public services to companies. If the services are provided by their own municipality-owned companies, it is crucial for the local governments that such companies are cost-effective, and in addition they utilize and increase the entrusted assets appropriately and minimize the risks deriving from excessive indebtedness (Hegedűs, Sz. – Széles, Zs. 2014; Sági, J. 2014).

The two main reasons behind establishing municipality-owned companies:

- During the transfer of wealth after the end of communism the asset management right of public utility companies was converted into ownership, which then later was increased by the handover of further public utilities (Vigvári, A. 2007).
- As part of the local governments' obligation to exercise duties – to the impact of the significant public service management theory of our era, the New Public Management paradigm – the local authorities are responsible for the organization of public services and not for directly carrying out a certain public task (Farkas, Sz.– Zsugyel, J. 2014; Vigvári, A. 2009). Several municipality-owned enterprises started their operation due to the delegation of compulsory and voluntarily imposed duties of the local governments, and not just in the public utilities sector (Kopányi, M. — Hertelendy, Zs. 2004).

**Material and method.** In the course of the research we examined the application of the bankruptcy models among the municipality-owned companies. A common feature of all three bankruptcy models is that they use discrimination analysis. The methods of Altman (1968) and Springate (1978) were the first multi-variant models, while in Hungary Professor Miklós Virág (1996) was the first who made such calculations and he did put one of his models into practice. On the basis of experience we conducted the analysis in terms of three years. These years were 2006, 2011 and 2013. They were chosen because 2006 was the last year prior the financial crisis. In the wake of the crisis the risk of excessive indebtedness and becoming inoperative did not just hit the classic profit-oriented companies but the budgetary entities too (Lentner, Cs. 2013). After 2010 a new public financial system was established in Hungary in order to manage the causes of the crisis (Lentner, Cs. 2015b). In 2011 there was an inflection in the municipal

corporate world, namely that the drastic rise of the number of companies stopped and as a consequence the asset value was restructured. The full state consolidation of the volume of debt that had been accumulated by the Hungarian local governments between 2002 and 2008 took place between 2011 and 2014 (Lentner, Cs. 2015c; Lentner, Cs. 2014c). In the year 2013 the sector's volume of debt rose record high by crossing 1% of the GDP, and additionally to the transfer of wealth at the water utilities the debt of the companies exercising public tasks was increased by nearly 20 billion HUFs (Hegedűs, Sz. 2016). Moreover, the official price regulation of the public utilities also happened in 2013 (Lentner, Cs. 2015a).

### Analysis.

Table 1

### Z-scores of the examined bankruptcy models

		Altman 6	Altman 11	Altman 13	Springate 6	Springate 11	Springate 13	Virág /6	Virág /11	Virág /13
N	Available	199	184	342	196	343	361	193	334	345
	Missing	208	223	65	211	64	46	214	73	62
Per - centilis	5	0,00	-1,07	-0,85	-1,42	-2,97	-4,29	0,82	0,15	0,22
	10	0,34	0,00	-0,08	-0,38	-1,06	-1,28	1,39	0,74	0,76
	15	0,59	0,18	0,22	-0,08	-0,64	-0,57	2,03	1,38	1,53
	20	0,82	0,31	0,56	0,11	-0,42	-0,30	2,50	1,85	1,93
	25	1,09	0,55	0,84	0,19	-0,20	-0,05	2,79	2,49	2,59
	30	1,35	0,92	1,03	0,27	-0,07	0,13	3,04	2,90	3,21
	35	1,67	1,24	1,43	0,32	0,17	0,22	3,48	3,41	3,58
	40	1,84	1,37	1,71	0,45	0,27	0,33	3,86	3,83	4,02
	45	2,07	1,59	2,06	0,50	0,38	0,39	4,35	4,46	4,49
	50	2,31	1,92	2,28	0,60	0,49	0,53	4,72	4,77	4,82
	55	2,54	2,24	2,57	0,66	0,63	0,62	5,11	5,27	5,45
	60	3,04	2,61	2,84	0,83	0,83	0,81	5,33	5,75	6,00
	65	3,29	2,87	3,20	0,94	0,96	0,99	6,15	6,26	6,46
	70	3,67	3,11	3,58	1,02	1,18	1,13	6,91	7,33	6,98
	75	4,08	3,65	3,99	1,22	1,37	1,32	7,59	8,26	7,61
	80	4,35	4,01	4,47	1,38	1,56	1,50	8,52	9,79	9,31
	85	5,08	4,48	5,51	1,53	1,82	1,67	9,87	13,97	10,94
	90	6,37	5,23	7,12	1,84	2,42	2,16	11,86	17,98	16,72
	95	9,11	6,19	10,71	2,85	3,39	2,89	22,45	31,93	23,80

Source: Own research, 2017



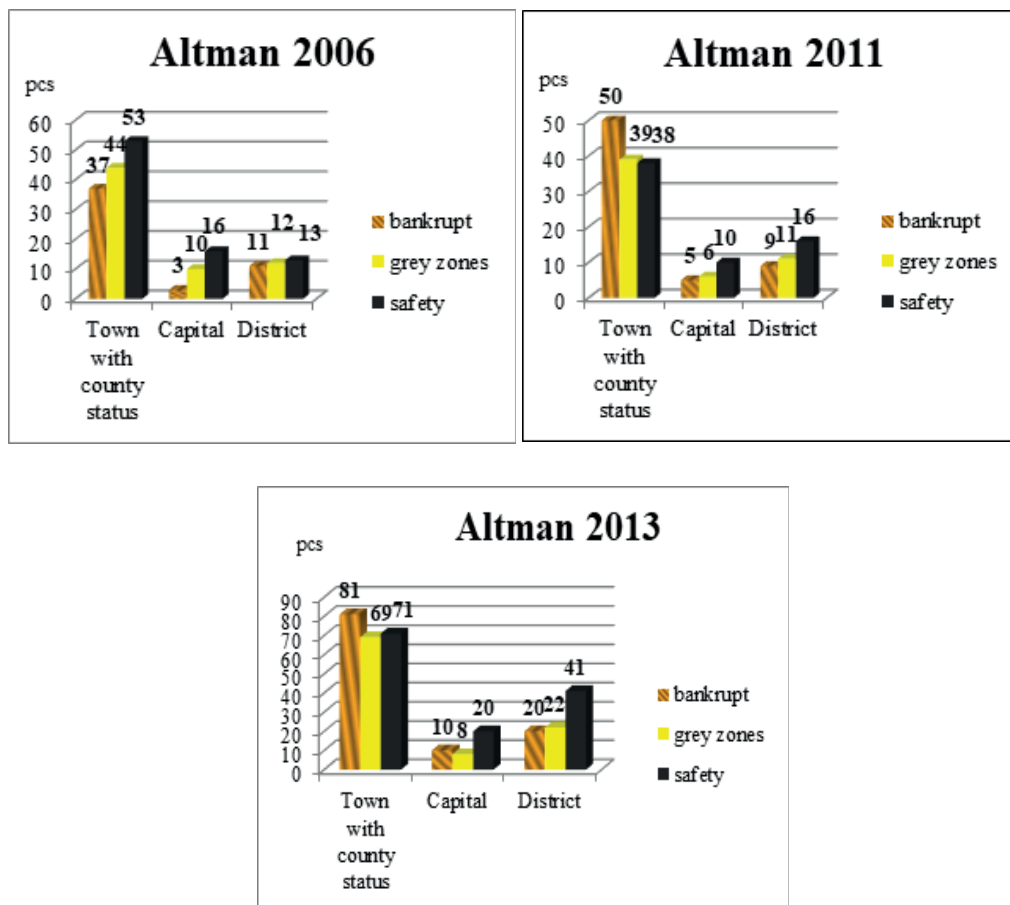
The first table shows the descriptive statistics of the analysis conducted of the three bankruptcy models and of the three years. In 2006 the highest score of the worst-performing municipality-owned companies – that accounted for 10% of the total examined companies – was 0.3422 according to Altman's method, meaning that the companies with the worst Z-score were lower than 0.3422 and therefore they were highly prone to bankruptcy. By 2011 this value had dropped to -0.754 and by 2013 it was down to 0.0038, given that the model accepts the negative Z-scores in extreme situations. On the basis of Altman's bankruptcy model, with regard to the index numbers of the companies in 2006 40% of them fell into the safety zone, whereas in 2011 only 30% of them and in 2013 only 35% of them belonged to the safety category. The Altman model works with two values, between of which is the grey zone that is marked on the diagram with grey. This is where 35% of the corporate sample could be found in 2006, while this ratio was 30% in 2011 and 20% in 2013. It cannot be clearly determined of these companies to which group they belong. However, according to Springate's model, in 2006 10%, in 2011 30% and in 2013 20% of the examined companies could be classified under the bankrupt category. On the other hand the method of Miklós Virág confirms that 30% of the examined statistical population ended up being in the bankrupt zone in two of the years, while the score was higher in 2006. As it is clear from the table, two of the models verified that the index numbers of the upper 10% of the best-performing companies reached the highest scores in 2011. It can be stated that the three models led to quite different results. It is noticeable that the closest results came from the newer models, the models of Miklós Virág and Springate. The data reveals that under normal market conditions a significant proportion of the companies would be in a situation close to bankruptcy in all the various models. This is because their revenue side highly depends on the municipal resources, and this is especially true in the case of the mainly non-profit enterprises established between 2006 and 2011 for the sake of calling off tenders.

In the second part of the article we introduce the differences between municipality categories (town with county status, capital and district).

Figure 1 highlights how many companies got themselves into the bankrupt, grey and safety zones in the three examined years, considering the municipality categories.

If we take a look at the municipality-owned companies of the towns with county status we can see that in 2011 and 2013 the number of the bankrupt enterprises grew, while in the case of the enterprises operated by the Municipality of Budapest we cannot discover any substantial changes in relative terms. On the other hand the number of the district municipalities' companies falling into the safety category increased in 2013. If we examine the three years then we can establish that the municipality-owned companies of the towns with county status were mostly placed into the bankrupt category or into the grey zone on the basis of Altman's method, and the number of companies in these two categories was significantly higher than the number of companies in the safety category.





**Figure 1: Companies belonging to the bankrupt, safety and grey zones with respect to the municipality categories, based on Altman's model (data in pcs)**

*Source: Own research*

Looking at the variables under the Springate method (Figure 2.) we can see that it shows a considerably more optimistic picture than Altman's method. By 2013 the number of the bankrupt municipality-owned companies of the towns with county status had dropped substantially. While based on the Altman method in all three years more enterprises belonged to the bankrupt and grey zones than to the safety category, according to Springate's model in 2006 more than 68%, in 2011 more than 69% and in 2013 more than 84% of the examined municipal companies of the towns with county status could be placed into the safety zone.

On the basis of Figure 3 it can be stated that the method of Miklós Virág also supports the Springate model. Although by 2013 the number of bankrupt enterprises had risen among the municipal companies of the towns with county status, but the number of companies in the safety zone was significantly higher. According to Altman's method

the number of companies belonging to the bankrupt and grey zones was quasi equal to the number of companies in the safety zone in the cases of enterprises owned by the Municipality of Budapest or the district municipalities. However, it can be asserted that this has not been confirmed by the methods of either Springate or Miklós Virág (1990). The safe enterprises had a higher percentage among all the examined enterprises in the case of both the companies owned by the Municipality of Budapest and the companies owned by the district municipalities.

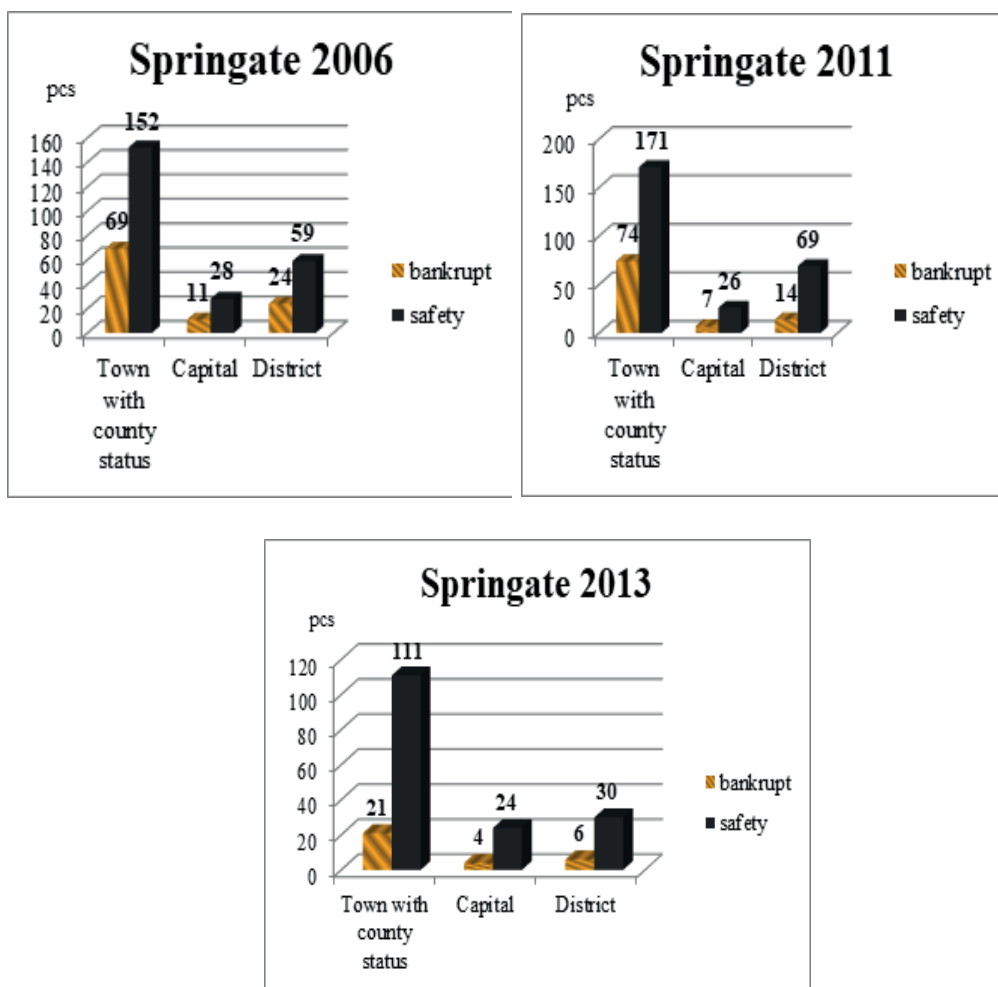
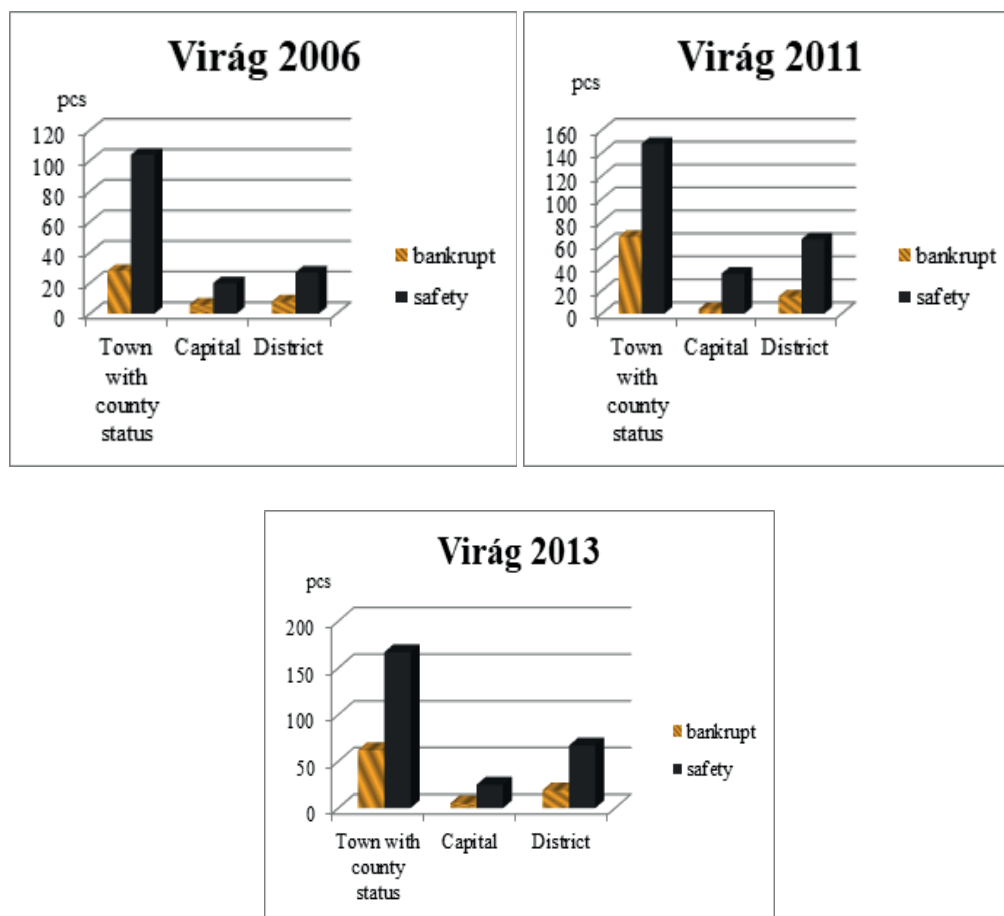


Figure 2: Companies belonging to the bankrupt, safety zones with respect to the municipality categories, based on Springate's model (data in pcs)

Source: Own research



**Figure 3: Companies belonging to the bankrupt, safety zones with respect to the municipality categories, based on Miklós Virág's model (data in pcs)**

*Source: Own research*

**Conclusions.** The three models showed fairly different results during the descriptive statistical analysis. The closest results to each other came from the more recent models – the ones of Miklós Virág and Springate. On the basis of Altman's method it has been determined that under normal market conditions a considerably high percentage of the companies would be in a situation close to bankruptcy in the various models. The reason for this is that their revenue side highly depended on the municipal resources, and it was especially true at the mainly non-profit enterprises established between 2006 and 2011 for the sake of calling off tenders. When examining the classification by municipality categories, it can be observed that Altman's method painted the most pessimistic picture, while the methods of Springate and Miklós Virág showed nearly the same results in relative terms. While based on Altman's method the municipality-owned companies of the towns with county status were typically placed into the bankrupt or grey zones,

according to the methods of Springate and Virág in all three municipality categories the proportion of the safe municipal companies exceeded the percentage of the bankrupt enterprises. Nevertheless, the bankruptcy models don't always predict the future, since the state and the local governments do not let their enterprises engaged in public service duties to go bankrupt.

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## **PUBLIC ADMINISTRATION**

### **LOCAL GOVERNMENT AUTHORITIES OF THE II COMMONWEALTH OF POLAND AS SUBJECTS FOR IMPLEMENTING THE STATE RELIGION POLICY IN RELATION TO THE ORTHODOX CHURCH**

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**Annotation.** *The article analyzes the powers of local governments as subjects of the state religious policy implementation regarding the Orthodox Church in the II Commonwealth of Poland. The lowest level of administration was carried out by county parishes headed by the starostas. The voivodship authorities in their heads administered the voivodships by the governors. The special voivodship administration had a separate structure, which included the Department of Religious Confessions and Public Education. It was proved that the voivods and the administrative apparatus of the Voivodship departments actively interacted with the police, the prosecutor's office, district chiefs, and controlled political, economic and religious life.*

**Key words:** *Poland, the Orthodox Church, state policy, local government, voivodship administration, starosta.*

**Formulation of the problem.** November 11, 1918, J. Pilsudski was released from German prison, arrived in Warsaw, proclaimed the restoration of the Polish state and became its interim leader. The government appointed by it issued a decree "On the supreme representative power of Poland" on November 22. The Polish Republic became the state of the titular nation, the dominant Roman Catholic denomination and a significant number of national minorities (Ukrainian, Jews, Germans, etc.). Ukrainian lands in the II Commonwealth - Eastern Galicia, Volyn, Kholmshchyna, Podlasie and part of Polissya - accounted for about a third of its territory. According to the All-Polish census of 1931, there were 8.8 million people living in these lands, including Ukrainians, according to various estimates, there were 4.4 to 5.5 million people, Poles - almost 2 million, Jews – 0.9 million [29, p.265]. Most of the "Polish" Ukrainians lived in the countryside and were Orthodox or Greek Catholics. Features of the confessional situation identified one of the tasks of the authorities - the settlement of relations between the state. The relation of the central administration to the eastern regions was different, which influenced the state religious policy, which was implemented through the activities of local governments.

The purpose of the article is to analyze the activity of local authorities as subjects of the state religious policy implementation regarding the Orthodox Church in the Second Commonwealth (1918-1939).

**Analysis of recent research.** Public administration in the eastern provinces of the Second Commonwealth, in particular the functions and powers of local governments,



was studied by Polish authors M. Brunck, Y. Hirzhevsky, T. Matsievsky, V. Medretsky. Ukrainian scholars T. Pashchuk and Y. Kramar analyzed the activities of state authorities and the administration of the Volyn Voivodship, and Y. Vovk - the state policy of the Second Commonwealth on Christian churches in 1918-1926. At the same time, implementation of state policy by the local authorities regarding the Orthodox Church was not specifically was studied.

**Presenting main material.** Local governments dealt with the administration of religious issues in the regions of the Second Commonwealth. In the years 1919-1920, their structure and functions changed several times, due to the formation of borders and military actions in the eastern and central regions of the country. Thus, the formation of local executive bodies in the Lviv, Stanislav, Ternopil and Volyn Voivodeships ended only during 1920-1921.

The state administration at the provincial level (official name - general or political administration) had a two-level structure. The authorities of the first instance were the district starostats, headed by the starostas, and the second - voivodship headed by the governors [4, p. 95-100]. The latter represented the central authority in the region [10], and its credentials in the field of confessions until 1921 were not clearly outlined; they were administered through established special departments in voivodship management, such as the Department of Confessions of the Ministry of Religious and Public Education (hereinafter referred to as the MRPE) [2, p. 12]. The Voivod was able to inform the central administration about the violation of the rules of worship by the Orthodox priests, in particular their conduct outside the parish [1, p. 265]. The special administration of the voivodships had a separate structure consisting of military, justice, finance, postal and telegraph departments, agricultural reforms (until 1932), religious denominations and education, industry and trade, communications, and social security [7, p. 51].

The Constitution of 1921 of the Polish Republic consolidated the principle of decentralization - subordination of lower level state administration bodies to higher-level bodies [26]. However, in the eastern regions, the voivods minimized the role of local self-government bodies in the leadership of the province; in particular, their instructions could be abolished based on the fact they did not comply with the political course of Warsaw [8, p. 162]. Voivods were authorized to correspond with the General Prosecutor's Office [2, p. 54].

The bodies of the administrative authorities of the first and second instance actually acted as mediators in the religious issues with the MRPE, which provided supervision over them. Such a division of powers had negative consequences: it did not allow local authorities to make decisions on their own, taking into account the specifics of the region, making it impossible to react quickly to a change of situation, retarding activity through correspondence [20, p. 572].

Warsaw's policy on eastern regions was characterized by selectivity. In particular, in January 1921, the Ministry of Internal Affairs (hereinafter - the MIA) emphasized that the question of Orthodox and Jewish religions had a political subtext, therefore all measures of the bodies of the first and second instance should take into account

the recommendations of this department [5, p. 28-29]. Note that issued by the MRPE "Provisional Regulations on the State's Attitude to the Orthodox Church in Poland" (1922) gave new levers of influence on the Orthodox Church in Poland (hereinafter - OCP) to the executive power subordinated its activities to the interests of the state. This MRPE initiative was supported by the Presidium of the Polesie Voivodship, which expressed its confidence in their implementation as soon as possible [14, p. 55].

The highest administrative authority of the voivodships in the eastern regions of the Second Commonwealth were Lviv, Stanislaw, Ternopil and Volyn Voivodship Departments. The first three were created based on the law "On the temporary organization of the administrative authorities of the second instance (voivodship)" of December 3, 1920 [11], and the last - the law "On the normalization of the legal and political state of the lands annexed to the territory of Poland..." of February 4, 1921 [21] and orders of the government. Voivodship departments were headed by governors appointed by the head of state. The powers of the governor and voivodship departments were determined by a government order of March 21, 1921 [12; 13]. Voivodeship administration was subordinated to almost all regional government institutions: district starostas, police, magistrates, etc. [24, p. 61]. Departments of self-government, public-political and general were subordinated to the Ministry of Internal Affairs, and the rest - profile ministries [23, p. 26]. For this purpose, voivodship authorities co-operated with the Ministry of Internal Affairs in the church-religious issues [19, p. 39]. At the same time, the voivods provided legal protection for the Roman Catholic Church and controlled the implementation of state orders by other confessions [3, p. 22].

The structure of the voivodship administration allowed influencing maximally all spheres of social life, and, it would promptly suppress them in the event of a discontent among the local population. For effective management at all levels, preference was given to Polish-born employees or to persons who were loyal to the Polish authorities [16, p. 100].

In order to implement certain areas of state policy, voivodship departments set up branch departments, in particular, religious affairs departments supervising parishes and religious communities. In the Lviv voivodship, this department was created in September 1921 by the decision of the Presidium of the Voivodeship Administration [17, p. 1]. MRPE Minister appointed its head and employees from among the graduates of the law schools [14, p. 14-15]. This department cared for the activities of all church denominations and contributed to the implementation of the policy of patrolling the Ukrainian population of the eastern provinces [17, p. 1]. Therefore, in 1922, the officers of the department contributed to the confiscation of Ukrainian-language church books published in the printing house of the monastery Vasilian-Unyits [25, p. 2-38]. At the same time, they monitored religious preferences and public opinion of the inhabitants in the Lviv province, prevented their transition from Greek-Catholic confession to the Orthodox. At the same time, MRPE regularly sent circulars to Voivodeship departments with detailed recommendations on ensuring the influence of state institutions on Orthodox believers and priests [27, pp. 15].

An important means of implementing the state confessional policy was the correspondence between the voivodship departments for religious affairs and parishes, leaders of religious communities and district chiefs. By correspondence approved budget estimates and lease contracts of parishes, considered a request for state subsidies by priests, members of their families, as well as widows and orphans [28, pp. 1-3]. Orthodox priests could, normally, receive subsidies only with the consent of the voivods [22, ark. 1-3]. Monthly, voivodship departments received information from the district starostas about the prevailing attitude among the faithful, while at the same time they sent the last various requests or orders to receive additional information about the parish, etc. [6, p. 102]. The reports of the county starosta concerning the religious life of the region and the activities of the Orthodox priests were sent to the MIA. At the same time, in the voivod reports usually expressed the recommendations of the central administration on certain areas of confessional policy [30, p. 98].

Departments for Religious Affairs of Voivodship Departments provided an audit of the economic activity of church and monastic possessions of the OCP, which allowed confirming the existence of profits from economic activities, the lease of real estate and the conduct of religious ceremonies. Since church authorities (episcopal, monastic, parish) have sometimes abandoned their own economic initiatives, departments of religious affairs of voivodship departments took the initiative to conclude, on their behalf, contracts for the lease of immovable property or land with Polish or foreign entrepreneurs for the purpose of obtaining profits. At the same time, voivodship administrations carried out administrative patronage of church ordination through departments on religious affairs [17, p. 1-2].

During the interwar period, there were reorganizations in the structure of Voivodship departments. For example, the Department for Religious Affairs of the Stanislav Voivodship Administration, which functioned in 1925, was reorganized into a subdivision on religious affairs of the presidia department, and soon entered the structure of the administrative department, in 1935 - to the political and national subdivision of the political department of the voivodship administration [23, p. 26]. In addition, Voivodship Councils acted as collegial advisory bodies at the governors, consisting of county governments representatives [7, s. 51].

The apparatus of the Voivodeship departments was formed from among persons entrusted to the Polish state. For example, the majority of employees in Volhynia came from the number of demobilized troops of the Polish Army: in 1923, out of 283 servicemen of the Voivodeship Administration, 42 persons (14.8%) were former military, and 38 were older Police officers, 21 persons (55.2%) went to military service [9, p. 93]. Some of the managers were migrants, Poles from Ukraine and representatives of the UNR emigration (officers and former government officials) [15, p. 176-179].

In counties, administrative functions were concentrated in the hands of the starostas, whose competence was attributed to religious issues [17]. The starostas were appointed by an interior minister, although they were subordinated to the voivodship. The starosta, as the representative of the state power in the county, headed the general and special

administration [23, p. 49]. In 1932, voivods were introduced in cities with a population of more than 75 thousand persons.

Consequently, in the Second Commonwealth, the state policy on the Orthodox Church was implemented by the Voivodeship authorities and the starostas. The administrative function of these bodies was limited geographically, and they almost did not affect the adoption of appropriate decisions at the highest level. Voivods and the administrative apparatus of the Voivodship departments actively interacted with the police, prosecutor's office, district starostas, and controlled political, economic and religious life.

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## **PHILOSOPHY AND THEOLOGY**

### **СПЕЦИФИКА ФУНКЦИОНИРОВАНИЯ УАПЦ В 90-х гг. XX в.: РЕЛИГИОВЕДЧЕСКАЯ ПОСТАНОВКА ВОПРОСА**

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***Zaporozhets V. Specifics of the functioning of the UAOC in the 90s. XX century: religious study of the question.***

**Annotation.** The article highlights the main aspects and specific features of the UAOC functioning during the epoch-making of Patriarch of Kyiv and all Rus'-Ukraine Dymytriy (Yarema). The author identifies two periods in a given period, namely 1993-1997 and 1997-2000. The first, according to the researcher, is related to the UAOC institutionalization in the context of a dialogue with the UOC-KP, and the second is due to the stable existence and growth of the church due to the increase in the number of clergy, temples and dioceses.

**Key words:** UAOC, Patriarch Dymytriy (Yarema), UOC-KP, Orthodoxy, Ukraine.

Актуальность темы нашего исследования обусловлена тем, что в украинском обществе все больше ощущается значимость религиозных организаций в общественной жизни. Особенно мощно это стало проявляться вследствие Революции Достоинства и вооруженного конфликта с РФ, который сейчас происходит на востоке Украины. Религиозные организации оказались в ситуации, когда нужно проявить свою четкую гражданскую, национальную позицию относительно событий, которые разворачивались в нашей стране в 2013-2014-х гг. Поэтому сейчас становится все более целесообразным анализ истории и функционирования традиционных религиозных течений в украинском социуме. Это безусловно, касается и Украинской автокефальной православной церкви (далее УАПЦ).

Стоит отметить, что хотя имеются в научной литературе исследования по истории и современности УАПЦ Н. Беликова [1], власовское [2], А. Воронина [3], Ю. Линника [4], В. Еленский [5], в Петрушко [6], Л. Прокопчук [7], Д. Степняка [10] и других, однако в них фактически отсутствует целостный анализ особенностей функционирования данной религиозной конфессии в 90-х гг. XX ст.

Следовательно целью предлагаемой статьи является освещение эволюции внутренней институализации УАПЦ в последнее десятилетие XX века.

Прежде всего стоит отметить, что когда состоялась кончина Патриарха Мстислава (Скрыпника) в 1993 г. в юрисдикцию Украинской Автокефальной Православной Церкви вернулось только два архиерея УАПЦ, а именно архиепископ Львовский Петр (Петрусь) и епископ Белоцерковский и Уманский



Михаил (Дуткевич). Перед этим, чуть раньше, в декабре 1992 г., архиепископ Петр (Петрусь) распоряжением Патриарха Мстислава (Скрыпника) был назначен на одну из ключевых должностей в церкви, а именно управляющим делами УАПЦ. Данное событие предусматривало фактическое руководство им УАПЦ в тот период, когда первосвященник был за пределами Украины.

Поэтому вполне логичным было то, что после смерти патриарха Мстислава *de-jure* и *de-facto* временно возглавив УАПЦ архиепископ Петр (Петрусь) приступил к увеличению высшего церковного духовенства путем замещения вакантных епархий, а соответственно проведения новых хиротоний в епископский сан. Так, летом 1993 архиепископом Петром (Пе) и епископом Михаилом (Дуткевичем) состоялась хиротония двух церковных иерархов – епископа Луцкого и Волынского Феофиста (Пересада) и епископа Харьковского и Полтавского Игоря (Исиченко).

Вместе с тем следует отметить, что в 1993 году в Украинской православной церкви США и Диаспоры (УПЦ США и Диаспоры) на место покойного патриарха Мстислава был избран митрополит Иринупольский Константин (Баган). Новый предстоятель, в отличие от предшественника, взял курс на дистанцирование от УАПЦ и одновременное сближение с Вселенским Патриархатом. Постепенно уже весной 1995 Константинополь принял УПЦ США и Диаспоры на правах митрополии в свою юрисдикцию.

Через данную ситуацию которая сложилась, высшее церковное духовенство УАПЦ было вынуждено выбирать самостоятельно патриарха Киевского и всей Украины без епископата американских епархий Украинской Автокефальной Православной Церкви (то есть от УПЦ США и Диаспоры). Именно протоиерей Владимир Ярема, по мнению тогдашних церковных иерархов УАПЦ, был наиболее подходящим на эту должность. В соответствии с этим в августе 1993 года был пострижен в монашество с именем Димитрий, а уже 5 сентября того же года был рукоположен в епископский сан.

14 октября 1993 состоялась интронизация епископа Димитрия (Ярема) в сан патриарха Киевского и всей Украины. Чин произошел после того как 7 сентября 1993 на Втором Поместном Соборе УАПЦ был избран патриарх Димитрий (Ярема).

Первоочередными своими задачами новый Предстоятель УАПЦ видел не столько в межцерковном векторе, сколько во внутренней институционализации. Поэтому он начал решать проблемы, которые были связаны с юридическим статусом и административным устройством УАПЦ.

Дело в том, что в то время, а именно с июля 1992 года УАПЦ не имела официальной государственной регистрации, что вызывало существенное ограничение ее религиозной деятельности. Дилеммой было то, что Совет по делам религий Украины в 1992 г., провела регистрацию Киевского Патриархата с признанием за ним правопреемства от УАПЦ, однако это не было воспринято ни одним из первоиерархов УАПЦ, ни Мстиславом (Скрыпником), ни Димитрием (Яремой).

В соответствии с этим Предстоятели УАПЦ пытались получить повторную

регистрацию Устава церкви в редакции 1990 года, однако, к сожалению, их усилия были напрасными. Это было обусловлено, в первую очередь, тем, что тогдашняя власть Украины оказывала всяческую поддержку Киевскому Патриархату, тем самым специально задерживая, а затем усложняя процедуру регистрации УАПЦ. Только летом 1995 года был наконец официально зарегистрирован Устав УАПЦ.

В данном контексте следует отметить, что в этот же год стали проявляться тенденции к сближению УАПЦ и УПЦ КП с перспективой в будущем объединения их в единую церковную организацию. Об этом было устно договорено между Предстоятелем УАПЦ патриархом Киевским Димитрием (Яремой) и тогдашним Предстоятелем УПЦ КП Патриархом Киевским Владимиром (Романюк).

Одним из главных условий объединения два первоиерархи видели в том, чтобы сложить с себя все Предстоятельские полномочия и избрание совершенно нового патриарха Киевского и всей Украины. Однако вследствие внезапной смерти патриарха Владимира (Романюка) в июле 1995 г., фактическое руководство УПЦ КП перешло к местоблюстителю патриаршего престола, а именно к митрополиту Киевскому Филарету (Денисенко).

В это время для многих стало очевидно, что митрополит Филарет видит свое будущее в качестве нового Предстоятеля УПЦ КП в сане патриарха Киевского и всей Украины. Однако деспотический характер Местоблюстителя Патриаршего престола отталкивал от него многих последователей Киевского Патриархата и крайне осложнял перспективы объединения УАПЦ и УПЦ КП в единую поместную Церковь.

Обсуждение сложившейся ситуации произошло на расширенном Архиерейском Соборе УАПЦ, проходившем 12 октября 1995 г. Этот Собор принял решение обратиться с официальным письмом к Киевскому Патриархату и призвать митрополита Филарета (Денисенко) к отводу своей кандидатуры с гарантиями неопределенного сложения полномочий и Предстоятелем УАПЦ Патриархом Киевским Димитрием (Яремой). Однако митрополит Филарет проигнорировал как уже существующие договоренности между патриархами УАПЦ и УПЦ КП, так и обращение Архиерейского Собора УАПЦ. В конце-концов, в противовес всему 20 октября 1995 г., он созвал Поместный Собор УПЦ КП, на котором был избран новым ее Предстоятелем в сане патриарха Киевского и всей Руси-Украины.

Такая ситуация вызвала два момента:

- отложило на неопределенный срок перспективу объединения УАПЦ и УПЦ КП;
- много противников этого избрания из числа последователей Киевского Патриархата в знак своего протеста вообще перешли в юрисдикцию УАПЦ.

Среди иерархов УПЦ КП, перешли в епископат УАПЦ из-за вышеназванной причине, оказались следующие лица: митрополит Галицкий и Ивано-Франковский Андрей (Абрамчук), архиепископ Тернопольский и Буцацкий Василий (Бондарчук), епископ Нежинский и Брацлавский Роман (Балашуком), епископ Хмельницкий и Каменец-Подольский Мефодий (Кудряков). В результате присоединения

вышеназванных церковных иерархов численность церквей УАПЦ соответственно и увеличилась почти вдвое (с 616 до 1209).

В контексте увеличения канонической территории УАПЦ летом 1996 г. по благословению патриарха Димитрия (Яремы) состоялось создание в пределах Российской Федерации автономной структуры данной религиозной организации, получившей наименование Русская Истинно-Православная Церковь (РосИПЦ). В том же году иерархами УАПЦ для РосИПЦ были рукоположены новые церковные иерархи, а именно епископ Московский и Коломенский Иоанн (Модзалевский) и епископ Санкт-Петербургский и старорусском Стефан (Линицкий).

Однако эта часть УАПЦ недолго просуществовала в ее составе. Уже в 1997 г. от Русская Истинно-Православная Церковь полностью отделяется от УАПЦ. Протестуя против такого решения, принятого большинством епископата РосИПЦ, архиепископ Московский и Коломенский Иоанн (Модзалевский) покинул данную религиозную организацию и перешел непосредственно в подчинение патриарха Димитрия (Яремы).

Возвращаясь к тогдашним украинским церковным реалиям, необходимо отметить, что бывшие епископы УПЦ КП, присоединились осенью 1995 года в УАПЦ воспринимали свой шаг не просто как переход в другую церковную юрисдикцию, а именно как реализацию договоренности патриархов Димитрия (Яремы) и Владимира (Романюка) по объединению двух религиозных организаций.

В результате этого осенью 1995 года епископами УАПЦ и бывшими иерархами УПЦ КП был подписан «Акт объединения Церквей», тем самым патриарх Димитрий (Ярема) гарантировал сложении с себя патриаршего звания на будущем Поместном Соборе УАПЦ. Необходимо отметить, что, по нашему мнению, не вызывает никаких сомнений, что архиереи, которые выступали от имени Киевского Патриархата, не обладали юридическими и церковными полномочиями, необходимыми для объединения УПЦ КП с УАПЦ. Данное обстоятельство во многих вызвало вполне обоснованные сомнения в непосредственной правомочности «Акта воссоединения Церквей».

После подписания «Акта воссоединения Церквей» последователи УАПЦ разделились на две партии. Большинство епископов признавало слияния УАПЦ и УПЦ КП свершившимся фактом, однако епископ Харьковский и Полтавский Игорь (Исиченко) категорически был против этого, отметив, что действительное и каноническое объединение может быть осуществлено только на Поместном Соборе УАПЦ и в присутствии лиц, обладающие правами принимать решения такого уровня. В ноябре 1995 года он провел в Харькове собрание восточно духовенства, на котором «Акт объединения Церквей» был охарактеризован только как декларация намерений относительно объединения, требует обязательного общецерковного соборного подтверждения.

Желая решить вопрос в свою пользу, группа сторонников «Акта воссоединения Церкви» провел 6 августа 1996 г. Церковный Собор, на котором было провозглашено объединение УАПЦ и УПЦ КП в единую религиозную организацию, получившую

наименование Украинская Автокефальная Православная Церковь Киевского Патриархата (УАПЦ- КП). Поскольку этот Собор не включал в себя всю церковную полноту УАПЦ, то многими он был воспринят исключительно как попытка церковного переворота с целью устранения патриарха Димитрия. Последний в своем заявлении «О стремлении ликвидировать УАПЦ в Украине», опубликованном 14 сентября 1996 г. объявил о том, что ситуация возникшая побуждает его отказаться от давнего желания составить патриаршие полномочия.

Осенью 1996 года в результате создания УАПЦ-КП, разрастается внутреннее противостояние в УАПЦ, ведь патриарх Димитрий запретил в священнослужении и почислен за штат лидера внутрицерковной оппозиции в УАПЦ митрополита Львовского Петра (Петруся).

18 октября 1996 стремясь завершить начатое, сторонники «Акта воссоединения Церквей» из числа как бывших иерархов УПЦ КП, так и большинства архиереев УАПЦ провели Церковный Собор УАПЦ-КП, на котором объявили об устранении патриарха Димитрия (Яремы) и избрание митрополита Тернопольского Василия (Бондарчук) в качестве Местоблюстителя патриаршего престола УАПЦ-КП. Кроме того, последовательный противник «Акта воссоединения Церквей» епископ Харьковский и Полтавский Игорь (Исиченко) был объявлен запрещенным в священнослужении.

Таким образом, на ноябрь 1996 четко был выражен внутренний раскол в УАПЦ. В результате происшествия разделения в составе данной религиозной организации осталось всего лишь три архиерея: Патриарх Киевский и всей Украины Димитрий (Ярема), епископ Харьковский и Полтавский Игорь (Исиченко), епископ Хмельницкий и Каменец-Подольский Мефодий (Кудряков).

Зато в составе новообразованной Украинской Автокефальной Православной Церкви оказалось большинство бывших церковных иерархов УАПЦ: митрополит Тернопольский и Бучацкий, Местоблюститель патриаршего престола УАПЦ-КП Василий (Бондарчук), митрополит Галицкий и Ивано-Франковский Андрей (Абрамчук), архиепископ Луцкий и Волынский Феоктист (Пересада), епископ Нежинский и Брацлавский Роман (Балащуком), епископ Белоцерковский и Уманский Михаил (Дуткевич).

Уже 26 октября 1996 состоялся Собор УАПЦ-КП названный его инициаторами как «III Поместный Собор УАПЦ». На этом церковном собрании было соборно подтверждено избрание митрополита Тернопольского Василия (Бондарчука) Предстоятелем УАПЦ-КП с титулом Местоблюстителя Патриаршего престола, а также запрет в священнослужении и зачисления за штат УАПЦ патриарха Димитрия (Яремы), епископа Игоря (Исиченко) и епископа Мефодия (Кудрякова).

Не признав легитимность «и II Поместного Собора УАПЦ» патриарх Димитрий продолжил возглавление УАПЦ той ее части, которая признавала его власть и назначил на вакантную должность Управляющего делами УАПЦ епископа Игоря (Исиченко). В начале ноября 1996 году на Львовской епархии УАПЦ был рукоположен епископ Макарий (Малетич), который сейчас уже является

Предстоятелем данной религиозной организации.

Однако данный раскол внутри УАПЦ просуществовал недолго. Нарастание внутренних конфликтов привело эту неканоническую религиозную организацию к полному распаду чуть больше, чем через полгода после ее образования. В конце мая 1997 года во председательством патриарха Димитрия (Яремы) состоялся III Поместный Собор УАПЦ который объединил УАПЦ с УАПЦ-КП. На этом Соборе также состоялось принятие нового Устава УАПЦ и прославления в лике святых митрополита Киевского Василия (Липкивского) и других основателей УАПЦ первого поколения (1921 г.).

После 1997 года в УАПЦ наконец наступил период стабилизации, сопровождавшийся укреплением церковной структуры, открытием новых епархий и приходов, возложением рук новых иерархов. В это время внутренняя жизнь УАПЦ выстраивается в соответствии со своим действующего Устава, выражалось в регулярных проводках Архиерейских Соборов, совершении архиерейских хиротоний только после утверждения епископских кандидатур на тех или иных епархиальных собраниях и т.д.

Рассматриваемый период современной истории УАПЦ был связан со смертью патриарха Димитрия (Яремы), произошедшей 25 февраля 2000 К этому менее, чем за два месяца до своей смерти, 1 декабря 1999 года, он составил свое завещание, в котором предостерегал УАПЦ от выбора новых «патриархов» и настоятельно рекомендовал включить УАПЦ в состав Украинской Православной Церкви в США, которая находится в составе Константинопольского Патриархата. Завещание патриарха Димитрия во многом определило дальнейшую историю УАПЦ, отказалась (и по сей день) от института патриаршества и активизировала свои усилия по вхождения в юрисдикцию Константинопольского Патриархата.

**Выводы.** Итак, осуществив детальный анализ внутрицерковной существования Украинской автокефальной православной церкви в 90-х гг. XX века можно сделать следующие выводы:

1) в данный период функционирования УАПЦ можно условно выделить два периода, а именно 1993-1997 гг. и 1997-2000 гг. Первый, по мнению исследовательницы связан с институализации УАПЦ в контексте диалога с УПЦ КП, а второй обусловлен стабильным существованием и разрастанием церкви вследствие увеличения числа духовенства, храмов и епархий.

2) Последнее десятилетие XX ст. сказалось для УАПЦ, с одной стороны, внутрицерковными конфликтами, а, с другой стороны, расширением церковной инфраструктуры, что способствовало дальнейшему ее утверждению в нашей стране уже под предстоятельством митрополита Мефодия (Кудрякова).

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## ПРАВОСЛАВИЕ В РЕЛИГИОЗНОМ ПРОСТРАНСТВЕ ВОЛЫНСКОГО РЕГИОНА ТОТАЛИТАРНОГО ПЕРИОДА

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***Panchuk I. Orthodoxy in the religious space of the Volyn region of the totalitarian period.***

***Annotation.*** The article investigates the main trends of the Orthodoxy development of the region both at the internal and external levels. Analyzed administrative, organizational, economic means of influence on the Orthodox Church. It was proved that church and administrative reorganizations were aimed at using the Orthodox Church organization as a kind of state apparatus, far from religious.

***Key words:*** Orthodox Church, Soviet power, Volyn region, institutionalization.

**Постановка проблемы.** Сейчас православие доминирует в религиозном пространстве Волынского региона, хотя и предстает перед вызовами современного секулярного мира. Поэтому в условиях общественной модернизации исследуемая нами традиция в ряде случаев вынуждена адаптироваться к новой для себя роли актера социального пространства и набирать новые стратегии своей бытийности. Если же исследуемая нами культурно-историческая традиция не отреагирует на вызовы современности, православным конфессиям стоит ожидать массового оттока верующих.

Исторически на Волыни православие влияло на все сферы социокультурной жизни. Поэтому православная вера на указанных территориях была не только потребностью верующих в религиозной деятельности, но и воспринималась прежде всего украинским населением как хранительница национальной идентичности, особенно в условиях польско-католического окружения. Конечно, с началом сентября 1939 г. для тысяч, преимущественно православных волынян, разрушался привычный уклад социальной жизни. Поэтому закономерно, что религиозный вопрос стал одним из определяющих в процессе ассимиляции и политической нейтрализации населения в новых социалистических реалиях. Учитывая факт доминирования православных в Волынском регионе, задачей нашего исследования есть анализ тенденций развития этой конфессии в исследуемом нами культурно-историческом ландшафте.

Отдельные аспекты этой проблемы мы находим в трудах В. Войналовича, Н. Шлихты и других. Эмпирической базой нашего исследования послужили местные архивы и интервью с жителями Волынского региона.

С приходом на территорию Волыни советской власти Православная церковь осталась оторванной от своего первоиерарха митрополита Варшавского Дионисия (Валединского), хотя сначала продолжала действовать на основе канонического



единства с Православной автокефальной церковью в Польше (ПАЦП). Однако официальные власти, используя РПЦ как инструмент, «способствуют» переходу приходов ПАЦП в Украине под юрисдикцию Московской патриархии. Следствием таких трансформаций стало создание надзорного органа (надзор за выполнением распоряжений Патриархии в епархиях) – Западного Экзархата. Согласно принятому тогда указу Волынская епархия делилась на две: первая – Волынская, с кафедрой епархиального архиерея в Луцке, вторая – Тернопольско-Галицкая, с временной кафедрой архиерея в г. Кременце (эти епархии вошли в состав Западного экзархата).

Специфика религиозной жизни на Волыни обусловила перестройку структурной организации РПЦ, которую большевистская власть успешно использовала для распространения советского влияния на подконтрольных территориях и превратила в послушный элемент своей внутренней и внешней политики. Однако искусственное юрисдикционное подчинение православных конфессий Западной Украины Московскому патриархату повлекло раскол в украинском православии, который негативно сказался на дальнейшем развитии православного движения в Украине.

Принципиально новая общественная атмосфера, которая сложилась с началом Второй мировой войны на Волыни, способствовала кардинальным изменениям в сфере религиозной жизни как в количественном, так и в качественном измерениях. Процесс повторной инкорпорации волынского края в состав сталинского государства осуществлялся путем борьбы с украинским движением сопротивления, репрессий против мирного населения. На этот раз религиозная политика советской власти базировалась на ситуативном толерировании и использовании РПЦ. Ее основной задачей было проведение государственной политики русификации и искоренение национальных особенностей не только в сакральной сфере, но и во всем общественно-культурном комплексе существования народа (официальная риторика обозначила это воспитанием нового «советского» человека). Однако такая политика не могла быть Церковью абсолютизирована, поскольку объективные условия существования Православной церкви заставляли ее учесть местную специфику и конкуренцию со стороны других конфессий. Церковно-административные перестройки направлялись на использование православно-церковной организации как разновидности государственного аппарата, далекого от религиозного. Составными частями этого процесса были: формирование структуры Советов, ликвидация при этом каких-либо исторических, национальных, территориальных особенностей религиозно-церковной практики конфессий.

Послевоенную деятельность Волынского-Ровенского епархиального управления рассматривают со времени прибытия в г. Луцк правящего епархиального Архиерея (Николай (Чуфаровский) – И. П.) 3 июля 1944 г. (хотя назначен он был 23 мая 1944 г.). К этому времени Волыньско-Ровенская епархия состояла из Волынской области (30 районов с 350 приходами), Ровенской области (25 районов с 290 приходами) и части Тернопольской области с 9 районами и 140 приходами (часть Тернопольщины, что соответственно религиозной регионализации относится к

Волыньскому региону) [2, л. 3]. Следствием реорганизации епархии стал уход 9 районов Тернопольской области к новообразованной Львовско-Тернопольской епархии [2, л. 4]. Поэтому на 1945 г. Волыньско-Ровенская епархия состояла из Волыньской области с 30 районными благотворительными и 335 приходами и Ровенской области с 30 районными благотворительными и 373 приходами. В целом Волыньско-Ровенская епархия состояла из 708 приходов [2, л. 4].

Конечно, учитывая эти количественные показатели, заметим, что Волыньско-Ровенская епархия стала одной из крупнейших в Советском Союзе. Почти в каждом селе действовал самостоятельный приход. Притом, волыньские приходы в основном были малочисленные, «так как в силу местных условий – содержание прихода целиком зависело от земельного участка» [3, л. 46]. Именно на этом обстоятельстве настаивали тогдашние официальные отчеты Волыньско-Ровенской епархии, и в этом они видели причину низких денежных пожертвований паствы. Хотя, по нашему мнению, такую ситуацию в крае с традиционно высокой религиозностью и доверием к институту Церкви, прежде всего, вызвали послевоенная разруха, безденежье и т. д.

«Традиционное чувство собственника заставляет прихожан стремиться к сохранению небольших нежизнеспособных приходов». Исключение составляли те приходы, состоявшие из двух-трех сел и они считались многочисленными. Притом важным признаком, который в течение последующих десятилетий углублялся, была дифференциация приходов, особенно в сельской местности, региона на «богатые» и «бедные». Основной причиной такой бинарности была не столько антирелигиозная и атеистическая культурно-воспитательная работа в одних селах и ее меньшие масштабы у других, а сколько экономическое обнищание села, которое вызывало постоянную миграцию в города. Конечно, экономическое обнищание селян, в частности верующих прихода, подорвало прочную основу существования этой низшей церковно-административной единицы, а затем и приходских храмов. Эти процессы приводили к частым сменам настоятелей храмов, или даже к их отсутствию. Иногда такие экономические факторы становились определяющими в решении священников продолжать богослужения и возглавлять приход. Ведь для клириков в ряде случаев экономические вопросы (прежде всего возможность заработка) играли определяющую роль в продолжении / прекращении служения. Эмпирически это подтверждает документ: «В приходах, где не было прибыли духовенству, оно не служило» [5, л. 103].

Конечно, в течение указанного периода правительством заключается ряд постановлений и распоряжений, регламентирующих функционирование РПЦ. Однако особенно важным в нашем контексте есть принятие «Положения об управлении Русской Православной Церковью» (31.01.1945 г.), санкционированное советским режимом. Именно этот документ засвидетельствовал институциональное существование Церкви в СССР, и на полтора десятилетия определял организационные основы ее внутренней жизни. Учитывая этот факт, остановимся на его детализации.

Несмотря на клерикальный характер этого документа, он восстанавливал гиперцентрализованную структуру РПЦ, он фактически демонстрирует «путь институционального выживания» (В. Флетчер) РПЦ в советском обществе. Об этом свидетельствует структура самого «Положения»: Часть 1 «Патриарх». Часть 2 «Священный Синод», часть 3 «Епархии». Часть 4 «Приходы». Мнения исследователей указывают на то, что этот документ полностью подменяет соборные принципы управления Церковью властью одного человека как на уровне патриархии (власть Патриарха становится практически неограниченной, поскольку полномочия Священного Синода и Поместного Собора сводятся на нет), так и на уровне епархии (епархиальный архиерей получает широкие полномочия, включая право самостоятельно управлять епархией (или при содействии епархиального совета, который мог образовываться по его решению в составе 3-5 человек), не обращаясь за помощью к епархиальному управлению, настоятелей храмов и благочинных назначает епархиальный архиерей), так и на уровне прихода (настоятель является председателем церковного совета, отвечает за управление приходом, решает все финансовые, экономические вопросы и представляет приход перед светской властью) [12, с. 136-137]. Наибольшие изменения касались статуса приходского управления и устройства. Поэтому распорядительным органом общины считались приходские собрания, которыми избирались два другие органы прихода: исполнительный – церковный совет и контрольно-ревизионная комиссия. Церковный совет состоял из четырех человек – настоятеля (председатель), церковного старосты, его помощника и казначея. Последние трое, как и три члена ревизионной комиссии, избирались общим приходским собранием из числа прихожан [1, с. 199].

О результатах внедрения статей «Положения» в Волынско-Ровенской епархии говорит нам протокол собрания благочинных в присутствии уполномоченного РСРПЦ, в котором, среди прочего, отмечается, что все священнослужители, которые являются помощниками или практикуют на местах ... «должны немедленно занять свободные приходы». Все священники моложе 18 лет должны быть сняты с работы. Вся наличность приходов должна храниться в отделениях Госбанка. Выдача служебных командировок благочинным должна ограничиваться рабочей целью в пределах епархии. Кроме того, что для нашего исследования важно, в обязательном порядке должны быть изъяты из богослужебной практики все партитуры и молитвословы, в «которых вредно пропагандируемая молитва «Боже Великий Единый» [2, л. 6].

Поэтому это подтверждает тот факт, что одной из первоочередных задач для тогдашних иерархов Волынско-Ровенской епархии, было «избавление» от любых проявлений национального в Православной церкви. Ведь не случайно следующий управляющий Волынско-Ровенской епархией еп. Валаам, который был назначен Постановлением Священного Синода от 3 января 1946 г. на Волынскую и Ровенскую кафедру, одной из главных забот в период своего пребывания в епархии считал возвращение к церковно-славянской речи в богослужении. Именно о выполнении

этой задачи он отчитывается в составленной им и поданной Патриарху Алексию докладной записке: «Всю свою пастырско-миссионерскую жизнь на Волыни я провел в борьбе за традиционные устои православия и в частности за церковно-славянский язык. В ходе назначения и перемещения, учитывая местные условия, я ставлю перед вновь назначенными священниками задачу перехода к традиционной богослужбной речи, что выполняется» [3, л. 46]. Хотя Экзарх Украины митрополит Иоанн был сторонником разрешения использования украинского языка для литургических целей. Показательным в этом смысле есть синодальное постановление (29 октября 1947), которое позволяло употреблять украинский язык в церковной жизни приходов Волыни, ссылаясь на права, дарованные Украинскому экзархату патриархом Тихоном (1923 г.) [11, с. 128-129].

Поэтому мы видим, что проблема использования украинского/церковнославянского языка оставалась архисложной во второй половине 40-х годов XX века. Более того, подчеркнем, что даже при тех же обстоятельствах, когда использование в богослужбной практике украинского языка было четко регламентировано иерархами, однако у верующих богослужбная литература на украинском языке, по сути, переносилась в сферу личного пространства. Эмпирическим подтверждением таких теоретических рассуждений является интервью, взятое в ряде сел Корецкого (с. В. Межиричи, с. Свитанок), Дубенского районов (с. Мирогоща), где жители вспоминают, что у них самих, или у их родителей были молитвенники на украинском языке.

Кратковременное ослабление антирелигиозного давления в середине 50-х годов привело к институциональному росту православных приходов. Это совпало с переводом 15 ноября 1952 г. еп. Палладия (о нем вспоминают как об умелом церковном администраторе и поборнике надлежащего выполнения священниками своих пастырских обязанностей) на Волынскую и Ровенскую кафедру, где он зарекомендовал себя последовательным и принципиальным архипастырем. Пытаясь активизировать церковную жизнь в епархии, епископ реорганизовал деятельность приходов, стремился упорядочить благочиния, заботился о рукоположении священнослужителей, материальном положении семей священников. Именно он провел ряд организационных мероприятий по финансовому укреплению епархии. В результате таких реорганизаций прекратилась текучесть кадров духовенства, были заполнены свободные приходы священниками, приходы финансово окрепли, увеличилось на 30-50% их доходность. Кадровую проблему иерарх решил за счет посвящения в сан священников и диаконов (18 чел.) из выпускников Волынской духовной семинарии (5 чел), а также, что для нас является чрезвычайно важным, способствовал возвращению приходов священникам, которые вернулись из ссылки (17 чел. ). Поэтому за время его руководства епархией она пополнилась 40 священнослужителями [5, л. 42, 42]. Также он способствовал количественному росту числа студентов Волынской духовной семинарии (с 38 до 160).

Такая деятельность Палладия вызвала резкую реакцию со стороны государственных органов – он был приглашен на личную беседу к председателю

Совета по делам РПЦ при Совете Министров СССР Г. Карпова. Архиерей был предупрежден о выявленных в его действиях нарушениях советского законодательства и его обязали отозвать свои циркуляры. С того времени и до конца земного служения владыка Палладий был среди «неблагонадежных» епископов РПЦ, что и обусловило географию его многочисленных перемещений в течение последующих лет жизни [8].

Самый высокий уровень институционального роста количества православных приходов Волынской-Ровенской епархии тоталитарного периода наблюдаем в конце 50-х годов. По состоянию на 1957 г. при наличии 499 сельских Советов, было 406 действующих приходов Ровенской области, из которых 21 приход – вакантный, а остальные 385 – обслуживались на постоянной основе, 73 церкви – по совместительству. Кадрового духовенства – 361 человек, из них диаконов – 47 [5, л. 113].

Кроме того, реорганизация сельских расселений на основе укрупнения колхозов и совхозов, концентрация объектов социальной, культурной инфраструктуры в назначенных населенных пунктах усилило влияние на состояние и тенденции развития сельских приходов региона. Хотя, в конце 50-х годов сельские приходы Ровенской области и в дальнейшем оставались малочисленные (от 150 до 300-500 дворов), городские – многочисленны. Официальная документация свидетельствовала, что на их экономическое положение влияли, с одной стороны, улучшение материального благосостояния верующего населения, с другой – «проведенные духовенством меры по упорядочению отчетов и подотчетность денежных поступлений в церковные кассы и контроль за их распределением» [5, л. 43]. Поэтому, отмечается в документе, «в большинстве церквей прекратилось хищение средств церковниками (церковными старостами, их заместителями и кассирами)» [5, л. 42, 43].

По данным архиепископа в начале 1960 г. в Ровенской области было 29 основных приходов и 102 – обслуживающие (то есть без постоянного священнослужителя) [7, л. 10] однако, по инициативе уполномоченного и за «содействия» еп. Панкратия институциональная сеть православных общин должна была сократиться в течение 2-3 месяцев на 95 приходов, не считая уже снятых с регистрации) [6, л. 33-34].

Как следствие, комплекс идеологических, административных, социально-экономических факторов привел к закрытию ряда храмов, особенно в сельской местности и вызвал снижение религиозности среди местного населения региона. Кроме того, такие мероприятия также повлияли на сокращение частоты богослужений. От ежедневных служб в первые годы мирной жизни храмы перешли на богослужение только по выходным дням и праздникам. Так, к примеру, среди 522 зарегистрированных религиозных общин РПЦ в Волынской и Ровенской областях (на 1 января 1963 г.), только в 2 осуществлялись ежедневные богослужения (Ровно, Луцк), 2-3 раза в неделю – в 10 храмах (9 – Волынская область, 1 – Ровенская область), по воскресеньям и религиозным праздникам – в 471 храме, периодически, несколько раз в год – в 10 храмах Волынской области, служба не проводилась от

1 года и более – в 30 храмах Волынской области [1, с. 687]. Характерно, что на Ровенщине во всех зарегистрированных приходах РПЦ проводились, как видим, богослужения, хоть раз в неделю.

Под давлением государственной власти на Архиерейском Соборе (выполнялось синодальное постановление от 18 апреля 1961 г. «О мерах по улучшению существующего уклада приходской жизни») вносятся существенные изменения в «Положение об управлении РПЦ» (18 июля 1961 г.). Изменения касались, прежде всего, части «Приходы». Суть этой реформы заключалась в устранении священнослужителей от управления хозяйственно-административным функционированием прихода, что существенно ослабило централизованную структуру Церкви. Ведь епархиальный архиерей больше не назначал священников, они только «утверждались» им, а «избирались» приходом. Согласно новому «Положению» настоятели храмов лишались руководящей прерогативы. Они становились наемными работниками, привлекались общиной для совершения религиозных служб. Кроме того, власть имела право отозвать членов приходского совета, способствовать назначению в эти органы нужных ей людей. Священнослужитель терял право официального представительства прихода перед органами власти, прежде всего РСРПЦ, что упрощало возможность закрытия того или иного прихода, а затем лишало юридических оснований влиять на внутреннюю жизнь религиозной общины. Таким образом, роль настоятелей ограничивалась исключительно духовными функциями, а финансово-хозяйственная деятельность православной общины возлагалась на исполнительный орган. Епархиальный архиерей также терял какие-либо права в отношении прихода, а последний также не имел никаких обязательств перед ним. Ревизии подвергались и полномочия благочинных, которых назначал архиерей для эффективного управления епархией [11, с. 104]. Такой порядок управления приходами, утвержденный Поместным Собором РПЦ просуществовал до 1988 г. и был отменен только принятием нового устава об управлении.

Обычно эти «нововведения» максимально упрощали процедуру закрытия церквей в регионе. Ведь обновление прихода (из-за введения в их состав «нужных» членов) потеряли способность к сопротивлению. Поэтому в течение 1961 г. наиболее существенные сокращения институциональной сети произошли как раз в Западной Украине. Поэтому характерным признаком Волынской-Ровенской епархии стало уменьшение количества зарегистрированных религиозных объединений.

Обычно такие действия для официальных властей считались неполными, а затем для дальнейших институциональных сокращений сети православных общин планировалась реформа РПЦ на административном уровне. В частности, было предложено объединить епархии и оставить в Украине 8 епархий. Волынская-Ровенская должна была объединиться с Житомирской и стать Житомирско-Ровенско-Волынской, с епископской кафедрой в г. Житомире. Однако такой план не был воплощен [1, с. 249-250].

Попытка занять определенную социальную нишу в социалистическом



обществе и удержать привлекательность Церкви заставила православных богословов модернизировать видение религиозных идей. Модернизация включала в себя не только отход от традиции, но и теоретическое обоснование догматической необходимости и канонической допустимости введения новых обычаев. Несмотря на то, что православие очень консервативное по форме и по содержанию и трудно поддается модернизации (как мы видим и сейчас), идеологи этой конфессии начали апеллировать прежде всего к будущему. Притом признавалось, что есть много проблем, назревших в православии. Церковь пыталась продемонстрировать так называемую «осмысленную религиозность» и старалась найти общий язык с представителями других конфессий. Поэтому появились рассуждения о необходимости обновления этого института, как возможность адаптации к новым социальным реалиям. Такое видение было средством поддержания жизнеспособности Церкви.

Наиболее активно происходила модернизация религиозно-политического сознания [10, с. 420]. Ведь РПЦ «искала себе место в послевоенном обществе, которое так и не стало «молчаливой массой», хотя и безусловно приняло насаждаемое властями «правильное сознание» [11, с. 107-108]. В контексте сказанного подчеркнем, что социально-политическая концепция православия, прежде всего, характеризовалась идеей присутствия советского патриотизма и устойчивой гражданской позиции. На региональном уровне рассылались копии постановлений Патриарха и Священного Синода РПЦ в котором констатировалась «благодарность ... правительству за его неизменное доброжелательное отношение к РПЦ, которая, в свою очередь, как и в годы Великой Отечественной войны, так и сейчас проводит и будет проводить свою деятельность в духе патриотизма и верности своему народу и его правительству»[4, л. 178].

**Выводы.** Риторика высших иерархов не менялась и в течение последующих десятилетий. Патриарх РПЦ Пимен высказывал именно этот аспект политической позиции следующим образом: «Современный период жизни нашего общенародного государства знаменателен тем, что наше общество вступило в новый этап экономического и социального развития, достигло новых реальных возможностей для своего дальнейшего и всестороннего прогресса. Осознание этого радует нас всех и побуждает к еще большей вовлеченности к труду в пользу нашего Отечества» [8, с. 40]. Безусловно, РПЦ как церковь византийской традиции, основывала свою позицию на лояльности и покорности государственной власти. Ведь, как обычно, государственная Церковь (В. Старк) – организация, которая не могла действовать иначе относительно государственной власти. В этом контексте важное значение приобретает вопрос «своевременной»/ «двойственной»/ «советской идентичности».

Поэтому на основе религиоведческого анализа тенденций развития православия Волынского региона тоталитарной эпохи мы заключаем, что: религиозную жизнь православных Волынского-Ровенской епархии формировало еkkлезиальное наследие территории и официальная религиозная политика.



Их сочетание стало причиной серьезных вызовов, стоящих перед Украинским Экзархатом и Московской Патриархией; в целом в течение всей тоталитарной эпохи советская власть пыталась использовать влияние Православной церкви в регионе для укоренения своего влияния и инструментализировать авторитет Церкви в своих целях.

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## NEO-ORTHODOXY IN THE POST-SECULAR WORLD AND ONTOLOGICAL EXPLICATIONS OF WORD OF GOD

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**Annotation.** *This article considers the reception of basic ideas of Karl Barth's neo-orthodox theology in context of critics of phenomenon onto-theology by M. Heidegger as one of principle source of crisis in philosophy. The formation of post-metaphysical and post-secular thinking project in philosophy and theology gives us a chance to discover the heuristic meaning of ideas of dialectical theology in current stage of human studies. The key point of the article is the conception of Word of God in frames of pointed approaches, and also the correlation between knowledge and faith and settlement of this problem in context neo-orthodox and post-metaphysical thinking, illustrated by conception by falsification theology by E. Flu.*

**Key words:** *neo-orthodox theology, onto-theology, Theo-ontology, Barth, Heidegger, post-metaphysical thinking, falsification, Word of God.*

Applicability and motivation of this article were pointed by the research of contemporary theological thought, religious studies, philosophical anthropology, directed to reflection concerning contemporary post-metaphysical and post-secular world and according ways of thinking, and also such called “theological turn” (D. Janiko) in philosophy. The immediate base for writing this article were the new and advanced re-reading of well-known theological discussion of 50-60 years of XX c. devoted to observation and insights concerning of specific philosophical and theological position in knowledge of God, verbalization of theological discourse (thus shaping it in conceptual form and making it's more dynamic in historic-cultural and semantic meaningful context of language) and also in proper Christology, ecclesiology and conception of kerygma diastasis, crisis, Theophany – presumption the falsification of faith, as it well-known in English-speaking scientific literature as “theology of falsification” [16].

**Analysis of recent research and publications.** Contemporary scientist J. Knight in his researches in special way had considered the basic arguments of such approach in context of distinction between liberal and post-liberal theology of XXc., pointing out the time actuality of inclusive method for theology of XXI c., which trying to step out the measures conceptually restricted secular world and secular way of thinking [17, p. 225-227]. It should be noted that the researcher focused his attention on methodology of analytical philosophy concerning theological discourse and polemics between liberalisms of the end of XIX c. – first third part of XX c., neo-orthodoxy (philosophy of crisis), neo-liberalism, “theology of genitive case” (theology of “death of god”) in theological discussions of XX c, in accordance with ideas of philosophical hermeneutics, anthropology, and ontological tradition from Kant, throw Heidegger to Ch. Taylor and others.

Some native and foreign scholars were concerned by this topic, such as Y. Habermas, A. Didilivsky, I. Dobronravova, S. Zhizhek, M. Zlochevsca, S. Konchaeva, D. Manusakis, J.-L. Marion, F. Reati, L. Stasuck, Ch. Thailor, L. Shashkova, A. Yampolskaya and others.

The main object of the article is clarification of connection between intentions of K. Barth's neo-orthodox theology, Theo-ontological critics of M. Heidegger and imaginable experiments with falsification of verbal assertion concerning faith by E. Flu and creating post-secular and post-metaphysical way of thinking.

**The main material exposition.** When we are considering the possibility of using neo-orthodoxy as paradigm approach, we will rest upon fundamental ideas of K Barth («Der Romerbrief...», 1919), which points the insufficient of pure phenomenological approach to religious phenomenon, initiated by classical work R. Otto «Das Heilige» 1917 p. and his conception of numinous experience. The key idea that it is possible to separate the system of dogmatic, teachings of faith and Holy Tradition and religious experience makes impossible the connection in sphere of faith rational verbal constructions and synthetic existential-mystic religious experience of human kind, so called doctrinal understanding of faith. This point of view intrinsically had influenced into the theological of culture by P. Tillich, and also into all protestant theology of XX c. This matter leads us to the distinction of sacred and profane and open the possibility to restrict the religious experience to symbolism, interpreted in this or that way, as it was in R. Bultmann or P. Tillich works. But this interpretation points at anthropological and created by human kind character of the culture. Meanwhile the theology K. Barth rests, first of all, not on religious experience of man, and not on system of motivation and set of values, but on recognizing of restrictions of human nature by man himself, and god forsakenness, and the feeling that “man on the earth, but God in Heaven” (K. Barth). So Barth restricts phenomenological and epistemological way of human experience. According his conception, the only way – is the way from God to human kind. All material of natural theology, as minimum, is not sufficient as so as cosmological arguments. But not because this arguments appeal to the act of creation, but because it is the formal argumentation, the constructions. It is not the forms of appreciation or act of mind, but not “meeting” ‘hip-hop of the faith’ (K. Barth) namely the act of theophany. But this act is not the “finding of God” or “constructing of God” resulting of mind or sensual experience of humans. But, as it well known, one of the main topics, which was not being reinterpreted in late Barth works, comparing with earlier – it is the understanding of Christology as latent anthropology and its word-sentried character.

Thus the key point, where God meets man is the Word of God. It is so remarkable that contemporary explorer M. Pilaev had used for designation the point of encounter God and the man strictly geometrical (and this moment pointed to ancient roots of western rationality. The theological tradition is one of the forms of such rational way of thinking) analogous to circle and the direct line touched to it. [8, p. 28]. So that, according Barth, the Word of God is a primary first of all concerning Scripture, which is the image of Word of God, ladder by the language, And secondly by the Church, which is also the image of Word of God in ecclesiastical sense, and in this way the realization of the Word;

and thirdly as a Revelation of Christ-Logos as embodied Word, the Event of which is the only base of human existence, and any possible ontology and metaphysics. In this sense the Word of God is the base of human faith, but not vice versa. Contemporary Deutsch theologian E. Jungel, when he considered the theology of “death of God” in second half of XX c, stressed that such idea means the “death of metaphysical God, so that \...\ corruption of metaphysical view concerning God, that takes place in Modern Age, the view which identify Gods of Christian faith and metaphysical speculative idea of God. [9, p. 517]. Modern scientists S. Konchaeva [5] and A Nagibauer [7] proceeded from premise that intrinsically means the heideggerian project of destruction of metaphysics (which enrooted in tragic discursive metaphysics of S. Kierkegaard and Nietzsche’s pathos lamentation concerning the death of God) in other words – the overpowering of ontology.

Because in ‘metaphysics God has a secret name – *causa sui*, the Supreme Being, which is a cause of Himself and therefore the power and guarantee of all other things [7, p. 144], just when we will go away from such conception we could come closer to “God of true theology” [5, p. 299-300]. From our point of view, it could mean the same moment as dominance of Word of God over concrete forms of its realization and anthropomorphisation, the Word of God of Revelation over first principle axioms or any these, wondering and sacred fear of meeting (from pythagorical hymns, from Plato’s “Theetet” or from first book of Aristotle “Metaphysics”). The superiority of this Word over any scheme, over any structure of thinking, Archimedean drafts on sand, and at least over scholastically interpreted early-renaissance idea of God as “great geometer”. It is remarkable that A. Yampolskaya, when she problematizes the correlation between phenomenological and metaphysical approach to idea of God in XX c., had interjected, that after the “text” “praying” or “memoriam” of B. Pascal, where he physicist, mathematician, geometer and logician, he notes the fact of meeting with Revelation (Christ) and became a truly philosopher. Thus the concept of personal God in sphere of rational thinking and discourse were debunk. “So to banish off God from philosophy were more difficult, but this God steadily being aware as dead God \...\ for guarantor of space motion or moral norms it is not necessary to be alive. Thus ceasing to expect for reason, this stubborn antagonist of reasoning (M. Heidegger, “Nietzsche’s words “God is dead”” philosophy finally goes ahead. And this motion makes possible to reject the carcass of God and instead to find an empty place. To turn back the God into thinking is one of the vital task for philosophy today [13, p. 107 – 108], – writes a modern researcher. Namely, this means that ‘we are correlate with the subject of our thinking, and what is our point in correlation to the matter of philosophical dialogue’ [13, p. 108].

In this extent, because the crisis of ontoteology, according Heidegger is the crisis of strategical transcendent and transcendental thinking and respective crisis of discourse of conceptualization process and objectification of matter of thinking, we need new strategy and transformation of discourse but aside conceptual and doctrinal schemes. But how it is possible concerning theology?

In his first volume of “Church dogmatic” K Barth wrights: ‘The Eternal Word of

God had choose, blessed and accepted the human creature and human being until the full unity with Himself, just for in this way became a truly God and a truly Man, the word of reconciliation, the Word which God tells to man \...\ Any thought and any word about Him can have the only sense – once more to designate and call Him as a mystery [1, p. 68]. Thus Christ as Revelation, «revelatio immediate», cannot be shaped as any textual, verbal or sermonized form of the Word, He is the speech of God in Himself. Such Christological logocentrism of K. Barth inherently leads us to the question concerning that, how this – pre-logical and pre-verbal meeting with God, this immediate contact with the Word can happen? The Word of God is not restricted by human experience, but can be revealed to man in any living forms without any external extra-eventual essence. So, the Word of God is a free event, based and justified by himself (in this thesis Barth had cut off any possibility for determination of Word by the point of any logic, cosmology, metaphysics, history and anthropology). In his letter to A. von Harnack, K. Barth writes: “If you would say me, that it is impossible ‘to believe’ in way of God to us, which not corresponds, may be, to any way from us to God (because it is always and exclusively the way of God to us), I would respond to you that in deepest bottom of my heart I can share this your idea. But is it not apparent from the very notion of Revelation... that it is incredible?” [9, p. 169].

Thus the Word of God, which foregoes the Revelation, should be transcendental with regard to human kind, but It is not so, because it is an embodied Will of God. In this extend the alienation of theology from metaphysics (as ‘onto-Theo-logy’) is not a negation of ontoteology – it is most likely that refers to changing of accents in modern theology, which strive to drive nearer to ‘God after metaphysics’ [6], the key intuition of m. Heidegger concerning forgetting of being.

Possibly, we can suggest Theo-ontology, in which the human feeling of things existed and his inclusion into fullness of being are goes without a schematic of New Age metaphysics, but rather enrooted in Word as a secret original source of human sense, even before of shaping the Revelation, in authority of Holy Scripture and Holy Tradition, Church and ecclesiology. As had remarked the modern scholar M. Epstein – the famous symbol of unity of God-Creator and creation, Adam, the hand of God and hand of Adam and hand of Adam at well-known fresco of Michelangelo – is not can be connected owing to principle otherness of God, as Barth were stressed on it. The anthropological conclusion we can make here: the human nature is educed to Revelation, but not reduced to it also [12]. The biblical story of Job witnessing about the inconceivability of God’s ways; the upright man had searched the way to God through confessing of Low and piety, but God had paved the way for him through dishonor, illness and deprivation. So we cannot identify God through our system of notions and triangulations in any system of axes and any conceptions. Thus the critics of ontoteology and releasing theology from metaphysics is first of freeing of it from logical constructions as sense-generating models. The life stories as B. Pascal, mentioned above, or apologists of 20 c., as K. Lewis and G. K. Chesterton and tragic wrights or wrongs of his life – all these facts are a good witness of this thesis.

Ontoteology can record such state of affairs, in which “God metaphysically tied to us – He situated at the end of the chain of causality, and can not to break this chain. Metaphysically God always at hand /.../ He have a certainly defined place. But when it suddenly appears that He is not on his proper place – this situation became some strong examination for the faith” [2, p. 59]. The fact that God “shut off the being by Himself” [2, p. 61], insomuch He is the border, and nothing can be comprehended beyond this border (let’s bethink the reflections of Anselm, that named the ontological argument in history of philosophy) and the first being. And that way in which Heidegger had criticized the tradition from Plato through Alexandrian school till Thomas Aquinas, in that point when these authors were postulated the inevitability of ontologization of verbal descriptions while any attempting of human to describe the reality, to create the view of the world and to mark any knowledge with possibility of translation of this knowledge. It is not for nothing that in M. Heidegger’s later works (“The Brief on Humanism”, “On the way to language”, “The essence of speech”) as in works of L. Wittgenstein (“Philosophical researches”, “On validity claim”) as funders of fundamental ontology (enrooted in phenomenological approach) and analytical philosophy accordingly, they had become too similar conclusions. The first – to status of speech as mystery, and the second – to conception of speech games as unique form of life. Even when we keep in mind all differences of this conceptions, the ultimate question arises: “So where we can find the speech, which speaking by itself? It would be looks like so curious, but when something exited us, attracts, oppressing or inspiring us – in all this cases it is usually so difficult for us to find a proper word. In all this cases we should leave our feelings and ideas inexplicit, even have no ideas about that in this moments the essence of speech touched us from distant and for a short time [3, p. 137], - wrights M. Heidegger. It is obviously that the claim to go beyond any definitions and descriptions, to the being itself and to speech itself – from the point of analytical tradition is paradox, choose the words carefully. For instance, from the point of view of R. Carnap it is nonsense. Which assertion can make it possible? Or we should simply keep silence? How we can tell about God and how we can touch to His Word in our speech? And here we can see the intercrossing intuition as theological idea and a philosophy of dialogue, the overlap of analytical tradition and researches of new ontology. If, for example, according F. Rosenzweig “in speech our finite nature reach to its justification and own sense in relation to transcendental reality of Word of God” [11, p. 46], thus in this case we are dealing with phenomenon of post-secular thought (J. Habermas, D. Rols, J.-L. Marion, E. Jungel, Ch. Taylor, K. Meyasu), with theological turn in philosophy and philosophical turn in theology [10, p. 4]. Here we can trace the coming back of theological moods of philosophy, since any prohibition to think about cannot abolished the visions of it and beliefs in it, what creates some gaps in world-views, and that gaps spanned by combative irrationalism, political radicalism, religious fundamentalism and so on. Post-metaphysical way of thinking as a critics of ontology leads to problematization of communicative practices of peoples within the borders of philosophical as rational and thus religiously neutral discourse. Peculiarly say, the same discourse became a problem in that measure as a phrase ‘post-metaphysical



mode of thinking', which from one point looks like oxymoron, semantic anomaly, and from another – leads to full chaos of verbalization, descriptions and rough approximate expressions to reality, infinitive recursions of metanarratives.

In this context the methodological effort to use the method of falsification concerning relations between knowledge and faith looks like very interesting and heuristically useful. It is very important just for conceptual reflections of the sense Word of God not in existential human extent and not in transcendental Gods-like measurement, but in formally material, in aspect of expression, that is involve analytical procedures concerning discourse.

Modern western researcher asserts: "the increasing of interest to functioning Word of God in context of sacred rituals (sacraments) and outside of it \...\ The interpretation of sacramental nature of this Word in Christian tradition means the conviction that words can proclaim the presence of God [14, p. 6]. In the document of Second Vatican Council (1962-1965) "The Constitution on Saint Liturgy" contains the following assertion: "Christ present in His Word, because He enounce during the reading of Holy Scripture" [4, p. 16]. Also here had being argued that Word of God and Holy Sacraments contain in itself all divine grace for believers, an it give the universal not just theological but also philosophical meaning to ontological conclusions to theology of second part of XX c. It is true as for protestant tradition (K. Barth, R. Bultmann) as for catholic authors (K. Raner, G. Kung). Thus when Barth says about three forms of Revelation (Revelation as appearing the Word of God or Jesus Christ; Revelation as Word of God reordered or Holy Scripture; Revelation as Word of God announced or sermon in church). But in this thesis he is not confine God, because God is a truly sovereign and owner of His desires, and it is His Word before meeting this Word with a man.

Consequently, in post-secular world the paradox mode of thinking transcendental essences and approaching via speech to transcendental can being embodied in transcendental procedures. The good example of such approach is an article of well-known British Philosopher E. Flew "Theology and falsification" (1950), which he was presented for discussion in philosophical society of Oxford University as a report. The sense-bearing core of this report was a J. Wisdom's metaphor about an invisible gardener. In most abstract sense this metaphor outlined the question about that 'is any reality can witness about that the Plan exist?' The problem is not land itself discussing of ontological or cosmological being of God. It concerns discussions about that O. Rosenshtok-Hussi calls 'God drives us to tell', about hidden verbalization within a framework semiotic code of language pointing of something that goes beyond this frames. And using Popper's principle of falsification, British philosopher asks: what should happen for we would deny the God's love or even existence of God? Finally, we are talking about just mentioned correlation between knowledge and faith. If the knowledge about something necessarily envisages appealing to the language, it means that any descriptions as it is points to the Word and to the Plan which stands behind such descriptions. But if not, in this case the communication and mutual understanding is not possible at all. It is most remarkable fact that E.Flew himself, who recurrently pointed his atheistic convictions,



as a fair philosopher, who had not find a personal faith, at the end of his life should became a deist, so to accept the cosmological arguments concerning Plan and Goal [15].

Is it possible to consider the existence of God dependently of human conscience, who accept the hypothesis of His existence, drawing on living world of this human being (phenomenological approach), on space of his\her thinking (metaphysical approach, ontological argument of Anselm), or on the fact of his own speech (analytical approach and Wittgenstein's idea as speech is a border of human world)?

The discussion on this matter in English-speaking literature was so ample, but the point was rather not about a proving the existence of Word or Plan in ontological sense, as Flew and his followers, Christian philosophers were insisted, but about the character of sentences about faith as such, about inner logic of religious narrative. May be, the form of posing a question is doubtful, but, as for us, oxford philosopher here had established the fundamental characteristic of ontological thinking – the way from human being to God, from own existence to transcendental, that is absolutely excluded in neo-orthodoxy of K. Barth, where only God gives His hand to man and goes to him, as on well-known fresco of Michelangelo, where they even cannot touch to each other. Theo-ontology as we can characterize the post-secular and post-metaphysic way of thinking, means the inclusive approach to excesses of fundamental ontology by M. Heidegger, to radical philosophy of diastasis by K. Barth, to dialogical interpretations of theology in XX c., to theology of death of God - religious and also secular. Philosophy and theology, knowledge and faith find a free correlation as into full diffusion, crossing and destroying any borders.

Summing up, we can make some **conclusions**:

1. Neo-orthodoxy in its basic intentions (K. Barth) and key conceptions (crisis, diastasis between faith and culture, religion and faith, sin and grace, Revelation, Word of God) in unique way had anticipate the critics of secular world and secular conscience in philosophy of second half of XX c. This conception not just in accordance with kirkegard-nietzsche's tradition but also with Heidegger's critics of onto-theology as verbal and mental practice of oblivion of being.

2. Heidegger's critics of onto-theology and appealing to speech as a place, where the mystery of being is located in human world was the case of crisis of theological and religious discourse in particular, especially in context of approaching and interpenetration of conceptual constructs of existential philosophy and canonical Christian world-view in context of narrative of all human studies narrative by R. Bulthmann and P. Tillich. In this context the 'theological turn' (D. Janiceau) of philosophy in context of establishing post\secular and post\metaphysical mode of thinking can be considered as a shift of accents in philosophical practices, as appearing of Theo-ontology as the base of new world-view, which can be characterized as disclose and not-linear.

3. The method of falsification concerning balance of belief and knowledge and concerning the analysis of speech acts related to religious sphere and beliefs, had being showed as insufficient for universal approach. Because in context of this method has mentioned just linguistically inner structure of describing reality, just about logic of

language, but not about subject-matter or an object, and the more about concerning overpowering of metaphysical schemes, not questioning about Word and Plan, not-subjected, not-thing like, not objectivized essences, which stand behind visible reality.

The following discussion concerning problems of establishment of post-secular project of philosophy in context fruitful end heuristic intuitions of dialectical theology XX c. it seems very promising.

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## ATTACHMENT TO GOD AS A DETERRENT AGAINST LONELINESS

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**Annotation.** *It is a widely debated question whether people can have a deep attachment to God, and whether their personal faith or some other forms of religiosity can be an effective deterrent against loneliness. Although some Christian religious authors have described their faith as an effective buffer against loneliness (e.g., Clinton, Sibcy, 2002; Graham, 1982), empirical investigations have given mixed results. Nevertheless, it is proved that Christians that have intimate relationships with God, and are securely attached to Him, who view God as a loving, protective yet just, score lower in loneliness. On the other hand, explicit religiosity and insecure attachment to God are not significantly correlated with loneliness. Moreover, they cause distress and poorer sense of well-being of a believer.*

**Key words:** *loneliness, attachment to God, implicit religiosity, explicit religiosity, faith.*

There is a sizable amount of studies demonstrating that some aspects of religious life, such as involvement in organized religious institutions and support systems have some effects on psychological well-being and mental health of Christians (for a review, see Ellison & Levin, 1998 House, Umberson, & Landis, 1988; Mirowsky & Ross, 2003). Far fewer scholars have systematically investigated other facets of religious participation, such as intimate relationships with God that can be best described in terms of the attachment theory (Bradshaw, Ellison, & Flannelly, 2008; Ladd & Spilka, 2002; Pollner, 1989; Poloma & Gallup, 1991) [1, p.131]. The present article addresses this shortcoming by drawing on recent applications of attachment theory to religious phenomena.

Building on Bowlby's (1969, 1973, 1982) theory of parent-child attachments [2], it has been shown that close, interpersonal relations are not only crucial for a child's development, but are important for adults as well. The research reviews the recent findings in this area by examining whether one's conceptualization of God have any impact on his\hers relationships with God and how these relationships correlate with feelings of loneliness.

Therefore, in this article we focus on attachment styles and the impact of attachment to God on loneliness that the Christians experience.

**Attachment theory review. 4 styles of attachment.** In brief, initially in the attachment theory John Bowlby focused on the bond between an infant and the primary caregiver. In light of this theory, four primary styles of attachment have been identified later: one secure and three insecure – anxious or ambivalent, as commonly mentioned in the literature, avoidant and disorganized. Thereafter Mary Ainsworth developed the

attachment theory further by suggesting a method for measurement an infant's security and a concept of a "secure base" (securely attached children, when they are upset, will seek comfort and closeness from their parents). According to this perspective, securely attached individuals routinely display "proximity-seeking" behaviors toward their attachment figures—that is, they seek their company and protection, particularly during stressful times. Attachment figures, in turn, serve as a "safe haven" and a "secure base" in an uncertain world.

Secure attachment is characterized by feelings of love, approval, closeness, and warmth toward attachment figures. Anxious attachment is characterized by feelings of inconsistency and confusion, and attachment figures are perceived as warm, loving, and reliable at certain times and cold, distant, and unreliable at others. Avoidant attachment, a third style, is simply the inverse of secure attachment—that is, potential attachment figures are perceived as consistently cold, distant, and unreliable. And finally, there is a disorganized style, that is a combination of ambivalent and avoidant attachments.

The four styles of attachment are based on the person's core beliefs about yourself and others. The securely attached individuals are characterized by their positive attitude both toward themselves and others, and by comfortable interdependence from others. The anxious/ambivalent category represents the preoccupation with feelings of unworthiness and the need for other's approval. This style of attachment characterizes children who experienced insensitive caregiving. These children generally bring this overdependence into the adult relationships. Unlike them, avoidant individuals are identified by denial of the need or desire for intimacy, they tend to suppress their feelings. Their self-dimension is that they are self-sufficient and others are not reliable. Whereas disorganized question their sense of worthiness and other's too. These individuals shy away from intimacy because of interpersonal distrust and fear of rejection due to inconsistent or abusive family situations [3, p.12].

Thereafter, attachment theory researchers began to extrapolate their findings onto relationships between romantic partners (Hazan & Shaver, 1987). In support of Bowlby's assertions, Mikulincer and Shaver (2004) found that individuals who had access to an attachment figure were able to facilitate self-soothing for themselves. Conversely, those who did not have access to attachment figures demonstrated more negative affect than those who did. For example, poorer self-esteem and emotional well-being have been reported for the insecurely attached adults (Bureau, Easterbrooks, & Lyons-Ruth, 2009). Moreover, it was also asserted that individuals who were insecurely attached reported higher levels of loneliness and stress [4, p.13].

More recently, attachment research has begun to consider religion and God in the context of attachment figures (Exline, Park, Smyth, & Carey, 2011) [1, 131].

**God as the ultimate attachment figure.** A small number of researches, which has extended attachment theory to God, suggest that intimate relationships between humans and God meet the defining criteria of attachments—that is, proximity-seeking behavior, a haven of safety, and a secure base. Kirkpatrick in his theoretical approach to religion argues that "religious belief and experience may be fruitfully conceptualized from the

perspective of attachment theory.... For example, the God of most Christian traditions seems to correspond very closely to the idea of the secure attachment figure” [5, p. 29].

Empirical support for God being considered by most Christians as an attachment figure can be found throughout other recent researches. For example, Pargament, Kennell, & Hathaway’s (1988) research has shown that individuals routinely turn to God for help during stressful times. This is clearly proximity-seeking behavior, and exemplifies the haven of safety function of attachment relations. More recent scholars have even attempted to precisely measure attachment styles as they pertain to the relationship between humans and God. In the first study on this topic, Kirkpatrick and Shaver (1992) adapted Hazan and Shaver’s (1987) categorical self-report measure in order to classify respondents as securely, avoidantly, or anxiously attached to God based on their agreement with predefined descriptions of each—that is, their perceptions of God as warm and responsive, impersonal and distant, or inconsistent, respectively [1, p.133].

The attachment to God theory, which examines “styles” of attachment to the Divine, is also connected to the perceptions of the image of God, (i.e., the characteristics of God). Despite vast differences in samples, study designs, and methods, investigators have reached broad consensus regarding some of the most important dimensions of God imagery. In particular, several factor-analytic studies have shown a close association among a number of beneficent images of God—for example, as “loving,” “forgiving,” “caring,” and “protective” (Gorsuch, 1968; Spilka, Armatas, & Nussbaum, 1964) [for a review, see 1, p.133].

**God’s image in the scripture and attachment styles.** As was mentioned before, according to the attachment theory an attachment figure is required to have certain qualities, such as proximity (closeness) and accessibility, especially in times of trouble, sensitivity, responsiveness, and the ability to provide protection; the qualities related to provision of a secure base involve support of exploration of the world and learning.

Therefore the study of the core Bible Scriptures should give us cogent groundings to decide if the Christian God can actually be such an attachment figure. The perceived image of God is reflected first of all in His titles (names), the characteristics of His nature and His actions towards people.

From the very first chapters God in the Bible is seen as the Creator of all, Who is all-powerful and Mighty. The Bible uses name El-Shaddai, usually translated as the “All-mighty”. He is mighty to provide, to save and protect the needy (Gen. 17:1 and more). Perhaps this is the most common personal name of God, used more than 48 times in the Bible. He said to Abraham that He was his shield (Gen. 14:1); in Psalms He is called “shield”, “refuge”, “rock of salvation”, “fortress and deliverer”, “stronghold” – all describing assurance of God’s people in His ability to protect in times of trouble.

Numerous stories in Scripture such as of Noah, Abraham, Joseph, David, widow of Sidon, and so on, assert that God is capable and willing to save those who would cry for help or had relations with Him.

God is generally perceived by Christians to be not only omnipotent but also

omnipresent. So the other quality (attribute) of God that is obvious in the Bible is His proximity. He is the God “Who sees” (Hebrew “El-Roi”) (Gen.16:13), and answers the prayer (Job 35:13), which gives the idea of His closeness to people and His attention to their prayers (see Ps. 145:18, Is. 50:8). Psalmist says: “The righteous cry out, and the Lord hears them; he delivers them from all their troubles. The Lord is close to the brokenhearted and saves those who are crushed in spirit” (Ps. 34:17-18).

This quality of God is also reflected in His Name as it was revealed to Moses: “God said to Moses, “I Am Who I am.... The Lord, the God of your fathers... This is my name forever, the name by which I am to be remembered from generation to generation” (Ex. 3:14-15). This quality of God relates to the very meaning of the word YHWH which is used here. It comes from the Hebrew verb “to be” and is explained in the Bible itself by the words of God: “I am Yahweh,” (Hebrew: “ehier asher ehier”, which can be translated as “I am the One who is” (Ex. 3:14). God is He Who always is there, Who is near. The people of God, the Jews, in the Book of Deuteronomy exclaim: “What other nation is so great as to have their gods near them the way the Lord our God is near us whenever we pray to him?” (Deut. 4:7).

One of the outstanding traits of God’s character as the reader can notify is His affectionate, merciful and kind love: “The Lord is good, a refuge in times of trouble. He cares for those who trust in him” (Nahum 1:7). The phrase “The Lord is good and merciful” is repeatedly used in the Bible.

Perhaps, one of the most common imagery of God in the Bible is the concept of God the Father. He is compassionate and forgiving – as the Old Testament shows (Ps. 103:13, Is. 64:8); , the concept of God the Father is more wholly revealed in the New Testament He knows what we need before asking (Mt. 6:8); gives good gifts to those who ask Him (Mt. 7:11) and sends His Holy Spirit to comfort believers (Jn. 14:26). Father loves people (Jn. 16:27) and through His Son Jesus has adopted, accepted and loved all who would believe in Him (1 Jn. 3:1).

On the other hand, to say about God’s love without mentioning about His holiness would be quite a misrepresentation. There are a number of Scriptures saying that God is loving and slow to anger yet just and “jealous and avenging God...the Lord will not leave the guilty unpunished” (Nahum 1:2-3). Nevertheless this other angle of God’s character gives a sense of security and stability that all evil ultimately will be punished.

Undoubtedly, the conception of God as a parental attachment figure is consistent with the beliefs and teachings of most Christian traditions. In other words, the perceived availability and responsiveness of a loving God is a fundamental dynamic underlying Christianity. In this religious tradition, individuals are expected to proceed with the faith that they can personally and directly interact—through prayer and worship (a proximity-seeking behavior) - with a God Who will be available to hear, to protect and comfort them in times of trouble. This is an obvious haven of safety concept. It may also be the case that the mere knowledge of God’s presence and accessibility allows many religious individuals to approach the problems and difficulties of human existence with confidence and security, which is an example of the secure base function of attachment



relationships [1, p. 132]. In fact, God may be the absolutely adequate attachment figure (i.e., an omnipotent, omniscient, omnipresent, and infallible one), whereas humans are often inadequate. Nevertheless despite various theoretical parallels between interpersonal relationships and relationships with God, the attachment to God is unique in many ways [6, p. 11]. For example, the degree to which God is perceived as omnipresent, not limited with space or time, yet immanent, makes it possible for God to be continually available and responsive, unlike humans. At the same time, even though we can experience closeness with God, we still remain to be in need of closeness with other people.

**Attachment to God and Christian's response to difficult times of loneliness.**

There has been much debate regarding whether an individual's attachment style to God is essentially carried out from one's attachment style to people that they developed in the past (the correspondence model). Or perhaps, these are two independent structures functioning so that in difficult times insecurely attached individuals turn to God to compensate their dearth of secure deep relations with people, using God as a replacement figure (compensation model).

Empirical researches, theoretical reasoning and counseling practice support the correspondence model stronger. According to Jolene Hill (2014), Hall and colleagues (2009) results, compensation is temporary and is most evident with measures that more strongly tap into external expressions of religiosity (like how often one prays or attends church). They argue that compensation does not change the individual's underlying internal working model or attachment style [4, p. 56]. Tim Clinton and Gary Sibcy as practical Christian counselors, in their book "Attachments: why you love, feel and act the way you do" add to this idea arguing that insecure attachments are revealed most in times of impersonal tragedies, when these kind of persons inwardly tend to blame God, question His love and avoid His comfort [7, p. 152].

In Hill's research God attachment predicted all outcome variables independently of external religiosity. Therefore, God attachment appears to be a different construct and not just an expression of external religiosity. In fact, external religiosity in the multiple regression was slightly, positively related to post-traumatic symptoms, while attachment to God was negatively related [4, p. 62]. It could be that when a person is facing tragedy, she/he will attempt to go to church more, pray more, and read the Bible more in an attempt to feel better. In other words, the symptoms may cause an increase in external religious behavior; however, these behaviors, in the absence of an experience of having a secure relationship with God, are not helpful. In fact, this external religious behavior without trustful relationships with God breeds anger, disappointment and rebellion against God.

Therefore, in general, there are two separate attachment systems, related but distinct, one regarding how to be with people and the other regarding how to be with God. Hall and colleagues persuasively argue that internal attachment style arises from experiences; therefore, future research might focus on which experiences shape attachment to God. It is presumed that provided God is viewed as a secure attachment figure by Christians - as omnipresent, omnipotent and loving - those believers are likely to develop a secure attachment style to God that differs from their attachment style to people regardless their

experience with people.

Weighing the results of the studies mentioned above, in samples of self-identified Christians, both secure attached to people and to God contribute to positive outcomes following upsetting events or difficult life situations. Therefore we hypothesize that if God really is an attachment figure, this should pose that secure attachment to God was associated with greater life satisfaction and lower levels of loneliness, anxiety and depression. A certain ground to assert this can be found in a follow-up study of Kirkpatrick, Shillito, and Kellas (1999) who showed that secure attachment to God was inversely associated with loneliness among women [8, p. 513]. Likewise, Jones, Carpenter and Quintana (1985), Paloutzian and Ellison (1982) have reported that some forms of religiosity are more effective as a buffer against loneliness than others; for example, “born again” Christians (those who agree to the statement that they have received Jesus Christ as their personal Savior and Lord) scored lower on loneliness ( $p < .06$ ) than the nonreligious. Conversely, externally religious believers (those who agree to the statement that they try to follow the ethical and moral teachings of Christ) did not differ from the nonreligious. Therefore, explicit religiosity does not significantly correlates with loneliness [9, p. 135].

This raises the presumption that a non-religious person who does not have a secure relationship with God is not going to recover as well, following traumatic events (such as loosing close relationships due to death of a loved one or divorce) and, hence - is going to suffer from loneliness, as a religious person who has secure relationships with both God and people. However, the non-religious person may do better than a religious person who has an insecure attachment to God. This is something that could be tested in future empirical investigations.

**Conclusions.** Undoubtedly, the conception of God as a parental attachment figure is consistent with the beliefs and teachings of Christian tradition. In other words, the perceived availability and responsiveness of a loving God is a fundamental concept underlying Christianity. In this religious tradition, individuals proceed with the faith that they can personally and directly interact - through prayer and worship (a proximity-seeking behavior) - with a God who will be available to hear, to protect and comfort them in times of trouble. This is an explicit “haven of safety” concept. It may also be the case that the mere knowledge of God’s presence and accessibility allows many religious individuals to approach the problems and difficulties of human existence with confidence and security, an example of the secure base function of attachment relationships. In fact, God may be the absolutely adequate attachment figure (i.e., an omnipotent, omniscient, omnipresent, and infallible one), whereas humans are often inadequate.

Although many studies have found negative correlations between religiosity and loneliness, not all religious experiences produce positive affect. It is possible for religion to cause distress if it’s not related with deep secure relationships with God rooted in biblical Christian convictions. It was shown in this study that insecure attachment to God was associated with poorer outcomes following loneliness. Put another way, those who have assimilated implicit religiosity in their lives, rather than merely explicit

religiosity, will probably be less lonely, provided their implicit religiosity includes a healthy conception of God as an attachment figure. It would be advantageous for future empirical research to address this presumption.

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## **PEDAGOGY AND PSYCHOLOGY**

### **APPLICATION OF SOCIONIC METHODS AND TYPE THEORY IN THE ANALYSIS OF PERSONAL POTENTIAL AND MOTIVATION FOR PROFESSION SELECTION OF ECONOMISTS IN TRAINING**

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**Annotation.** *The article presents the results of experimental work on application of socionic methods and type theory in revealing personal potential of students of economic specialties, as well as determining their motivation for profession selection. Based on the research, the prevalence of certain psychotypes in economic specialties was revealed. It is suggested that in universities with competitive selection, a large number of applicants select their specialties in accordance with the strong functions of their psychotypes.*

*The type of students' motivation (extrinsic or intrinsic) of selection of economic specialties and correlation between the type of motivation and students' psychotypes are determined.*

**Key words:** *type theory, socionics, socionic functions, occupational attitude, students of economic specialties, motivation, psychotypes.*

Training of competent specialists in universities requires that teachers pay close attention to personality of a student. The success of such training depends on how well natural abilities of trainees are identified and developed and how well their personal potential is revealed. In [7] we justified application of type theory and socionic methods as tools for identifying such a potential. Later, we conducted an experimental study of personal potential of students in economic specialties on the basis of socionic approach and type theory [8]. The article presents the results of this experimental work.

Initially, we identified students' psychotypes on a sample group. Among the methods we used were surveys, observations, interviews and questionnaires by P. Tieger [10] and V. Gulenko [2, 3]. A total of 521 students of economic specialties FI (finance, banking and insurance) and PM (personnel management and labor economics) were recruited for the experimental work. The following universities were represented: Kharkiv Institute of Business and Management (KIBM) – 240 students, Kharkiv Institute of Finance (KIF) – 120 students, Kharkiv National Karazin University (KNKU) – 84 students, Poltava National Technical University (PNTU) – 77 students. The obtained data revealed certain trends in the manifestation of psychological types of students of these specialties.

As is known, socionics distinguishes between different occupational attitudes (clubs) depending on the combinations of two strong functions in the type model. Thus, the combination of sensory and logic shapes technical and managerial occupational attitude,

and the representatives of this club are called pragmatists; combination of sensory and ethics - social and communicative occupational attitude (the representatives are called socials); combination of intuition and logic - scientific and research occupational attitude (researchers); combination of intuition and ethics - humanitarian and artistic occupational attitude (humanitarians).

The research revealed that the students with the technical and managerial occupational attitude prevailed in both specialties. We consider it quite natural that these students are in the majority, since they have strong functions for logic (T) and sensory (S). They are characterized by such features as concreteness of thinking, realism, pragmatism, perseverance, scrupulousness. They easily operate with facts and figures, and that enables them to do well in the natural-science, professional-practical and general economic disciplines.

Socials ranked second. Their strong sensory (S) and ethics (F) functions make such students practical and communicative. They do well in professional and practical disciplines. Their selection of PM specialty is quite understandable, since mastery of it makes it possible for them to work with people, make specific practical decisions. It was necessary to find out by testing students' motivation why so many students-socials have chosen the FI specialty, which requires scrupulous analysis of digital information.

The students with humanitarian and artistic occupational attitude (humanities) ranked third in the general sample. The individuals with humanitarian thinking combine ability to work with images and emotions, categories of ethics and aesthetics (strong functions of intuition (N), ethics (F)). They are especially attracted by the humanitarian disciplines (philosophy, political science, history, business ethics, psychology, culturology). The motives for choosing the economic specialties by these students also were to be clarified.

The least numerous in both specialties were students with research attitude (researchers). Their strong functions intuition (N) and logic (T) give them an opportunity to be successful in various kinds of analytical work, in the development of concepts and forecasts, research and understanding of the laws of nature and society. They are interested in studying fundamental disciplines and more attracted by general principles, ideas, discoveries, not their specific embodiments in practice. Perhaps such specialties as FI and PM seem to them too specific and practical, so they were in the minority.

In connection with the study of the distribution of students in economic specialties in terms of occupational attitudes, E. Filatova's work "Socionic statistics for 299 women, men and their children" attracts attention. In this work the author considered distribution of the respondents between psychotypes, as well as between the clubs (occupational attitudes) on a sample of 299 respondents. E. Filatova notes that the sample was random and did not have professional orientation. She received the following data: pragmatists - 20.40%, socials - 19.53%, humanitarians - 27.76%, researchers - 32.11% [5]. In contrast to our studies, researches and humanitarians ranked respectively first and second. E. Filatova suggested that the unevenness of the distribution (the majority of respondents with a scientific occupational attitude) is due to the fact that the circle of communication of the scientific intelligentsia, to which all those who provided the data belonged, are

closest to the scientists. Obviously, in this case the professional orientation influenced the distribution of respondents according to the occupational attitude as well.

Further analysis of students' distribution of dichotomous functions showed that, in general, the functional signs predominate among students in both areas of training: extraversion (E), sensory (S), ethics (F), rationality (J). The results are shown in Table 1.

Table 1

**Statistics on the distribution of students in dichotomous functions  
(in % of the number of respondents in each area of training)**

Dichotomies	Finance, banking and insurance (FI)	Personnel Management and Labor Economics (PM)
Extraversion (E)	58,1	64,3
Introversion (I)	41,9	35,7
Sensory (S)	67,3	72,3
Intuition (N)	32,7	27,7
Logic (T)	43,5	49,1
Ethics (F)	56,5	50,9
Rationality (J)	62,3	68,7
Irrationality (P)	37,7	31,3

Among the students of the PM specialty, extroverts (64.3%) predominated over introverts (35.7%) that, in fact, correspond to the requirements for the future professional activity of an HR manager - to be an extrovert and not to get tired of communication. Although extroverts also prevailed among the students of FI specialty - 58.1% versus 41.9% introverts, their prevalence was not so significant.

Among the respondents in the sample as a whole and in the specialties, there was a significant predominance of sensory function (S) over intuitive one (N). For example, 67.3% of sensory types of the FI specialty and 32.7% of intuitive types were registered; on the PM specialty, the prevalence of sensory types over intuitive types was even greater: 72.3% versus 27.7%. As is known, the dichotomy of sensory / intuition determines the way information is collected. Sensory types' attention is riveted to the figures and facts, intuitive types pay more attention to ideas and theories. Naturally, such practical specialties as FI and PM proved to be more attractive for students with strong sensory function.

With regard to the logic / ethics dichotomy, the total sample tended to favor ethic types, although among the students of KNKU and PNTU logic types dominated. We assumed that strict competitive selection of students in these universities affects the prevalence of logic types. There is another possible reason why in general on economic specialties that require strict logical thinking, there turned out to be more ethic types than logic types. As noted by O. Kroeger and J. Thuesen, logic / ethics is the only



dichotomy that reveals a close correlation with the human sex. According to their data, two-thirds of logic types are among men, while among women, two thirds of them are with predominant ethical function [9]. Although we did not set out to investigate the relationship between psychotypes and gender characteristics, it is clear that the audience in these specialties is predominantly female.

On the dichotomies of rationality / irrationality, there was a significant advantage of rationality both in the sample as a whole and in the specialties. It turned out that there were more rationalists both on FI specialty - 62.3% against 37.7% of irrationals, and for PM specialty - 68.7% of rationalists, 31.3% of irrationals. Here we observed almost a golden cross section.

Next, we analyzed the frequency of manifestation of 16 types among students of economic specialties (FI, PM) in three universities: KIF, KNKU and PNTU (Table 2). The sample was 281 people. We deliberately excluded students from Kharkov Institute of Business and Management from the sample, as in this university there have not been competitive selection in recent years, and the preliminary analysis revealed an atypical distribution of HIBM students in occupational attitudes.

The psychotypes names are given here according to V. Gulenko [2, 3], their abbreviations - as they are commonly used in type theory [9, 10].

In both specialties, the unevenness in the manifestation of psychotypes was generally revealed. The same three leaders were observed: Administrator (ESTJ), Inspector (ISTJ), Enthusiast (ESFJ). All three types are rational and sensory. On FI specialty, the type of logical-sensory extrovert Leader (ESTJ) became an unconditional leader - 18.7%. On PM specialty it was slightly outstripped by the type of logic-sensory introvert Inspector (ISTJ): 15.2% against 14.1%. Both of them belong to technical and management occupational attitude, their total percentage for FI specialty was 32.4%, and for PM specialty - 29.3%, almost a third of the total of sixteen psychotypes.

In the context of the dominance of certain psychotypes, depending on the direction of instruction, the thesis by J.Shames [6], devoted to the identification of psychological determinants of the orientation of students at universities of culture, deserves attention. According to the results obtained by the scientist, the first three ranks on the sample of 467 students studied were taken by the following types: Psychologist (ENFP), Politician (ESFP), Seeker (ENTP). Attention is drawn to the fact that all three types have an extroverted occupational attitude (E), and they are all irrational (P). In addition, two of them - Psychologist (ENFP) and Seeker (ENTP) have the leading function of intuition (N), reinforced in the first case by ethics (F), and in the second by logic (T). The combination of logic (T), sensorics (S) and rationality (J) in the top three leaders of culturologists are not observed (like it was in our case in the top three on a sample of economists). For example, the type of Inspector (ISTJ) among students of "Social Pedagogy" specialty was in the amount of 2%, of "Culture Management" specialty - in the amount of 4%. The Administrator type (ESTJ) among social educators found manifestation in the amount of 4%, among library specialists - in the amount of 5%. But among the managers of culture, there were more representatives of the Administrator



type - 9% (management abilities are required for this specialty, even though they are not typical for culturologists in general).

Table 2

**Statistics of distribution of students by psychotypes  
(in % of the number of respondents in each area of training)**

FI				PM			
№	Type name	Number in the sample (people)	%	№	Type name	Number in the sample (people)	%
1	Administrator (ESTJ)	34	18,7	1	Inspector (ISTJ)	15	15,2
2	Inspector (ISTJ)	25	13,7	2	Administrator (ESTJ)	14	14,1
3	Bonvivant (ESFJ)	20	11,0	3	Bonvivant (ESFJ)	14	14,1
4	Psychologist (ENFP)	18	9,9	4	Guardian (ISFJ)	9	9,1
5	Guardian (ISFJ)	17	9,3	5	Psychologist (ENFP)	9	9,1
6	Politician (ESFP)	15	8,2	6	Mentor (ENFJ)	6	6,1
7	Mentor (ENFJ)	9	5,0	7	Commander (ESTP)	5	5,1
8	Mediator (ISFP)	8	4,4	8	Politician (ESFP)	5	5,1
9	Commander (ESTP)	7	3,9	9	Enterpriser (ENTJ)	5	5,1
10	Humanist (INFJ)	7	3,9	10	Humanist (INFJ)	4	4,0
11	Craftsman (ISTP)	6	3,3	11	Craftsman (ISTP)	4	4,0
12	Lyricist (INFP)	5	2,8	12	Analyst (INTJ)	3	3,0
13	Enterpriser (ENTJ)	5	2,8	13	Critic (INTP)	2	2,0
14	Analyst (INTJ)	3	1,7	14	Lyricist (INFP)	2	2,0
15	Critic (INTP)	3	1,7	15	Mediator (ISFP)	2	2,0
16	Seeker (ENTP)	0	0,0	16	Seeker (ENTP)	0	0,0
	Total	182	100		Total	99	10

The types that have found little manifestation among students of economic specialties: Seeker (ENTP), which is completely absent in both specialties, Critic (INTP) - 1,7 - 2%, Lyrical (INFP) - 2 - 2,8%, Analyst (INTJ) - 1,7 - 3%. A significant manifestation of the type with humanitarian and artistic occupational attitude of Psychologist (ENFP) on economic specialties (9.9% in FI, 9.1% in PM) is of interest. The significant presence of this type in PM specialty can be explained by desire and natural ability to work with people at close psychological distance. But Psychologist (ENFP) dislikes working with numerical information, that takes almost all of the time on FI specialty, and the choice of this specialty by a significant number of representatives of this type seems rather strange. The explanation is probably in the area of Psychologist's (ENFP) motivation to choose a specialty.

*The conducted research gave us an opportunity to assume that in universities with competitive selection the applicants' selection of specialties is determined by strong functions of their psychotypes that leads to more or less homogeneous formation of study groups. Thus, students with technical and managerial occupational attitude (pragmatists) and social-communicative (socials) occupational attitude prevail in economic specialties, and among the culturologists in most cases there are students with the humanitarian and artistic (humanitarians) and also social-communicative (socials) occupational attitudes. There is a so-called natural differentiation of students at the stage of specialty selection.*

After identifying students' psychotypes, we set the task to identify the motivation for students to select a specialty, determine the type of motivation (extrinsic or intrinsic) and presence or absence of a correlation between the type of motivation and student psychotypes. For this purpose, the questionnaire "Motives for profession selection" was used [4]. To test the assumption of correlation between students' psychotypes and the nature of motivation for selected specialty, statistical justification was used - the Spearman rank correlation coefficient, the number, by which the character and strength of correlation between two ranked indicators can be determined [1].

Let us dwell on the general results of the study. The motivation study was conducted on the six type leaders for each specialty. FI specialty turned out to be most attractive for Inspector (ISTJ), Psychologist (ENFP), Enthusiast (ESFP) types. But if this state of affairs for Inspector (ISTJ) and Enthusiast (ESFP) types can be explained by their intrinsic motivation - the matching of abilities, for Psychologist type (ENFP) extrinsic motivational factors turned out to be important - prestige of the profession, the influence of parents and friends on its choice, and intrinsic motive - the realization of the ability to manage. The Administrator type (ESTJ), which is ranked first in terms of the number in the sample, showed low and average scores in questions on intrinsic motivation for the selected specialty, but the highest score among all six types in the question of high pay, which indicates the predominance of extrinsic motives for choosing this type of FI specialty. For the Guardian type (ISFJ), the predominance of extrinsic motives in specialty selection was noted. In the question of the prestige of the selected specialty, it was ranked first, and this is an extrinsic motive. The Politician type (ESFP) (the last

in number in the sample of the six leaders) revealed low scores in almost all intrinsic motivation questions.

So, Inspector type (ISTJ) should be considered the most intrinsically motivated type for choosing FI specialty. Its intrinsic motives for the chosen specialty among the six leaders predominated: correspondence to abilities – ranked second; attractiveness of the profession – ranked first; realization of management abilities – ranked second; the opportunity to show creativity in the chosen profession – ranked first. At the same time, this type was ranked the last and penultimate for external reasons: high pay – penultimate rank; prestige of specialty – ranked last; influence of parents and friends – ranked last.

According to our observations, predominance of extrinsic motives in specialty selection by the types of Psychologist (ENFP) and Politician (ESFP) leads to further disappointment in the selected profession at the stage of training. Perhaps their irrationality and extroversion, which do not contribute to the work on the category "Person - Signed (numeric) information", are the matter of importance here. The types of Administrator (ESTJ), Guardian (ISFJ) and Enthusiast (ESFP) do not express a clear dissatisfaction with the training process and are more successful in it.

In general, a strong direct statistically significant correlation between the number of types in the sample and the answer to the question of the realization of management abilities was found in the sample of the six most common types for PM specialty. This means that the predominant types gave the highest score in the answer to this question. The types of Administrator (ESTJ) and Inspector (ISTJ) are ranked first and second according to the answer to the question whether the chosen specialty corresponds to their abilities. Prestige of the profession, high pay, opinion of parents and friends (extrinsic motives) did not significantly affect their choice, which indicates an intrinsic motivation for selection of the specialty. Psychologist (ENFP) and Enthusiast (ESFJ) also believe that PM specialty corresponds to their abilities and is attractive. Thus, Psychologist (ENFP) estimated the attractiveness of the profession to the highest score among the six leaders. It is interesting to note that Psychologist (ENFP) was the leader in terms of the number of points in the answer to the question on the possibility of showing creativity in the selected profession. Mentor (ENFJ) and Guardian (ISFJ) types got lower scores on almost all questions of intrinsic motivation, the issue of high pay was not a significant incentive for specialty selection, but their choice was influenced by an extrinsic motive such as preferences of parents and friends.

In general, it was revealed that Administrator (ESTJ) and Inspector (ISTJ) are the most intrinsically motivated types to choose the specialty of the PM on the parameters of suitability for the specialty, its attractiveness and ability to realize the possibility to manage. Enthusiast (ESFJ) and Psychologist (ENFP) types have both intrinsic motives (opportunity to show creativity, attractiveness of the specialty), and extrinsic motives - high pay for the Psychologist (ENFP) and prestige for Enthusiast (ESFJ).

**Conclusions.** Our work has led us to conclude that there is evidence of natural differentiation of students in specialty selection. In universities with competitive selection, students chose specialty in accordance with the strengths of their psychotypes.

This in turn leads to the formation of study groups consisting of a small number of repetitive types, mainly with technical and managerial and socio-communicative occupational attitudes. On both specialties (FI, PM) the same three leaders were revealed: Administrator (ESTJ), Inspector (ISTJ), Enthusiast (ESFJ). All three types are rational and sensory and have strong socionic functions corresponding to the work in the chosen specialties.

The study of the type of motivation of students' choice of economic specialties showed that the predominant types had an intrinsic motivation. Based on a sample of the six most common types for PM specialty, the strong direct statistically significant correlation was found between the number of types in the sample and the answer to the question on implementing management abilities.

Future work should concentrate on selecting and using such forms and methods of teaching that would develop the identified natural talents of students, which are subsequently claimed in their professional activities.

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## PEDAGOGICAL CONDITIONS FOR PROFESSIONAL TRAINING OF FUTURE PRIMARY SCHOOL TEACHERS TO PUPILS' LOGICAL SKILLS FORMATION

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**Annotation.** *The article reveals the essence of the concept of pedagogical conditions for future teachers' training to pupils' logical skills formation on the basis of philosophical, psychological and pedagogical literature analysis. On the basis of the theoretical study of the current state of the problem under study in the psychological and pedagogical literature and the results of the qualifying experiment, we have determined and grounded the pedagogical conditions for the training of future primary school teachers to students' logical skills formation: purposeful motivation of future primary school teachers to mastering the methods of students' logical skills formation; improvement of the content, programmatic and methodological provision of the process of training students of the specialty "Primary education" in the context of students' logical skills formation; use of active and interactive forms and methods in theoretical, practical and methodical training of students to logical skills formation of junior pupils.*

**Key words:** *pedagogical conditions, intellectual development, formation of logical skills, junior pupils, primary school.*

Changes in the content and conceptual foundations of primary education cause a social need of a new teachers' generation training. The purpose of future teachers' training to logical skills formation in primary school pupils is to explain students notions of basic logical concepts and methods of their operation, to be ready to solve logical tasks, which will contribute to pupils' logical skills formation.

The scientific novelty of the research results is: for the first time, pedagogical conditions, which provide an effective process of future teachers' training for the logical skills formation in primary school pupils have been substantiated.

The study of philosophical, psychological and pedagogical literature [3, 4, 7, 9] has given an opportunity to substantiate the concept under the study: we understand pedagogical conditions of future teachers' training to logical skills formation as a set of circumstances, content, forms and methods that provide effective training of future primary school teachers to logical skills formation of junior pupils.

On the basis of the theoretical study of the current state of solving the problem under study in the psychological and pedagogical literature and the results of the qualitative experiment, we have determined the following pedagogical conditions of future primary school teachers' training to pupils' logical skills formation:

- purposeful motivation of future primary school teachers to mastering the methods of pupils' logical skills formation;
- improvement of content and methodological provision of the process of training students of the specialty "Primary education" in the context of pupils' logical skills

formation;

- use of active and interactive forms and methods in theoretical, practical and methodical training of students to logical skills formation of junior pupils.

The first pedagogical condition is the purposeful motivation of future primary school teachers to mastering the methods of logical skills formation of junior pupils.

As we have already noted, only that teacher can provide logical skills formation in students, who possesses logical terms and concepts and can reasonably use them. So, at the first stage of the process of future teachers' training to logical skills formation of junior pupils, it is necessary to orient students at active participation in the process, to use purposeful motivation.

Targeted motivation, in our opinion, is the individual internal and external motives, which encourage the individual to continuous action, behavior changes, reorientation to the active orientation of the individual to professional self-determination, self-development, aimed at the final result.

In the context of our study, we consider the formation of purposeful motivation of students to pupils' logical skills formation as a process of forming their interests, awareness of the need and positive attitude to mastering the necessary vocational and pedagogical knowledge and skills for the further formation of pupils' logical skills. We distinguish external and internal motivation: the external motivation depends on the environment (active promotion of the project "Intellect of Ukraine" and the lack of proper training of teachers to educating pupils on its basis; modern requirements of society for the high-intellectual development of pupils; changes in the organization of educational process, pedagogical practice, including the development of modern technical means of training and their use in the process of training future teachers and students (ICT: TVs, projectors, interactive whiteboards etc.); positive example and support of others; internal motivation due to personal instincts and beliefs (interest in the formation of junior pupils' logical skills and the desire to succeed in this activity; awareness of the need for specially organized work and persistence in achieving the goals; personal views on the pupils' logical skills formation acquired during the pedagogical practice; the curiosity and inclination of future teachers to work with junior pupils and seek ways for their logical skills formation.

Such factors contribute to the formation of positive motivation in the context of our research:

- development of confidence in ability to promote the acquisition of pupils' logical skills in future primary school teachers;
- awareness of the need to master the methods for solving tasks in "Logic" with the aim of further pupils' logical skills formation;
- constant interest to professional development in accordance with new training programs in primary school aimed at intellectual development of the individual;
- a belief in the need for a constant process of self-improvement and self-education.

In order to form a positive attitude towards the problem under study at lectures on pedagogy and psychology, mathematics and methods of teaching mathematics,



students got instructions about requirements to a teacher in modern conditions (the new law "On Education", "The Concept of the Development of Education of Ukraine for 2015- 2025" etc.); the role, possibility of logical concepts application in career and pedagogical activity has been demonstrated: the direct relationship between the level of training to pupils' logical skills formation and the quality of the educational process has been confirmed by concrete examples from school practice; the fixation on the need of mastering this type of activity has been given; this kind of activity and approaches to the solution of tasks on the subject "Logic" in primary school has been demonstrated in practice; meetings and discussions with teachers were organized.

Thus, the formation of the students' purposeful motivation to mastering the methods of junior pupils' logical skills formation is a necessary pedagogical condition for career education of future primary school teachers and their training to future professional activity in the context of the problem under study.

The second pedagogical condition is the improvement of the content, programmatic and methodological provision of the process of training students of the specialty "Primary Education" in the context of pupils' logical skills formation.

Determining the second condition, we rely on the theory of a holistic pedagogical process of teacher's personality formation. In accordance with this theory, holism is evident in integration processes based on the synthesis of various scientific disciplines knowledge and is manifested in new organizational forms and teaching methods that provide the stock of theoretical knowledge and set the system of transition from educational activities to professional ones.

In order to implement the second condition, we try to reveal the possibilities of disciplines of the general cultural, psychological, pedagogical and subject blocks in future teachers' readiness formation for pupils' logical skills development. In particular, special attention was given to such disciplines as Philosophy, Pedagogy, Psychology, Mathematics and Methods of Mathematics.

It has been established that the course "Philosophy" introduces philosophical ideas and their place in the spiritual culture of society, the structure of philosophical knowledge, concepts of "consciousness", "knowledge", "reality", "thinking", "logic" and "language".

Studying the course "Pedagogy" students get acquainted with the factors of personality development (physical, intellectual, social and spiritual), study such topics as intellectual development of students and their mental education.

Studying "Psychology" students pay attention to types, forms, properties of the thinking process; essence, species, characteristic of attention; processes, types, quality of memory; means of students' psychological development, peculiarities of cognitive processes development (memory, attention, thinking); educational activity as a source of psychological development of junior pupil's personality; teacher as a subject of pedagogical activity; features and structure of pedagogical activity.

In the process of studying "Mathematics" students study elements of theory of sets and mathematical logic, different approaches to constructing a set of nonnegative



integers, methods of applying the theory of sets and mathematical logic to the definition of concepts of the school course of mathematics; mathematical statements and their structure; functions, equations, inequalities; quantities and their measurement; values studied in primary school; geometric quantities studied in primary school, their definition, properties and characteristics.

The course "Methods of Mathematics" introduces students to the description of the basic concepts of the initial course of mathematics and the sequence of its study; development of primary school pupils in the process of studying mathematics; formation of computing skills; methods for solving problems; methods for teaching algebraic and geometric material; methods of working on the quantities; analysis of alternative programs and textbooks in math for primary school.

Consequently, in the process of mastering disciplines, students get knowledge about the essence of "Logic", the peculiarities of psychological (intellectual) development, the use of methods, techniques, means of pupils' intellectual development; students get acquainted with various authoring methods of diagnostics and further intellectual development of junior pupils; receive theoretical, methodological and practical knowledge about organization of the process of studying in general educational institutions.

However, this training is fragmented, it does not show the peculiarities of pupils' logical skills formation.

Thus, for the implementation of the second condition, it is necessary to include a training material on diagnostics and peculiarities of the junior pupils' logical skills formation and methods of work in such disciplines as "Philosophy", "Pedagogy", "Psychology". During the study of "Mathematics" and "Methods of Mathematics" it is necessary to expand the sections, themes, subtopics of studying the basic logical concepts, operations on them, logical laws, etc.; pay more attention to the methods for solving tasks from "Logic". It is also advisable to increase the number of hours to study such sections.

Improving the content, in our opinion, can contribute to junior pupils' logical skills development. In particular, studying the disciplines, we propose the following topics:

1. The role and place of the junior pupils' logical skills formation in the system of education at the lessons of mathematics.
2. Logical concepts, propaedeutics of which is conducted in primary school.
3. Propedeutics of the concepts "statement" and "predicate".
4. Methods of concepts formation in primary school.
5. Methods of forming skills to classify concepts.
6. Methods of forming the ability to perform operations on speeches.
7. Methods of forming the ability to build the right considerations.
8. Content and methods of pupils' logical skills formation by alternative programs.
9. Means of pupils' logical skills formation in educational process (didactic game, projects, IKT).

For further consolidation of the studied material it is necessary to allocate and

reveal logic concepts in consideration of the corresponding topics of mathematics. For example, when studying the topic "Equation and inequality" it is necessary to consider the interpretation of the equation as a predicate (according to the current program) and reveal the logical content of the work proposed to conduct on this topic in school, in parallel with the presentation of the methods for studying equations.

During seminars and practical classes, it is advisable to study the following issues:

1. Disclosure of elements of logic implicitly present in the initial course of mathematics.

2. Allocation of tasks from the textbooks of mathematics for primary school, which implicitly contain elements of logic.

3. Methods of work with tasks, in the course of which logical skills are formed.

4. The development of a system of tasks similar to those given in the textbook, with the only difference that logical concepts and skills, propedeutics of which is carried out in the process of performing these tasks should be more clearly described.

5. Methods for correction the most common logical errors of junior pupils.

6. Selection of tasks to prevent such errors.

Important means of improving the process of future primary school teachers' training for the pupils' logical skills formation is to introduce special courses, seminars, workshops, etc. into the variational part of the curriculum. We have chosen a special course "Logical foundations of the initial course of mathematics".

Different forms of lectures (review lecture, problem lecture, lecture-conversation, etc.) were used to describe the main topics of the special course.

The lectures concentrated the most important material and provided the students with the necessary knowledge and skills. Basically, all lectures included elements of practical classes.

Students presented lectures, reports, business games. The structure of practical classes in general corresponds to I. Lerner's didactic conception about three levels of mastering knowledge: the reproduction of knowledge, the application of knowledge on a model, and implementation of knowledge in a changed, non-typical situation.

Students acquired the experience of independent activities (approbation of theoretical knowledge in practice) during the educational and pedagogical practice including attending classes and further analysis and self-analysis of them.

In order to solve pedagogical tasks in the context of the problem under study, the student must use obtained knowledge in psychological, pedagogical, methodological and special disciplines not in isolation, but in a complex way. Students were offered the tasks that contribute to junior pupils' logical skills formation. Future teachers attended lessons conducted by their classmates and primary school teachers, analyzed and discussed them. All classes, where students from experimental and control groups were trained, had the same tasks:

a) tasks aimed at the development of analysis and synthesis.

1. The combination of elements into a single whole:

Example.

The end of the first and the beginning of the second word is the name of the unit of mass.

Milli (...) ophone

2. Finding different signs of the subject:

Example.

1) How many angles, sides and vertices in a hexagon?

2) Paint the figures with three angles. How are they called?



3. Recognition of the object according to the specified features.

Example.

The object has the following features: it is sour, yellow, oval.

What it is?

4. Consideration of the object in terms of different concepts.

Example.

The concept "a spit".

What signs of this concept can you name? (long, sharp, wood, metal, lush, dense).

What kind of object appears in your imagination?

b) tasks aimed at developing the ability to compare.

Study the drawings (submit pictures) and find the differences. Explain.

c) tasks aimed at forming the ability to classify.

1. Formation of the ability to divide objects into classes according to specified description.

1) Numbers: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

Divide them into two groups:

a) even numbers;

b) odd numbers;

Which group should include numbers 12, 21, 33, 16?

2) Find the puzzle. "Match it" (submit the corresponding drawings).

In practice, students conducted the study necessary for writing coursework and final qualification papers.

The third condition involves the use of active and interactive forms and methods in theoretical, practical and methodical training of students for the junior pupils' logical skills formation.

In active study students become the subject of educational activity, are engaged in dialogue with a teacher, actively participate in the cognitive process, realizing creative, exploratory and problem tasks. Active teaching methods are ways in which teachers and students interact with one another, and students are active participants in the educational process.

The notion "interactive" is derived from English word "to interact" (syn. "to collaborate") [8]. In the context of interactive learning, knowledge acquires a different

form. Interactivity in learning can be explained as the interaction of students, finding them in the mode of conversation, dialogue, joint action [5].

Interactive learning methods can be considered as the most perfect form of active methods. In other words, unlike active methods, interactive ones are oriented towards a broader interaction of students not only with the teacher, but also with each other and they are aimed at the dominance of student activity in the educational process. The determining features of active and interactive learning are the students' intellectual activity intensification, their independent decision-making skills formation.

Interactive learning in the context of this problem involves the modeling of life situations with the help of logical concepts and operations on them; solving creative tasks with the help of logical schemes and laws; joint solution of assumptions, extraction method, finding the worst variant, etc.

A participant in interactive learning, a future teacher, must set certain learning goals, develop learning activity, master the reflection of his learning activities. The teacher, in his turn, must be able to create an atmosphere that encourages students to engage actively; the process of teaching must be based on such methods that would promote the development of logical skills and independent learning of students, stimulate reflection, apply effective methods of teaching and search for new teaching methods. The use of an interactive strategy changes the role and functions of the teacher – he ceases to be a central figure, he regulates the educational process, is responsible for its general organization, defines the general direction (prepares the necessary tasks for the lesson, formulates the questions for a discussion in the groups, controls the time and order of the intended task, gives advice, helps in case of serious difficulties).

The structure of the educational process in establishments of higher education contains three groups of organizational forms in education: theoretical, practical and methodological. The choice of organizational forms of education is determined by the peculiarities of the subject, the content of the educational material, the peculiarities of the study group, etc. Each of the organizational forms of training in establishments of higher education has certain features. Forms of theoretical training are lectures, seminars, educational excursions, educational conferences, consultations. The forms of practical training are laboratory classes, practical and seminar ones. Credits, exams, course papers, final qualifying projects and practical training – are forms of students' knowledge and skills control. Independent and extracurricular activities occupy intermediate place.

During theoretical and practical training of students it is advisable to use the following types of interactive teaching methods for students' logical skills formation:

The method "brainstorming" is a method of solving urgent tasks in a short time. The essence of the method lies in the fact that it is necessary to express as much ideas as possible in a small amount of time, discuss them and classify them. This method is used to solve complex problems. The method of brainstorming can be used in various types of activities: working with teams, small and large training groups, in individual work.

For example, when studying the topic "Solving problems in many ways" teacher should present the statement of the problem, using a projector, and formulate questions

clearly, then suggest everyone to express ideas for solving a given task, to analyze each statement mentioned. It is obvious to note all the ideas in the notebook in the order they were presented without comments or questions. It is necessary to warn students not to miss any idea of their colleagues, not to criticize it, but to offer new ideas, perfecting the previously pronounced ones. Teacher should encourage students to formulate as much as possible ideas, because this amount generates the quality of solving the problem.

"Round Table" – a method of giving classes with students who are already familiar with the methodology for solving the problem. At "round table" they can and should try to ask questions on the topic of discussion, to argue for approaches to solving a certain task and to report on a successful and bad experience. The "Round Table" is a kind of meeting on the exchange of experience and discussion of practical knowledge, achievements and mistakes. In this way, students learn the content of the topic, its key aspects.

"Discussion" is a method of giving classes, aimed to mobilize the practical and theoretical knowledge, the views on the problem under consideration. The discussion is successful when considering controversial issues in the study of the topic, but in educational process such a situation may not appear. For these reasons, planning classes as a discussion in advance is not entirely correct. The main preconditions for using the discussion in active learning are: it is necessary to include in the subject under study some tasks that have different solutions, or deliberately adhere to substantially different points of view. It can be done during lectures and other classes [2].

"Aquarium". The participants form groups of 4-6 people and read the tasks. One group takes place in the middle of the room, receives an instruction for conducting a group discussion: "Read the tasks aloud, discuss it in the group, take a joint decision within 3-5 minutes or sum up the discussion." When the time is over, the group returns to its place. It is necessary to discuss the task: Do you agree with the group's opinion? Was this idea sufficiently argued? Then another group takes place in the center of the circle. The following group may discuss another issue or another problem [6].

Reflection: why did we do that?

Method of team support for individual learning. The essence of the method is to enable small groups to advance in learning material at an individual pace. Groups are offered individual assignments on specific topics of the program, in which students can ask each other for assistance and advice. They can also check the work of each other, correct the errors. The quality of the tasks is checked by the teacher or his assistants. At the end of the topic, which includes several lessons, the results are summarized [1, 6, 10].

Further we will consider the interactive exercises used in the classroom during the study of the mathematical section "Elements of Mathematical Logic". Before implementation such exercises, teacher must necessarily explain the rules.

Topic: "Concepts and their definitions"

"Microphone". Rules:

- only person with an imaginary microphone can speak;

- the submitted answers are not commented and are not evaluated;
- when someone speaks, the rest of the group does not have the right to interrupt or tell something.

Students pass round an imaginary microphone and make statements about the subject, the image of which is demonstrated by the teacher. Students indicate the size, color, shape and other features of the subject.

For example, a tangerine.

1st student. Tangerine is orange.

2nd student Tangerine is sweet.

3rd student Tangerine is round.

Conclusion. The idea of an object, expressed in a word or phrase, is a concept.

Work in pairs. This form of educational and cognitive activities organization of students and pupils can be used to achieve a variety of didactic goals: retention, reinforcement, verification of knowledge, etc. Work in pairs, all students get an opportunity to express their point of view, have time to think, exchange ideas with each other and only after that to express their thoughts. This kind of group work helps to develop communication skills, ability to express, persuade and prove the opinion.

In the process of such work, student can quickly and thoughtfully perform tasks that in other circumstances require a significant amount of time. While working in pairs (or groups), students can study the textbook as well as do teacher's tasks. For example, students, having the task of finding common essential features of a subject, discuss the problem with the partner and come to a common agreement and distinguish objects with common features, etc.

To determine the essential features of the subject, the teacher can use such exercise as the "Box". Students are grouped together. Each group chooses a leader. The leader of each group takes the box and pulls out a card with a task for rivals. If a group of competitors cannot answer the question, then the group that ask it has to give an answer. If the answer is wrong, competitors should argue using counterexamples.

It is a matter of the teacher what methods and techniques to use giving educational material. As a variant, the method "Press" can be used. Students are grouped together. Participants need to take and clearly explain their position on the solution of the task, to convince others. This method gives the opportunity to learn how to formulate and express opinion during a discussion in a reasoned, clear and concise form, to influence the opinion of other participants. In order to be concise and persuasive, each statement should have the following structure:

Position: Start with the words "I believe that ..." and express your opinion.

Substantiation: Start with the words "... because ..." (the reason for the emergence of such an opinion must be substantiated).

Example: Continue the statement by the word "... such as ..." and give the facts confirming the position of the participant.

**Conclusions.** To finish the statement "So (that's why) I believe ..." and to summarize opinion, draw a conclusion. For example, "I believe that the definition of the concept

"square is a quadrilateral having equal sides" is inaccurate because not only the square is equal to the side, but also the diamond, which is also a quadrilateral, the sides are also equal. Therefore, I believe that in this notion it is necessary to replace the concept of a quadrilateral with the nearest generic notion - a rectangle.

Teachers should combine several teaching methods in different combinations in any type of training session. Applying certain teaching methods depends on the task and conditions of each type of classes.

Therefore, organizing an educational process based on the use of interactive learning methods, teachers must take into account the active participation of all students in the process of learning. Joint activity means that everyone makes their personal contribution, in the course of work there is an exchange of knowledge, ideas, means of activities.

Concluding the analysis of the conditions for future teachers' training to the junior pupils' logical skills formation, we note that we have intensified such conditions that provide the formation of motives in future primary school teachers for mastering theoretical knowledge and skills of junior pupils' logical skills formation and their use in practice; improvement of content, programmatic and methodical support of training students in the specialty "Primary education" in higher educational establishments in the direction of forming logical skills in primary school pupils; use of active and interactive forms and methods in theoretical, practical and methodical training of students for the junior pupils' logical skills formation. All this contributes to raising the level of knowledge and practical skills necessary for future teachers to intensify the junior pupils' logical skills formation and increase the effectiveness of the process of training to this type of activity in general. Prospects for further research on the subject of research are seen in approbation of the model of future teachers' training to junior pupils' logical skills formation.

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## **MEDICINE AND PHYSIOLOGY**

### **ANALYSIS OF THE POSSIBLE INTERACTION BETWEEN AMANTADINE AND GLYCINE**

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**Annotation.** *Interaction of drugs is the change in the effectiveness and safety of a single drug, compared with its simultaneous or consistent application with others. The purpose of this work is to determine the possible interaction of amantadine and glycine in the consistent use for Parkinson's syndrome pharmacotherapy. Thus, the same as in case of the pharmacodynamic phase, one should not expect a negative interaction of amantadine with glycine in the pharmacokinetic one, that makes their combined administration for treatment of parkinsonian syndrome scientifically grounded.*

**Key words:** *chemical and physico-chemical interaction, Amantadine, Glycine, pharmacodynamic drug interaction.*

It is known that extrapyramidal disorders are traditionally referred to as motor disturbances caused by lesions of basal ganglia or associated structures that are part of the extrapyramidal system. The classification of extrapyramidal disorders includes both extrapyramidal syndromes and extrapyramidal diseases. The latter include diseases that selectively affect the basal ganglia and are predominantly manifested by extrapyramidal syndromes (for example, Parkinson's disease, or essential tremor). Parkinson's disease is characterized by akinesia (hypokinesia) or rigidity (akinetik-rigorous syndrome), which are often accompanied by resting tremors and postural instability. Approximately 80% of Parkinsonian cases is the Parkinson's disease itself, for which clinically distinct one-sided or asymmetric symptoms at the onset of the disease, a pronounced reaction to levodopa's agents, the presence of a resting tremor and pathomorphological changes – degeneration of neurons of the the substantia nigra with the formation in intact neurons of intracellular inclusions – Lewy bodies [1].

Amantadine is one of the drugs that start treatment for parkinsonism. This medicine contributes to the synthesis of dopamine, reducing its back capture, while there is protection of neurons of the substantia nigra by blocking glutamate receptors. Therefore, for the correction of modeling extrapyramidal disorders that are consistent with parkinsonian syndrome, we considered it expedient to use amantadine as a basic therapy. It is important to note that Parkinson's syndrome is not only a violation of the extrapyramidal system. So in 70-80% of patients are observed neurotropic disorders – sleep disturbance, depression, cognitive deficiency, and others. Approximately half of patients with Parkinson's disease without dementia have mild cognitive impairment,

even in the early stages of the disease, and sometimes even before the development of mnemonic deficiency. This, in particular, violation the executive (planning and memory), visual-spatial and linguistic functions. It is known that among the drugs of nootropic action, we note a very wide range of drugs that are used to reduce and eliminate cognitive deficits, but not all of them are safe [2].

Glycine has a mild psychoactive effect, improves blood circulation, due to normalization GABA level, has anticonvulsant and antihypoxic properties. It is indicated when memory is reduced after an injury, stroke on the background of chronic diseases, etc.

Therefore, in our opinion, the research of glycine for reducing the manifestations of cognitive deficits on the background of anti-parkinsonian therapy is very important and relevant. We have previously studied the antiparkinsonian action of glycine in association with amantadine in catalepsy manifestations in rats and tremors in mice, and now it is interesting to determine the possibility of interactions of glycine and amantadine with simultaneous use.

Interaction of drugs is the change in the effectiveness and safety of a single drug, compared with its simultaneous or consistent application with others. Simultaneous use of xenobiotics, food, alcohol and smoking is the important aspect of the drug's interaction. Interaction of drugs that change the effectiveness and safety of pharmacotherapy has a clinical significance [3]. The interaction of medications, which leads to increased efficiency and safety of pharmacotherapy, underlies the rational combination of drugs. The combination of drugs which can result in a decreased effectiveness of pharmacotherapy is called irrational. Potentially dangerous combinations of drugs are a serious clinical problem. According to various authors, from 17 to 23% of drugs combinations, prescribed by physicians, are potentially dangerous. So in 16-18% of patients receiving such dangerous combinations, side effects are developed. In addition, the side effects arising from the application of potentially dangerous combinations also represent a serious economic problem, as the cost of their treatment is half the cost of therapy for all medical complications. The study of the mechanisms of drug interactions is one of the possible ways to increase the effectiveness of combination therapy and its safety.

The reason for the undesirable effects of interaction may be, firstly, physical, chemical or physico-chemical incompatibility and, secondly, pharmacodynamic and pharmacokinetic interactions.

The purpose of this work is to determine the possible interaction of amantadine and glycine in the consistent use for Parkinson's syndrome pharmacotherapy [4].

The first stage of research was the study of chemical and physico-chemical interaction of amantadine and glycine. This inconsistency arises from the chemical reactions (oxidation, reduction, hydrolysis, double exchange, etc.) of substances with each other. Possible interactions at the physico-chemical level in the combination of amantadine and glycine are developed due to the peculiarities of the structure and the presence of functional groups. Thus, amino group (functional group (1)) is the most

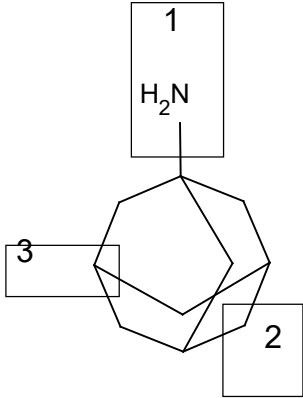
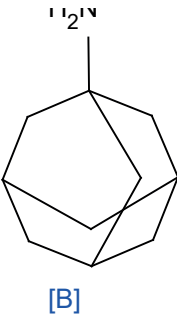
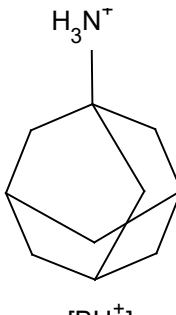
reactive in amantadine (Table 1), where protonation and deprotonation (depending on the pH of the medium) occurs first of all. As is evident from the rate of pKa ( $10.76 \pm 0.2$ ) in physiological conditions (pH = 7.4), the compound is a cation in an ionized form which goes under deprotonation at a high pH level only. This determines the high solubility in the aqueous medium (the estimated value is 6.61 mol / L) and low lipophilicity at pH = 7.4 ( $\log D = -0.88 \pm 1.0$ ). The ability of the nitrogen atom to reverse protonation also determines the formal number of proton donors, but for the protonated form of amantadine, this process occurs only at high pH values as stated above. However, since this process is equilibrium and there is always a certain amount of non-ionized form with high lipophilicity ( $\log P = 2.22 \pm 0.24$ ), the compound is notable for effectively overcoming a biological barriers by passive diffusion.

Other possible reactive centers of the molecule include the secondary (2) and tertiary (3) carbon atoms of the adamantane structure. It is known that the tertiary carbon atom is more reactive than the secondary one. Due to the weak inductive effect of aliphatic groups and the partial stabilization of free radicals, which is usually formed as an intermediate, these reactions are oxidative-reducing and can occur only in reactions with strong oxidizing agents. Thus, the amantadine reactivity is limited by the amino group only, where the most probable is the salivation reaction (protonation with the formation of salts). Formation of amid derivatives and Schiff alkali are the other inherent to the aliphatic amino group reactions. However, the first of these reactions can take place only under the conditions of salt and carboxylic acid dehydration (for example, at elevated temperature), but the conditions of the second one are necessity of the aldehyde or ketone derivative in a weakly acidic medium.

Glycine is a bifunctional compound which contains both amino (1) and carboxyl groups (2) in the structure (Table 2). Since the nitrogen of the amino group is a donor of unbound electronic dyad (basic properties), and the hydroxyl of the carboxyl group is capable of dissociation (acidic properties), glycine exists in the form of a bipolar ion (zwitterion) which polarity (polar surface of glycine) is 63.32 Å<sup>2</sup>. Consequently, it determines the high solubility in water (102.3 g / l theoretically calculated and 250 g / l according to experimental data). Due to the amphotericity of glycine, it exhibits both acidic and alkaline properties depending on pH and exists as a zwitterion (pKa amino group  $2.43 \pm 0.1$ , whereas for carboxyl  $9.64 \pm 0.13$ ). The isoelectric point is an another amino acids characteristic where the number of positively charged particles in a solution equals the number of negative ones. Therefore, as pI rate for glycine is 6.1, a certain fraction of glycine exists in the form of a carboxylic anion under physiological conditions. The presence of charge in glycine determines not only its pressure in water solubility, but also the insignificant ability to overcome biological barriers through passive diffusion (in particular, hydrophobic regions of lipid membranes) and enters the internal environment, mainly through active or facilitated transport.

Table 1

## Structure of amantadine molecule

		
	 [B]	 [BH <sup>+</sup> ]
Polar surface area, (PSA), Å <sup>2</sup>	26,02	
pKa	-	10,76 ± 0,2
Solubility, g/l (25 °C)	6,61 mol/l (pH 7,4)	
logD (logP)	2,22 ± 0,24	-0,88 ± 1,0
Proton donors number	0	1
Proton acceptors number	1	0

The reactivity of glycine is provided due to the presence of these two functional groups. So, besides the ability to form salts, which is primarily realized by the formation of carboniferous acid, glycine is capable of forming amides (from amino groups) and esters (with hydroxyl groups). It should be noted that these reactions occur only in case of water removal, in the presence of which, on the contrary, the hydrolysis of amides or esters takes place. Consequently, in conditions of the organism (in particular, the gastrointestinal tract) they are exceptions. Therefore, only ionic interactions between amantadine and glycine that result in the formation of an ionic compound

(aminoadamantane) are possible to be expected at the physicochemical level first of all. In the interest of this, the fact that amantadine amino group is deprotonated only at high pH values (higher than  $10,76 \pm 0,2$ ), and the carboxyl group of glycine (due to the presence of an amino group) has high acidity - protonation of carboxylic acid occurs only at a pH below  $2.43 \pm 0.1$ . In favor of this is the fact that amantadine amino group is deprotonated only at high pH rates (higher than  $10,76 \pm 0,2$ ), and the carboxyl group of glycine (due to the presence of an amino group) has high acidity - protonation of carboxylic acid occurs only at a pH below  $2.43 \pm 0.1$ . However, taking into account that the amino group of glycine also acts as an acceptor of protons and is in close proximity to the carboxyl group, as well as the fact that amantadine, as a pharmaceutical substance, is used as a hydrochloric salt, it can be concluded that the chemical interactions between these compounds are excluded, and the combination may be stable.

Table 2

## Structure of glycine molecule

	 [LH <sup>+</sup> ]	 [LH]	 [LH]	 [L <sup>-</sup> ]
Polar surface area, (PSA), Å <sup>2</sup>		63,32		
pKa	2.43 ± 0.1			9.64 ± 0.13
Solubility, g/l (25 °C)	102.3 g/l (250 g/l – experimental values)			
logD (logP)		(-1,03 ± 0,28)	-3,53 ± 1,0	
Proton donors number	2	1	1	0
Proton acceptors number	0	1	1	2

The next stage of our study was the determination of pharmacodynamic drug interaction. This type of interaction develops when two medicinal products with a summation or antagonistic effect at the cellular, physiological or physico-chemical levels are administered at same time. Although this type of interaction is often used for therapeutic purposes, there may be unwanted results as well. If the interaction is carried out at the receptor level, it mainly concerns agonists and antagonists of different receptors types. In case of synergism, the interaction of substances is accompanied by an increase in the final effect. Synergism of drugs can be manifested by simply summing or potentiation of the final effect. Summarized (additive) effect is observed with simple addition of effects of each component. When the overall effect exceeds the sum of the separate effects of both substances after combined administration of these substances, it indicates potentiation.

It has been established that the anti-parkinsonian effect of amantadine is realized by increasing the synthesis of dopamine in presynaptic terminals, increasing the release of dopamine in the synaptic cleft, inhibition of reuptake of dopamine in the presynaptic terminal, stimulation of expression of D2-dopamine receptors in striatum, and indirect anticholinergic action. A new mechanism of amantadine pharmacological effect was discovered recently: ability to block glutamate NMDA receptors predominantly at the level of striatum. It expands the range of the use of these drugs not only with secondary Parkinsonism, but also with other forms of central motor disorders. Currently, it is widely recognized that glutamate NMDA receptor antagonist of amantadine sulfate subtype, which inhibits neurotoxic effects of glutamate, has a neuroprotective effect [5].

Glycine is a substituted amino acid that has the properties of a metabolism regulator. Glycine is an inhibitive neurotransmitter, a regulator of metabolism in the brain. The biological targets of glycine are glycine and GABA receptors that regulate the activity of glutamate receptors. Due to these properties glycine is able to reduce conflict, psycho-emotional stress, aggressiveness, improve mood, and increase social adaptation.

Consequently, the pharmacodynamic action of amantadine and glycine depends on different mechanisms of interaction with the corresponding biological targets, therefore, one should not expect side effects while receiving them simultaneously. Particular attention should be paid to the features of pharmacokinetic interaction - the change of one or several characteristics of the drug: absorption, distribution, metabolism or excretion. These types of interaction are usually determined by the following parameters: serum concentration, half-life, binding to proteins, the amount of free drug in the blood, and the rate and amount of the drug excretion. Amantadine is well absorbed from the gastrointestinal tract after oral administration.  $C_{max}$  is 5 hours; amantadine sulfate  $T_{1/2}$  - 12-13 hours, amantadine hydrochloride - 30 hours. It is eliminated by the kidneys in the unchanged form. Amantadine metabolism in the organism under the action of enzymes of the monooxygenase system of hydroxylated derivatives was not fixed, and almost the only way of its biotransformation is amino conjugation i.e. acetylation

Unlike amantadine, glycine is not absorbed by simple diffusion, but by the specific carriers GlyT1 and GlyT2 [6]. The processes of glycine metabolism are characteristic



of amino acids and do not affect the enzymes that catalyze medications of xenobiotic origin.

**Conclusions.** Thus, the same as in case of the pharmacodynamic phase, one should not expect a negative interaction of amantadine with glycine in the pharmacokinetic one, that makes their combined administration for treatment of parkinsonian syndrome scientifically grounded.

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## ДИНАМИКА ИЗМЕНЕНИЯ СОСТОЯНИЯ ЖЕВАТЕЛЬНЫХ МЫШЦ И ОККЛЮЗИОННЫХ СООТНОШЕНИЙ ЗУБНЫХ РЯДОВ В РАННИЕ И ОТДАЛЕННЫЕ СРОКИ ПРОТЕЗИРОВАНИЯ ПАЦИЕНТОВ НЕСЪЕМНЫМИ ЗУБНЫМИ ПРОТЕЗАМИ

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*Moroz Ju., Nespriadko V., Lysiuk S. Dynamic of changes in the state of masticatory muscles and occlusal correlations of dentition in the early and distant periods of prosthetics of patients with non-removable dentures.*

*Annotation.* The article describes dates of the dynamics of changes in the state of occlusal correlations of dentition and the state of masticatory muscles of patients with included dentition defects, which were treated with non-removable dentures. The data of the computer analysis of Tskan occlusion and electromyography of the masticatory muscles in the early and late periods of prosthetics with non-removable dentures are presented.

*Key words:* dental-jaw apparatus, non removable dentures, jaw muscles, electromyography, occlusal inferences, adaptation, low jaw, occlusal interferences, neuromuscular complex.

**Актуальность:** Исследования нарушений окклюзии зубных рядов является одним из важнейших критериев в комплексном функционировании зубочелюстного аппарата (ЗЧА). Как известно, протезирование дефектов зубных рядов НЗП оказывает значительное влияние на окклюзионные соотношения зубных рядов, в частности, и всего ЗЧА, в целом. Проблема адаптации пациентов с включенными дефектами зубных рядов после протезирования НЗП является актуальной и до конца неизученной.

Для решения поставленных задач необходимо комплексное исследование параметров динамической окклюзии зубных рядов. [1-3]. Так же следует учитывать состояние ЖМ в ранние и отдаленные сроки адаптации пациентов к НЗП, поскольку атрофические и дисбалансированные процессы, которые происходят вследствие потери зубов и окклюзионно-артикуляционных нарушений негативно отражаются на жевательных и мимических мышцах ЗЧА [4-7]. Многие исследования, базирующиеся на изучении взаимосвязи окклюзионных соотношений челюстей и нейро-мышечных структур выявили зависимость функционального состояния ЖМ от качественных характеристик восстановленной окклюзии зубных рядов, а так же числом контактов зубов и строением зубных рядов [8-10].

Анализируя собственные клинические наблюдения, мы выявили, что после протезирования пациентов НЗП, не смотря на тщательность и точность проверки

и коррекции окклюзионных соотношений в день припасовки и фиксации ортопедических конструкций, пациенты предъявляют ряд жалоб. Таких как: дискомфорт в полости рта, сложности при смыкании зубных рядов, болезненные ощущения в жевательных мышцах, треск в полости рта. Это позволило сделать предположение о возможном изменении состояния окклюзионных соотношений в период адаптации пациентов к НЗП и необходимость глубже исследовать этот вопрос с целью предотвращения дальнейших осложнений после протезирования НЗП [11]

В связи с вышесказанным, период адаптации пациентов в ранние и отдаленные ее сроки, должен быть тщательно проанализирован с помощью таких функциональных методов исследования как: компьютерный анализ окклюзии TScan и ЭМГ ЖМ [12]

**Цель исследования.** Проанализировать динамику изменения состояния окклюзионных соотношений зубных рядов и степень изменения электромиографической активности жевательных мышц по количественным и качественным показателям в ранние и отдаленные сроки протезирования пациентов несъемными зубными протезами

**Материалы и методы исследования.** Объектом исследования стал репрезентативный контингент пациентов: 26 – женщин, 21 – мужчина. Всего было обследовано 47 пациентов из которых 10 - составили контрольную группу с нормативными показателями, 37 – составили группу исследования: 25 из которых вошли в 1 подгруппу (им были изготовлены мостовидные протезы с керамической облицовкой протяженностью не более 4-х зубов на одной из челюстей) и 12 – 2 подгруппу (им было выполнено тотальное протезирование НЗП одной из челюстей). В исследование не включали пациентов с дистально неограниченными дефектами зубных рядов, со съемными протезами, заболеваниями тканей пародонта, признаками дисфункциональных состояний височно-нижнечелюстных суставов (ВНЧС) и заболеваниями СОПР. Компьютерный анализ окклюзии TScan III и ЭМГ ЖМ проводили с помощью диагностического комплекса BioPac фирмы BioRESEARCH Associates (США) до начала ортопедического лечения, в день фиксации НЗП, через 1, 3 и 6 месяцев после протезирования.

**Результаты исследования и их обсуждение:** пациенты группы исследования предъявляли после протезирования НЗП ряд жалоб, основными из которых были: боль в витальных зубах, покрытых коронками; единичные болевые проявления в ЖМ; дискомфорт при смыкании зубных рядов; напряжение в ЖМ.

Мы исследовали такие характеристики окклюзии, как: время смыкания/размыкания зубных рядов, баланс окклюзии правой и левой сторон, локализацию первых окклюзионных контактов, контакты в динамических окклюзиях, наличие супраконтактов. Результаты наших исследований представлены на рис. 1, 2, 3, 4.

Исследования ЖМ было проведено с помощью 8-ми канального электромиографа по таким параметрам: состояние покоя ЖМ пациента, произвольное жевание, волевое сжатие ЖМ, заданное одностороннее жевание.

Результаты исследования количественных и качественных показателей состояния ЖМ в разные периоды после протезирования НЗП представлены на рис.5, 6, 7, 8, 9.

**Выводы.** 1. В день фиксации НЗП и на начальных этапах адаптации к ним время окклюзии и дезокклюзии значительно превышало нормативные показатели. В отдаленные сроки время окклюзии и дезокклюзии приблизилось к норме, а именно составило 0,1 секунду во время смыкания и 0,12 секунд во время размыкания зубных рядов.

2. Баланс окклюзии правой и левой сторон зубных рядов в большинстве случаев достигает приемлемых показателей только через 6 месяцев после фиксации НЗП.

3. Вектор суммарной окклюзионной загрузки на начальных этапах адаптации к НЗП был смещен в сторону дистальной группы зубов, что обусловлено длительным привычным жеванием вследствие наличия дефекта зубного ряда. В то время как на момент завершения нашей диагностики, мы наблюдали его смещение к середине, что свидетельствует о равномерном распределении жевательной загрузки по всему зубному ряду.

4. Судя по результатам компьютерного анализа окклюзии Тскан, следует вывод, что в отдаленные сроки адаптационного периода окклюзионные контакты пациентов обеих групп исследования стали равномерными и локализованными по всему зубному ряду в отличие от данных, полученных в ранние сроки после протезирования.

5. Исследуя контакты зубных рядов в эксцентрических окклюзиях, мы выявили такие закономерности:

- Контакты в передней окклюзии уже через 6 месяцев наших наблюдений начали отвечать физиологическим нормам в сравнении с тем, что у 7 пациентов группы исследования 2 подгруппы через 1 месяц после протезирования мы наблюдали единичные контакты на боковых зубах во время протрузионных движений нижней челюсти.

- Касательно боковых движений нижней челюсти, следует отметить, что у 15 пациентов мы наблюдали рабочие супраконтакты на протяжении всего движения, у 3 пациентов – балансирующие супраконтакты и контакты чрезмерной силы на рабочей стороне у 5 пациентов. В поздней фазе латеротрузионного движения преобладала групповая направляющая функция.

- Касательно супраконтактов в центральная окклюзии, то в поздние периоды адаптации, в большинстве случаев, наблюдалось улучшение ситуации, поскольку контакты чрезмерной силы в этот период начинали появляться лишь при 70 % окклюзионной нагрузки. В то время как в день фиксации НЗП супраконтакты возникали при 38 % окклюзионной нагрузки.

6. Позитивная динамика нормализации основных электромиографических показателей наблюдалась не ранее чем через 3 месяца от момента фиксации НЗП. Это объясняется сложностью строения рефлекторных связей нейро-мышечного комплекса и длительного периода его восстановления.

7. В отдаленные сроки после протезирования НЗП наблюдается нормализация жевательного веретена, приближения показателей коэффициента  $k$  к нормативным, нормализация количества жевательных циклов, выравнивание структуры и наполнения жевательной волны.

8. В отдаленные сроки после фиксации НЗП у 80-90 % пациентов наблюдается нормализация контактов зубов как во время статической, так и во время динамической окклюзии, однако у 24 % обследованных нами пациентов контакты чрезмерной силы и супраконтакты сохраняются, что позволяет сделать вывод о необходимости разработки алгоритма адаптации к НЗП.

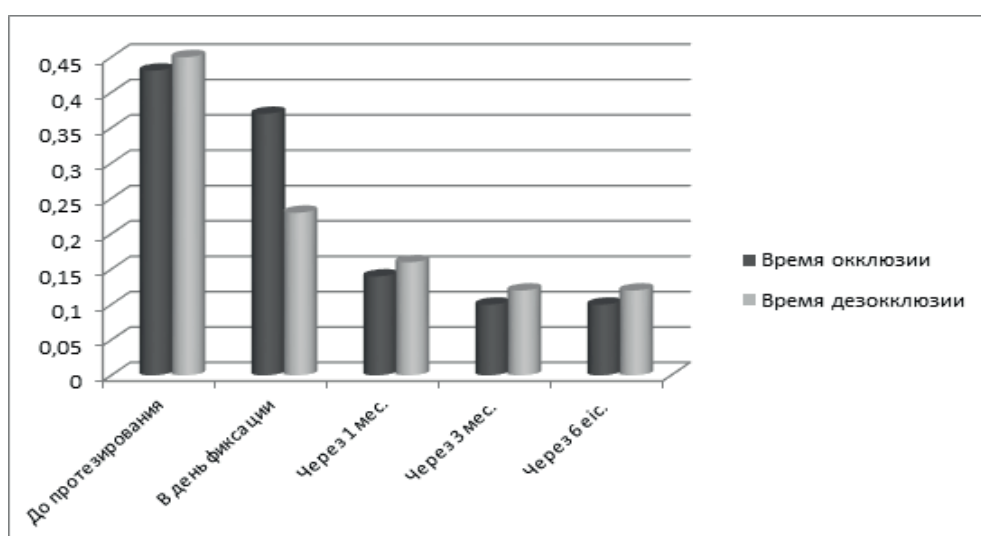


Рис. 1: Динамика изменений времени смыкания и времени размыкания зубов

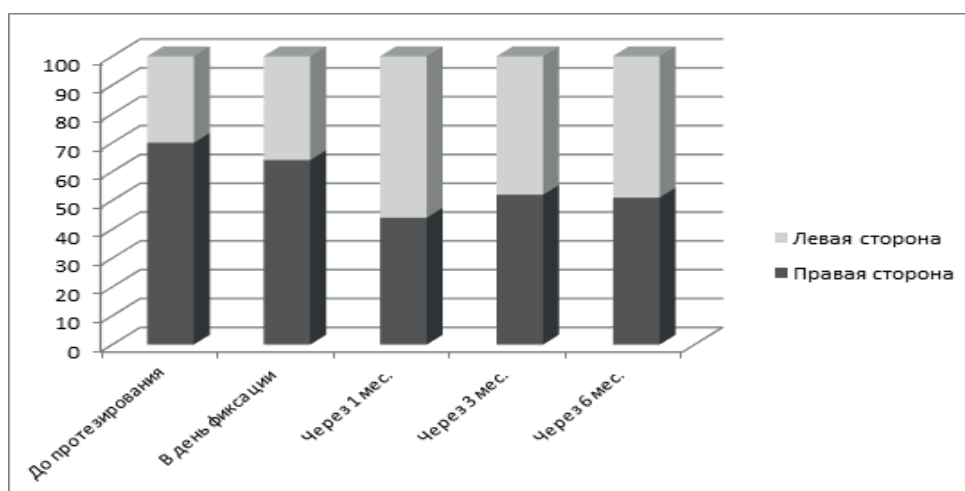


Рис. 2: Баланс окклюзии правой и левой сторон в %

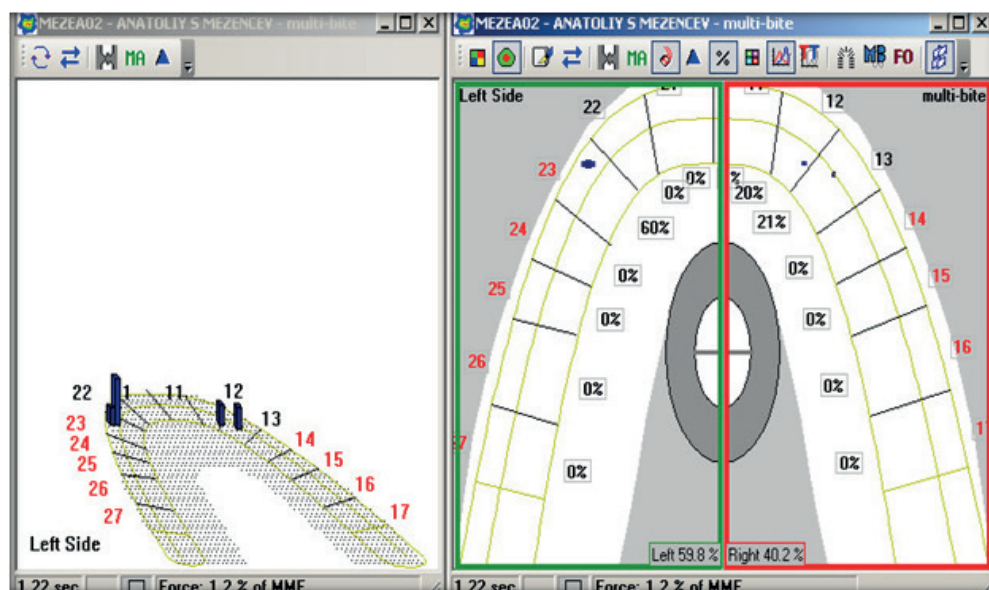


Рис. 3: Локализация первых окклюзионных контактов в день протезирования

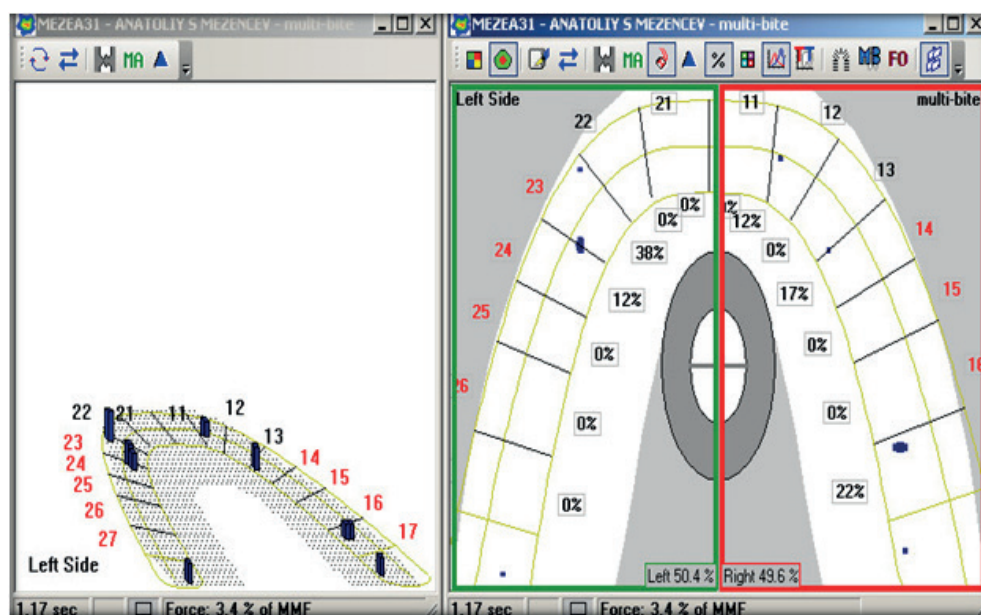


Рис. 4: Локализация первых окклюзионных контактов через 6 месяцев после протезирования

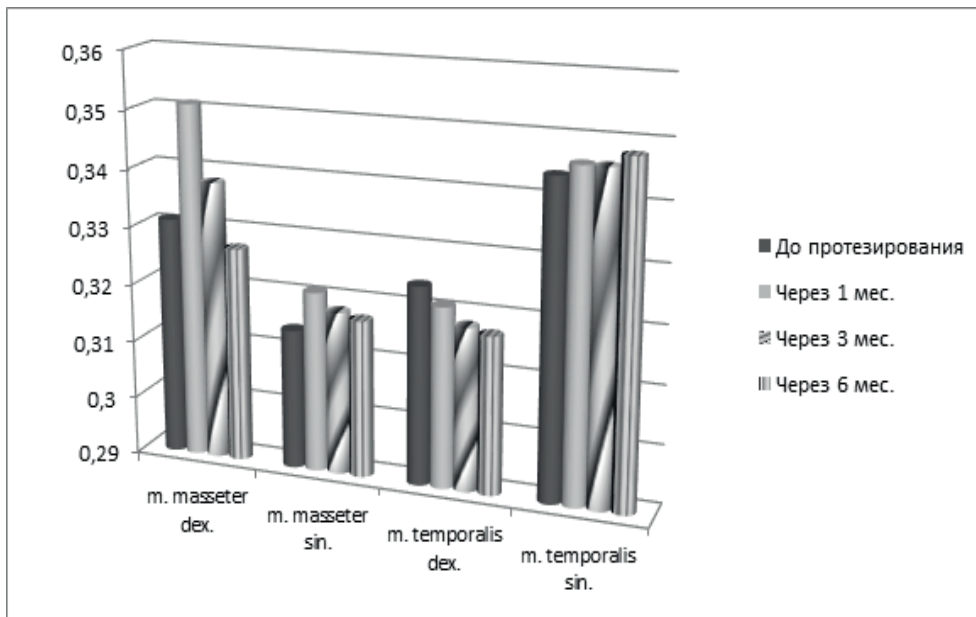


Рис. 5: Время активности ЖМ в разные периоды после протезирования в секундах

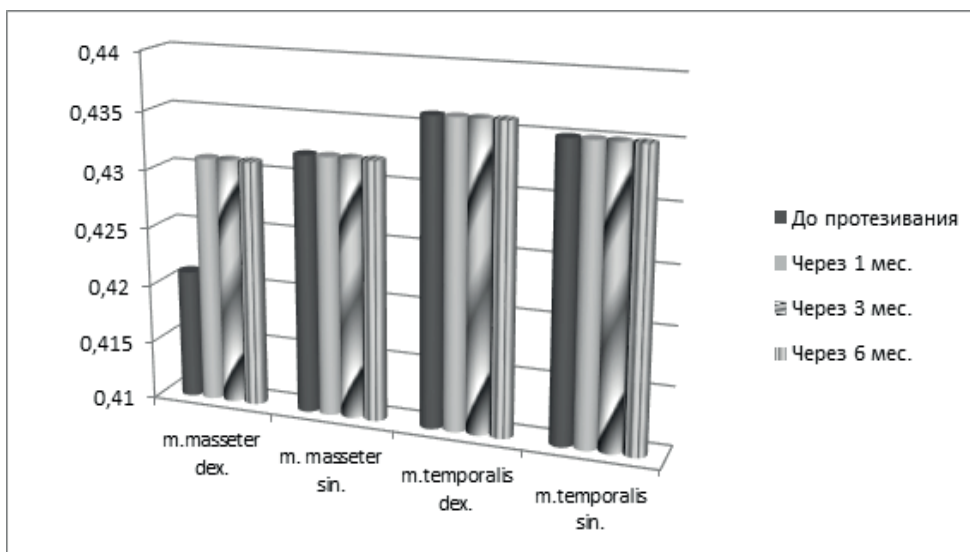


Рис. 6: Время покоя ЖМ в разные периоды после протезирования в секундах



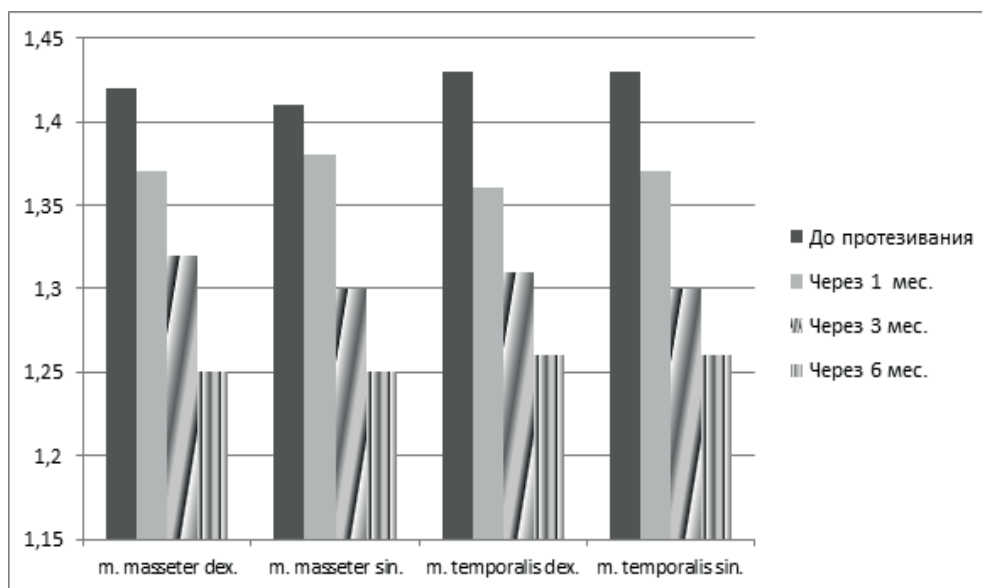


Рис. 7: Показатели коэффициента к ЖМ в разные периоды после протезирования

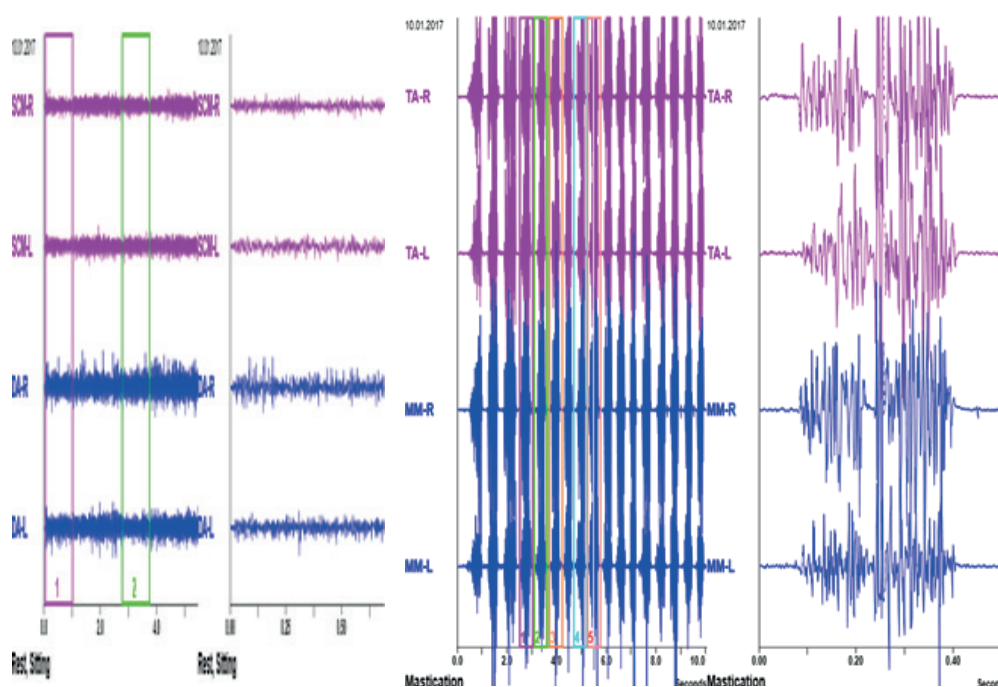


Рис. 8: ЭМГ пациента С., 1976 г. р., 2 группы 2 подгруппы в день фиксации НЗП: А – состояние покоя ЖМ; В – произвольное жевание.

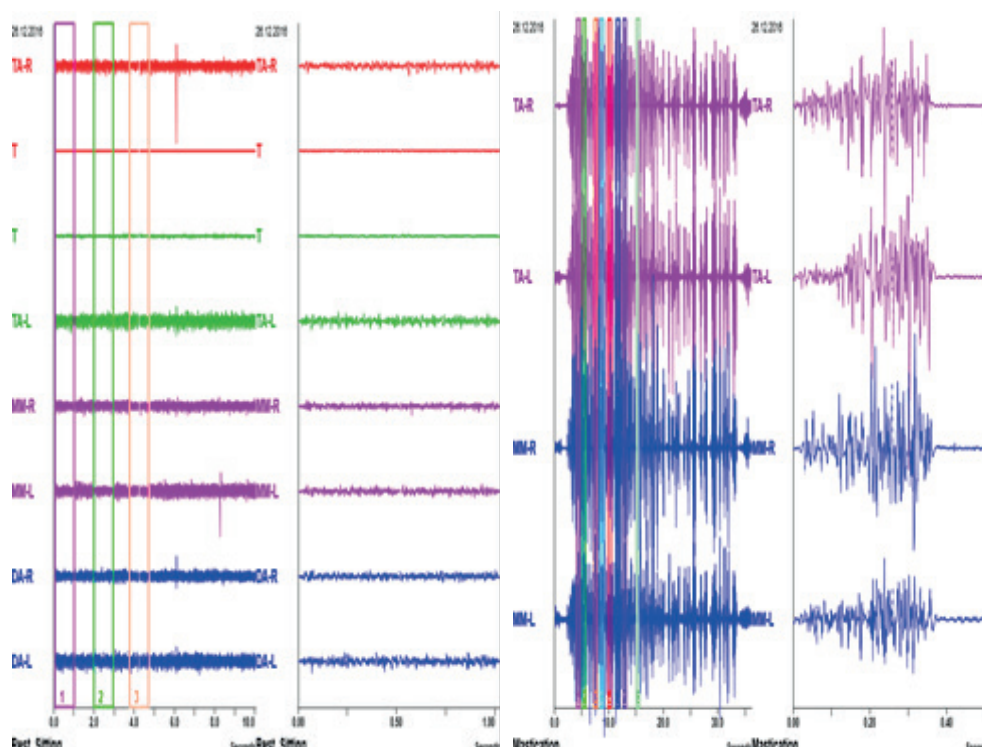


Рис. 9: ЭМГ пациента С., 1976 г. р., 2 группы 2 подгруппы через 1 мес. после протезирования: А – состояние покоя ЖМ; В – произвольное жевание.

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## СОДЕРЖАНИЕ ИНТЕРЛЕЙКИНОВ IL-8 И IL-12 В СЛЮНЕ ПАЦИЕНТОВ С ХРОНИЧЕСКИМ ГЕНЕРАЛИЗОВАННЫМ ПАРОДОНТИТОМ И МЕТАБОЛИЧЕСКИМ СИНДРОМОМ

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**Pindus T., Denga O., Bubnov V. Content of IL-8 and IL-12 interleukins in salives of patients with chronic generalized parodontitis and metabolic syndrome.**

**Annotation.** The exact role of IL-8 and IL-12 cytokines in chronic generalized parodontitis is still unclear. The situational manifestation of the role of cytokines can significantly depend on the presence of different somatic pathologies in patients. The study of the content of interleukin-8 and interleukin-12 in the saliva of patients with chronic generalized parodontitis of varying severity on the background of metabolic syndrome. To assess the IL-8 and IL-12 expression in the patient's saliva, the Human Periodontal Diseases array C1 (Cat N AAH-PPD-1-, RayBiotech), and the video documentation VersaDoc 4000 MP (Bio-Rad, USA) were used. Normalization of luminescence detection data was carried out using the Ray Bio analysis tool software (S02-AAH-PDD-1) attached to the set.

**Key words:** interleukins, chronic generalized parodontitis, metabolic syndrome.

Пародонтит представляет собой хроническую патологию в полости рта, поражающую ткани пародонта, включая костные ткани. Распространенность хронического пародонтита, по данным ВОЗ, составляет более 60 % среди населения Земли. Хронический пародонтит является многофакторной патологией, которая зависит от взаимодействия между патогенными микробами, иммунным ответом, генетическими факторами и общей неспецифической резистентностью организма. Цитокины играют важную роль в патогенезе болезни пародонта и могут использоваться в качестве маркеров в диагностике. Иммунная реактивность контролирует реакцию на патогенные микробы, а сеть цитокинов регулирует взаимодействие между патогенными возбудителями и воспалительным процессом, способность усиливать или подавлять тканевые реакции при пародонтите. Цитокины играют роль активации Т- и В-клеток, высвобождаются, когда микробиологические антигены распознаются соответствующим рецептором, что приводит к клеточно-опосредованным и гуморальным иммунным ответам. Пародонтит характеризуется несбалансированным ответом организма на патогенные факторы, что приводит к нарушению метаболических процессов в тканях пародонта и клиническим признакам заболевания. Качество иммуновоспалительного ответа организма на

бактериальную атаку определяет тяжесть и степень заболевания [1].

Интерлейкин-8 (IL-8) является хемокином, участвующим в патогенезе заболеваний пародонта. IL-8 является мощным хемоаттрактантным цитокином и активатором нейтрофилов, продуцируемый из эндотелиальных клеток десневыми фибробластами, нейтрофилами, моноцитами [2]. IL-8 обеспечивает транзит нейтрофилов из васкуляризированной ткани десны в десневую борозду. В различных работах приведены противоречивые данные о содержании IL-8 в ротовой жидкости у пациентов с хроническим генерализованным пародонтитом (ХГП) [3].

Другой цитокин – интерлейкин-12 (IL-12) является одним из мощных деструктивных стимуляторов в патогенезе различных воспалительных заболеваний. Показано, что при пародонтите повышенный уровень IL-12 в сыворотке крови и десневой жидкости коррелирует с тяжестью ХГП [4-6].

Однако, точная роль цитокинов IL-8 и IL-12 при ХГП до сих пор неясна. Кроме того, ситуативное проявление роли указанных цитокинов может существенно зависеть от наличия у пациентов различной соматической патологии.

Целью настоящего исследования было изучение содержания интерлейкина-8 и интерлейкина-12 в слюне пациентов с ХГП различной степени тяжести на фоне метаболического синдрома (МС).

**Материалы и методы.** Ротовую жидкость у 14 пациентов с МС и ХГП (8 человек – с начальной-I степенью ХГП и 6 человек – со II-III степенью ХГП) собирали натошак и замораживали при температуре -200С. Для оценки экспрессии IL-8 и IL-12 использовали набор Human Periodontal Diseases array C1 (Cat N ААН-PPD-1-, RayBiotech). Перед проведением анализа слюна была разморожена и разведена в два раза стерильным физраствором. Анализ проводили в соответствии с протоколом к набору. Учет реакции осуществляли на системе видеодокументации VersaDoc 4000 MP (Bio-Rad, USA) с высокочувствительной камерой для детекции люминесценции. Обработку данных проводили с помощью приложенной к набору программы Ray Bio analysis tool software (S02-ААН-PDD-1). Расчет условной концентрации осуществляли по формуле:

$$X(Ny) = X(y) \cdot P1/P(y),$$

где: P1 – средняя сигнальная плотность позитивных контрольных точек на контрольной матрице; P(y) – средняя сигнальная плотность позитивных контрольных точек на оси «у»;  $X(y) = X(Ny)$  – нормализованная интенсивность сигнала для точки «X» на оси «у».

**Результаты и обсуждение.** Результаты исследования содержания цитокинов IL-8 и IL-12 в слюне у больных с пародонтитом различной степени тяжести и соматической патологией (МС) представлены в таблице 1 и на рисунках 1, 2.

Из приведенных данных видно, что содержание провоспалительного цитокина IL-8 в слюне пациентов с ХГП II-III степени достоверно выше (в 1,78 раз), чем в слюне пациентов с ХГП начальной-I степени, несмотря на большие разбросы в значениях из-за небольшого количества пациентов (рис. 1). В отличие от цитокина IL-8 содержание IL-12 у пациентов с ХГП II-III степени увеличивалось по

сравнению с ХГП начальной-I степенью в 1,54 раза, но было недостоверным ( $p = 2$ ).

Таблица 1

**Содержание цитокинов IL-8, IL-12 в слюне у пациентов с хроническим генерализованным пародонтитом на фоне метаболического синдрома,  $M \pm m$ , условная концентрация**

Название	Содержание цитокинов в слюне у больных с нач.-I степенью ХГП (n=8)	Содержание цитокинов в слюне у больных со II-III степенью ХГП (n=6)
IL-8	$6712,0 \pm 1310,5$	$11962,2 \pm 2090,1$ $p < 0,05$
IL-12	$107,6 \pm 22,7$	$165,0 \pm 31,7$ $p > 0,05$

Примечание:  $p$  – показатель достоверности отличий от группы с нач.-I степенью ХГП.

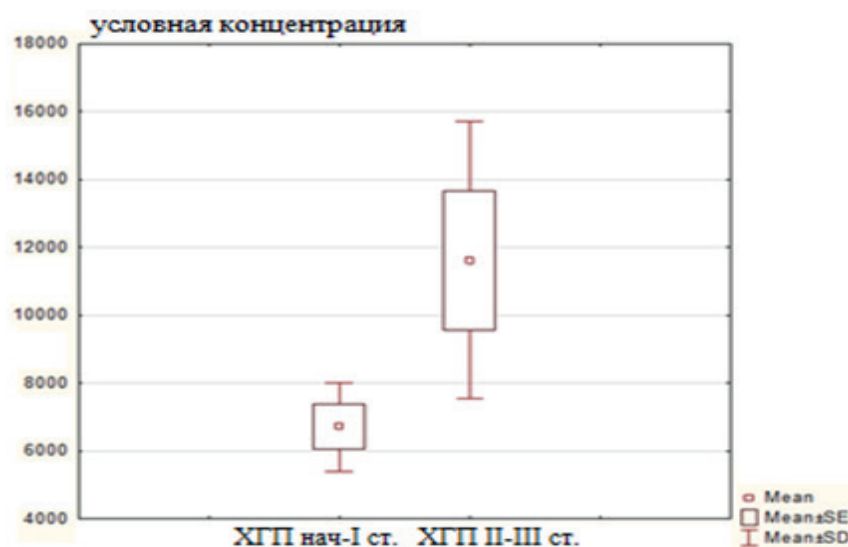


Рис 1. Содержание IL-8 в слюне больных хроническим генерализованным пародонтитом различной степени тяжести на фоне метаболического синдрома

Имеющиеся литературные данные свидетельствуют о том, что сети цитокинов играют важную роль в инициировании и прогрессировании заболеваний пародонта. Наличие ряда хронических и соматических патологий, протекающих с иммуновоспалительными реакциями, способствует формированию особенностей цитокиновой регуляции воспалительно-деструктивных изменений в пародонте. Взаимосвязь между общесоматическими заболеваниями и состоянием

органов полости рта обусловлена нарушениями метаболизма, гемодинамики, микроциркуляции, иммунологическими и нейрорегуляторными изменениями и сдвигами микробиоценоза. Многочисленными исследованиями установлено, что возникновению существенных функциональных и морфологических изменений в пародонтальном комплексе способствуют универсальные патогенетические механизмы, формирующиеся при различных заболеваниях органов и систем. МС является мультифакторной патологией, в основе патогенеза которого лежит нарушение жирового и углеводного обмена, резистентность тканей к инсулину. Для МС характерно состояние системного хронического воспаления, при котором усиливается выработка провоспалительных цитокинов, в том числе ИЛ-8 и ИЛ-12. При этом усиливается перекисное окисление липидов и поражение эндотелия сосудов, наблюдается прогрессирование атеросклеротического процесса. Степень повреждения тканей пародонта зависит при этом от соотношения эффективности повреждающих факторов и резистентности организма. Значительную роль в развитии патологии играет и иммунная система. Воспалительные инфильтраты, появляющиеся в тканях пародонта, обычно содержат иммунокомпетентные клетки, что свидетельствует об участии иммунной системы в патологическом процессе. Развитие пародонтита сопровождается так же дисбалансом цитокиновой системы. В ротовой, десневой жидкости и в крови наблюдается повышение содержания провоспалительных цитокинов [7-21].

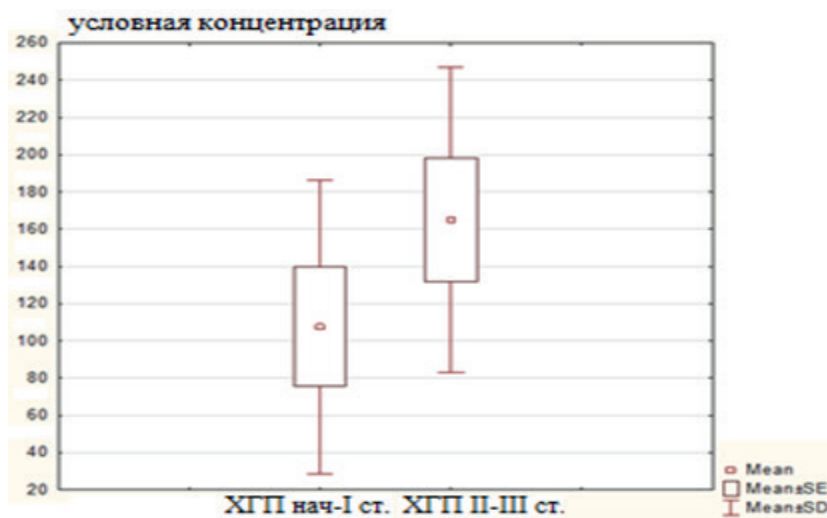


Рис 2. Содержание ИЛ-12 в слюне больных хроническим генерализованным пародонтитом различной степени тяжести на фоне метаболического синдрома

Интерлейкин ИЛ-8 представляет собой хемокин, продуцируемый различными тканями, являясь мощным индуктором хемотаксиса и активации нейтрофилов, которые, в свою очередь, могут продуцировать другие провоспалительные



цитокины и протеиназы, приводящие к разрушению пародонта у пациентов с II-III степенью ХГП. Интерлейкин IL-12 является цитокином, который играет важную роль в иммунном ответе путем управления дифференцировкой нативных Т-клеток на клетки Т-хелперы 1 (Th1) [4]. IL-12 начинает продуцироваться в результате индукции антигенными сигналами, особенно липополисахаридами. Кроме того, продукция IL-12 дополнительно регулируется другими цитокинами, такими как IL-1 $\beta$ , который является мощным остеолитическим цитокином. Таким образом, IL-12 может быть вовлечен в патогенез пародонтита в качестве мощного деструктивного стимулятора, который приводит даже к разрушению костных тканей. Наличие у пациентов с ХГП такой соматической патологии как МС безусловно накладывается на функционирование сети цитокинов, включая и интерлейкины IL-8 и IL-12.

**Выводы.** Проведенная оценка активности деструктивных цитокинов IL-8 и IL-12 в слюне у пациентов с ХГП начальной-I и II-III степени на фоне МС позволяет прогнозировать течение патологии пародонта и оценивать качество проводимой терапии. Содержание в слюне интерлейкина IL-8, представляющего собой хемокин, продуцируемый различными тканями и являющегося мощным индуктором хемотаксиса и активации нейтрофилов, в нашем случае достоверно увеличивалось с увеличением степени пародонтита. Содержание в слюне интерлейкина IL-12, играющего важную роль в иммунном ответе путем управления дифференцировкой нативных Т-клеток, при увеличении степени ХГП увеличивалось недостоверно (в 1,54 раза).

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## MORPHOLOGICAL CHANGES WITHIN THE STRUCTURES OF TEMPOROMANDIBULAR JOINT IN LABORATORY ANIMALS AT OCCLUSIVE TRAUMA MODELING

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**Annotation.** Study of morphological changes within the structures of temporomandibular joint (TMJ) is of a certain scientific interest in view of the increased frequency of cases of functional disorders in the dentoalveolar apparatus. There is no possibility of conducting a morphological research of human TMJ structures with chronic traumatic arthritis. Therefore, modeling of occlusive TMJ arthritis was carried out on laboratory animals. Modeling and identification of regularities in the development of pathology in comparison with the data, obtained during the studies of animals under physiological conditions, are a necessary step for development of new methods of diagnostics and treatment of this disorder in experimental medicine. This paper presents data of a morphological research of TMJ structures in rats on a physiological diet of vivarium, under conditions of modeling of chronic traumatic arthritis.

By disturbing the occlusal relationship between the teeth of the upper and lower jaws, chronic traumatic arthritis in temporomandibular joints of laboratory animals (rats) was modeled. Morphological studies of the structures of temporomandibular joints in laboratory animals (rats), allowed identifying the regularities in the development of pathological changes of musculo-articular component of TMJ in the modeling of occlusive arthritis.

**Key words:** temporomandibular joint, occlusive arthritis, modeling, laboratory animals (rats).

Emotional tension, exercise stress and occlusive disharmony are the main reasons, which lead to functional disorders of the masticatory apparatus balance and adaptive capacity of the body. As a result there are such symptoms as pain, muscular rigidity and fatigue, clicking and limitation of motion in the area of temporomandibular joints, the phenomenon of pain in ears, teeth attrition, odontoclasia and intense load on the alveolodental ligament [1, 3, 5, 6].

Temporomandibular joint is a paired organ acting synchronously. Irregularly distributed load of the masticatory apparatus motor unit is considered to be one of the key factors of the development of TMJ dysfunction.

Many clinical X-ray and myographic studies show that asymmetric occlusion contact play an important role in the etiology of this dysfunction, and this leads to the asymmetric function of masticatory apparatus muscles and TMJ. [1, 4, 8]

The weak components and the most common causes of the functional imbalance in the structures of temporomandibular joint are teeth, dentitions and neuromuscular apparatus.

Concordant interaction of joints and dental arch results in optimum performance of the neuromuscular apparatus. When masticatory apparatus functions properly, its muscles act in unison and coherently. This allows the mandible to make voluntary and reflex movements within its movement limits, as well as to perform such functions as mastication, swallowing, and uttering sounds.

The most frequent cause of the functional imbalance of the dentoalveolar apparatus is an occlusal disharmony or odontoloxo, and nervomuscular component damage. Correct interdental cuspal interference at stable vertical and horizontal arrangement of the mandible is a necessary condition to achieve functional harmony. Its loss prevents smooth movement of the mandible frontwards and sideways.

The basic guarantor of the functional balance of the dentoalveolar apparatus is the optimal interdental contact in dentitions and to a great extent a genetically predetermined psychoemotional sphere of an individual [4, 2, 7].

Search for new ways to diagnose and treat this pathology imposes the need to create adequate experimental models and define morphological characteristics (of TMJ) in the normal condition and pathology.

**Research materials and methods.** 10 mature outbred eight-month male rats served as a material for experimental study. Before the experiment animals were divided into two groups – main group and control group.

Main group consisted of 5 rats, in which occlusive arthritis in TMJ was modeled.

For this purpose, in the beginning their mouth cavities were fixed and opened under general anesthesia. Front cutting teeth of the upper and lower jaws were nipped by nail nippers from one side (left) at 3 mm from the cutting edge, and thus continuity of buccal tubers of the first molar in the mandible of the same side was broken. During the following two weeks, rats ate hard food, which included mostly hard grades of grain crops. In the end of the first week, due to the restoration of the central cutting tooth of the mandible, the nipping of the cutting edge was repeated, at the height of 2 mm.

After 14 days, rats were sacrificed.

Animals were killed through decapitation under ether anesthesia as per "Methodological guidelines on sacrificing the animals": A. F. Bogomolov, I. Yu. Luk'yanov, L.R. Gorbacheva; "Ivanov State University". – 2005. The experiment was held at the same time – at 10 a. m.

Musculoskeletal blocks from the TMJ area of the injured side (1<sup>st</sup> group of study), as well as from the non-injured TMJ area (2<sup>nd</sup> group of observation) were taken for further morphological study.

The control group (3<sup>rd</sup> group) included 5 healthy animals having no macroscopic

evidences of pathological changes in TMJ. Diet of animals from this group was in line with a standard rat food respective to their sex and age.

Temporomandibular joints with adjacent soft tissues from the right and left sides were taken for the pathomorphological study.

#### Histologic Examination

Pieces of soft tissues of TMJ were fixed in 10% neutral formaline solution. After fixation the material was washed, dehydrated in ascended alcohol series, taken through chloroform and embedded in paraffin (O. V. Volkov 1982) [O. V. Volkov, Yu. K. Yeletskiy, 1982]. 7-8  $\mu\text{m}$  tissue sections were prepared at a rotary microtome, placed on the glass, stained with haematoxylin and eosin, and embedded in Canada turpentine according to Van Gieson's method.

Temporomandibular joints and adjacent soft tissues complexes were decalcified in Ebner's liquid consisting of: 12-15% sodium chloride solution (200 mg), strong hydrochloric acid of 1.19 specific gravity (4 ml). Every day 1-2 ml of hydrochloric acid were added to this solution during the calcination to maintain the initial concentration. At the end of calcination the pieces were placed into a daily changeable 12-15 % sodium chloride solution for several days, and then they were washed in the flowing water for 24-28 hours. (G. A. Merkulov 1969) [G. A. Merkulov, 1969].

Histologic specimens were studied at x10, x40 zoom with the help of microscope Primo Star 5, package 5 (Carl Zeiss, Federal Republic of Germany); afterwards microscopic images were photographed.

Morphometric measurements of the longitudinal section of the masseter muscle were made in the main group, both on the injured and non-injured side. Morphometric measurements included the following indexes: area ( $\mu\text{m}^2$ ), width ( $\mu\text{m}$ ), length ( $\mu\text{m}$ ) and perimeter ( $\mu\text{m}$ ) of the longitudinal section of the masseter muscle.

Results and their discussion. Morphological characteristics of the temporomandibular joints of healthy rats while having the physiological diet of gnawing animals (control group).

**At the macroscopic study** TMJ represents a junction of the caput mandibulae and mandibular fossa of the temporal bone, which is surrounded by joint capsule, ligaments and muscles. Right and left temporo-mandibular joints are a combined connection (abarthrosis), since they act in couple in the process of functioning.

Opening and closing of mouth in gnawing animals is accompanied by lowering and raising of the mandible. Mandibular advancement and retreat, movement rightwards and leftwards are necessary components of masticatory movements of rat's mandible.

At the same time, it is worth noting that as opposed to human, one direction of movement prevails in rat's TMJ, i. e. articular heads of the mandible slide frontwards and then backwards in articular channeled fossa of animal's temporal bone.

With respect to the norm anatomic and histologic features of the right and left TMJ are identical.

Articular heads of the mandible look like rollers located in sagittal. Articular fossas of the temporal bone on the right and on the left remind a channel, where narrow rollers

of articular heads of rat's mandible move in A-P direction.

Surfaces of bones forming a joint are covered by a fibrocartilage called an interarticular disk.

The interarticular disk levels incongruity of articular surfaces and allows to create congruence between heads of the mandible and mandibular fossa of the temporal bone.

On the macroscopic bases the interarticular disk has a form of oval plate a bit thickened at the edges.

The interarticular disk divides joint cavity into two sections: upper and lower. With respect to the norm these spaces are not connected. They look like a gap.

Boundaries of the upper joint gap of TMJ are formed by the articular fossa of the temporal bone and the upper surface of the interarticular disk. The lower surface of the interarticular disk and head of the mandible limit the lower joint gap.

During examination of anteromedial parts of disk, the section of its tight adherence to tendon of the lateral pterygoid muscle is found.

The disk is tightly connected to the head of the mandible in the lateral and medial sections; peripheral sections of the disk fuse with joint capsule.

The joint capsule covers TMJ by attaching to it in the area of a condylar neck on the underside, and on the upperside – in the area of the articular fossa of the temporal bone.

Macroscopy allows to define tissues of temporomandibular (lateral) ligament on the lateral side of the joint capsule, which are located between a jugal arch of the temporal bone and the condylar neck. During a thorough study (with the help of a magnifying lens), anterior (or external) and posterior (or internal) parts are distinguished in it.

Furthermore, at some distance from the joint two more extracapsular ligaments – middle maxillary and stylomandibular ligaments – are found. The first one being a thickened fragment of fascia lies from the medial part of the joint between a spine of the sphenoid of the sphenoid bone and a lingula of mandibulae.

The stylomandibular ligament heads from styloid process of the temporal bone towards the mandibular angle.

Extracapsular ligaments strengthen the temporomandibular joint and prevent the joint capsule from sprain.

Examination of the surface in the place of rat's TMJ cut with the help of the magnifying lens allowed distinguishing extracapsular fibers of ligaments heading upwards and downwards from the interarticular disk. The disco-temporal ligament is located between the upper edge of the interarticular disk and the jugal arch of the temporal bone; it includes anterior and posterior fragments of its fibers. The disco-mandibular ligament consists of lateral and medial parts, it is found in sections between internal part of the joint capsule attachment (near the head of the mandible) and the lower part of the interarticular disk.

Physiological functioning of the temporomandibular joint is ensured by rat's masseter muscles attached to its mandible.

When soft tissues adjoining rat's TMJ were examined, the masseter muscle located between the exterior mandibular ramus bone and lower edge of the cheek bone was



found in the first place.

Where the cheek bone is attached, two groups of fibers of this muscle are identified – superficial and deep ones. Superficial part begins from the anterior and central sections of the jugal arch, and the deep one begins from the central and posterior sections.

The temporalis muscle in the form of a fan is located in the temporal fossa of the temporal bone coming to the temporal line at the top. It is attached to the coronoid process of mandible by its tendon.

The lateral pterygoid muscle has upper and lower heads. The former begins from the lower surface and infratemporal crest of the greater wing of sphenoid bone. The upper head comes down to the medial section of the joint capsule of TMJ and to the interarticular disk. The lower head begins from the exterior surface of the lateral plate of the styloid process of the sphenoid bone and attaches to the pterygoid fossa of the mandible.

The medial pterygoid muscle is located between the pterygoid fossa of the sphenoid bone and the pterygoid tuberosity of the mandible.

Muscles forming rat's oral floor are also attached to its mandible.

Mylohyoid muscle begins from the mandibulohyoid line of the mandible. At the central line of the diaphragm of the oral cavity, muscular fibers of the right and left muscles meet forming a seam of the mylohyoid muscle. It should be noted that muscle fascicles located behind are attached to the front surface of the basihyoid bone. Both mylohyoid muscles are take part in the formation of the oral floor (diaphragm of the mouth).

The digastric muscle and its two bellies connected by a tendon may be studied in detail in the macroscopic way by means of a magnifying lens. The anterior belly of digastric muscle begins from the digastric muscle fossa and goes to the basihyoid bone. The posterior belly of digastric muscle is attached to the digastric fossa of the temporal bone.

The geniohyoid muscle connects the mental spine of the mandible and the front surface of the basihyoid bone.

The genioglossal muscle begins from the outstanding stylosteophyte, i. e. mental spine of the mandible. Fascicles of this muscle are attached to the tongue, basihyoid bone and epiglottic cartilage.

**Histologic examination** of tissues of rat's TMJ was started from the examination of samples of tissues attached to the joint for the further microscopic study and morphometry.

Cross and longitudinal fibers of muscles appear to lie beneath the layers of the stratified squamous skin epithelium and dermis.

At x10 zoom, tissues of the masseter muscle divided by layers of the connective tissue are found within field of view. Mass of muscles is formed by multiple smaller fascicles. Spaces between fascicles are filled with loose connective tissue. The perimysium layer covers fascicles from outside penetrating inside by thin endomysium fibers. The latter, as it may be constantly seen, is full of capillary network. Vessels of a bigger diameter (arterioles, venules) and respective nerve endings are located in the area of perimysium.



Longitudinal cross-sections of the muscular tissue from TMJ allowed to study structure features of separate fibers at x10 zoom.

They appear to be a cylinder like formation of up to 50  $\mu\text{m}$  diameter.

Cross-striation is vividly seen on the preparations stained with haematoxylin and eosin. It occurs as a result of sequence of dark and light discs of the tissue. Many flattened cores are located under the cellular myolemma in more or less regular intervals. They constitute a myosymplastic part of the muscular fiber. Fiber cores are oriented along muscles by their maximum diameter.

At x40 zoom, especially on the longitudinal cross-section of the muscular fibers, smaller oval cores of satellite cells are found together with myosymplast cores. Cores of satellite cells are attached to myolemma of the myosymplast from outside.

The myosymplast center is formed by the sarcoplasm with multiple organelles and inclusions.

At the cross section, isolated cores of the myosymplast as a rule located at the periphery of the sarcoplasm near the cellular membrane (myolemma) are found within field of view. Muscular fibers cores of the ovoid form, rather light, contain 1-2 nucleoli.

Rat's temporomandibular joint was studied on the series of cross-sections of tissue specimens stained with haematoxylin and eosin, and also according to Van Gieson's method.

Outside the joint was surrounded by a connective-tissue capsule represented by a tight connective tissue. The outer layer of the capsule is formed by a fibrous tissue, and the inner one – by the layer of synovial cells involved in the production of the serous fluid, which lubricates articular surfaces.

The inner layer of the synovial membrane is folded, often in the form of small villi directed to the joint cavity. Multiple vessels of microcirculatory bloodstream, lymphatic capillaries, nerves surrounded by the perforating fibres network are found in the stroma of villi.

Ligaments helping to locate the interarticular disk physiologically are entwined into the joint capsule; they also ensure its movement in the process of functioning of the flexible synostosis.

The interarticular disk is of different width in different sections: on the periphery it is a bit thicker than in its central sections. Collagenous fibers, between which fibroblastic cells are found, take part in its formation.

Mature fibrocytes in the area of contact with the head of the mandibular are mostly directed in parallel with the disk surface. Vessels of the microcirculatory bloodstream are seen among fibers of the connective tissue. Fibers of the lateral pterygoid muscle entwine into the interarticular disk.

The head of the mandible is formed by a hyaline cartilage, which is tightly attached to the cortical bone of the condyle of rat's TMJ (figure 6). Multiple chondrocytes involved in the synthesis of glycosaminoglycans and perforating fibres of the cartilage are seen on the preparations stained with haematoxylin and eosin. Existence of glycosaminoglycans in the stroma causes the existence of focal spots of bluish color at the pinkish background

of the stained matrix of the cartilage.

Several different layers of the condyle may be differentiated at x10 zoom during the examination of tissue specimens of the head of rat's mandible. The articular facet is represented by collagenous fibers, between which fibrocytes, fibroblasts, histocytes and macrophagocytes are found. Zone of badly differentiated cartilaginous cells is located beneath; it is a zone of a dormant cartilage. And finally a zone of proliferating cartilage goes. Badly differentiated cartilaginous cells (chondroblasts) and a small number of mature enlarged cells are seen in the last layer. Blood vessels are found in the interstice of the hyaline cartilage at the border of the bone. Signs of perivascular resorption of the cartilaginous tissue are noticed in some places. The line connecting the cartilage with trabeculas of bones is rather irregular.

It is known that rat's condylar cartilage retains growth potential and potential to replace with bone tissue during the whole life of the gnawing animal (V. N. Pavlova 1988; Shen and Darendeliler 2005).

The articular fossa of the temporal bone follows the shape of rat's condyloid process.

The squamosa of gnawing animal's temporal section in the area of the joint is covered with a connective-tissue cartilage, which allows maintaining adequate scope of movement in the joint.

Morphological characteristics of rat's temporomandibular joint in the modeling of chronic traumatic arthritis (experimental group)

Study of macro- and microscopic features of structures of TMJs of the experimental group was conducted in comparison to specific features of osteoarticular connection in rats of the control group.

The examination with the naked eye of juxta-articular soft tissues involved in rat's unilateral act of mastication located in the temporomandibular joint on the injured side (on the left) did not allow to found noticeable differences in the materials of the experimental and control groups.

Usage of a magnifying lens allowed revealing certain irregularity of blood filling in the left temporal and left lateral pterygoid muscles. Detailed examination of the rest of muscles comprising the block of soft tissues under investigation, which are connected with the temporo-mandibular joint, did not show noticeable differences in the experimental and control groups of observations.

After the temporomandibular joint was sectioned laterally on the left, the examination was done under the zoom of a magnifying lens. Thorough inspection of the lateral ligament, concave-convex lens and infra-articular surface evidenced the lack of macroscopic vivid deformations.

The head of the joint moved a bit to the right and was a bit deformed on its medial surface.

Different morphological changes were observed on the injured side during the microscopic study of histologic specimens of soft tissues belonging to the experimental group of animals.

Small foci of perforating fibres breaking were found in the lateral ligament.

Small foci of dystrophic changes were also observed in infracapsular ligaments of TMJ. Focal infiltrates consisting of histocytes with addition of lymphocytes located mostly near full-blooded vessels of the microcirculatory bloodstream were noticed on the histological sections of the posterior concave-convex lens and temporal ligament.

Small foci of dystrophy were found in masseter muscles, namely in temporal, lateral pterygoid and masseter muscles. Sections of muscular fibers fragmentation were registered on the longitudinal cross-sections of the above muscles.

Separate myocytes were enlarged; cytoplasm sometimes contained pinkish protein granules.

Layers of the intermuscular connective tissue oftener spread due to the stromal edema.

Signs of congested plethora of capillaries were found in vessels of perimysium.

Study of rat's temporomandibular joint on the decalcified tissue specimens showed that the most part of the condyle is formed by the reticulofibrous bone tissue.

The articular surface of the head of the mandible turned towards the joint cavity was formed by collagenous fibers, fibroblasts, fibrocytes and histocytes.

Congested plethora of sinusoidal capillaries, focuses of dystrophic changes in the interarticular disk and the head of the mandible called attention.

Morphological study of the right temporomandibular joint in the experimental group of animals (on the side where dental injuries were missing) also included macroscopic and microscopic investigation of the material.

Appearance of soft tissues adjoining the joint, as well as features of osteoarticular connection in the right temporomandibular joint had no specific features in comparison with the left joint of the experimental and control groups.

Masseter muscles had macroscopic characteristics equal to the respective muscles adjoining the left TMJ. Moreover, irregular blood filling of the masseter muscle was noticed, it was similar to the blood filling in the left masseter muscle of the experimental group.

Appearance of right temporal, lateral and medial pterygoid muscles and muscles forming the oral floor had no visible differences from observations in the control group.

Ligaments of the right TMJ in animals of the experimental group even under triple zoom with the help of the magnifying lens had morphological signs similar to the control ones.

The interarticular disk of the right TMJ in the analyzed subgroup of rats had no visible changes when compared to the control characteristics.

Osteal formations comprising the joint did not differ visually from the control group of observations as well.

Histologic examination began from examining microscopic features of muscles and ligaments adjoining the right TMJ of the experimental group of animals.

Focal dystrophic changes of collagenous structures and focuses of vessel hyperaemia of the microcirculatory bloodstream were occasionally found during the examination of lateral and infracapsular ligaments. However, the specific volume of such processes did

not exceed the indexes typical for the control group.

Hypertrophy of muscular fibers, expansion of perimysium and endomysium, areas of fiber damage in collagenous fibers of the stroma were reported in the masseter muscle itself.

Boost in diameter cross-sections of myocytes and local signs of muscular destruction were noticed in the histologic sections of the masseter muscle, stained with haematoxylin and eosin.

Focal loss of cross striation of muscular fibers and sites of denuded myocytes were registered.

Focuses of damage were also noticed during the examination of the lateral pterygoid muscle.

Examination of the decalcified tissue specimens of the right TMJ made it possible to define signs of alteration and compensation in tissues and fibers forming the joint.

Articular capsule, articular facet of bones in the given study group had microscopic features similar to the normal registered parameters.

The interarticular disk in the large scale also had no expressed pathomorphological changes. Alongside with that, signs of dystrophic changes of connective-tissue fibers were seen in some of its loci.

Morphometric indexes at chronic traumatic arthritis in temporomandibular joints of laboratory animals.

The most expressed index in groups was the area of the longitudinal section of the rat masseter muscle (Figure1)

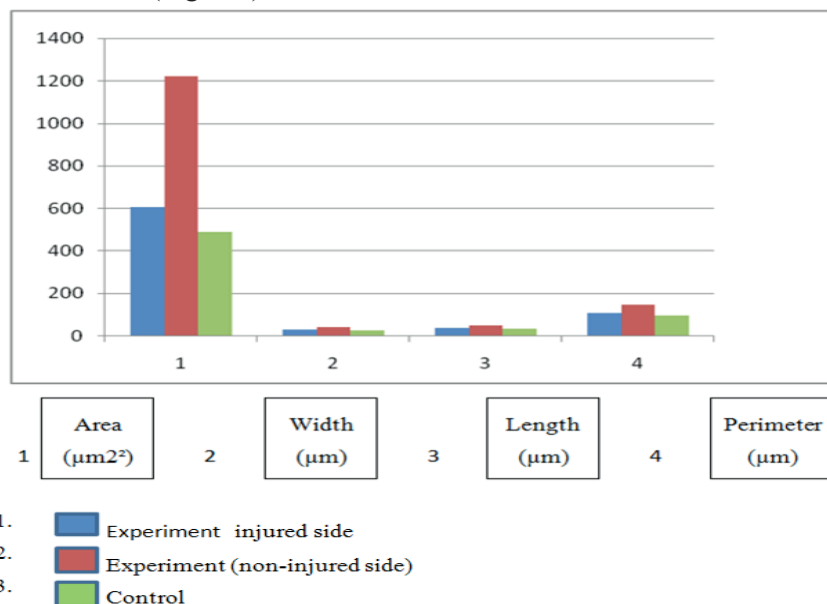


Figure 1. Morphometric indexes of the longitudinal section of the rat masseter muscle (Normal and in case of experimental occlusive arthritis in TMJ)

While modelling the traumatic arthritis in the temporomandibular joint of animals in the main group, the area of the longitudinal section of the masseter muscle on the non-injured side increased in 2 times compared to the injured side and in 2.5 times compared to the control group. This fact proves the formation of the unilateral act of mastication.

**Conclusions:**

1. By disturbing the occlusal relationship between the teeth of the upper and lower jaws, occlusive arthritis in temporomandibular joints of laboratory animals (rats) was modeled.

2. Morphological studies of the structures of temporomandibular joints in laboratory animals (rats), allowed identifying changes in the musculo-articular component of TMJ in the modeling of occlusive arthritis.

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## **HISTORY**

### **ТИПОЛОГИЯ НАСТРОЕНИЙ КРЕСТЬЯН ПОДОЛЬЯ В КОНЦЕ 1920-Х - НАЧАЛЕ 1930-Х ГГ.**

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***Ruban V. The typology of the Podillia peasants' moods at the end of the 1920s- beginning of the 1930s.***

***Annotation.*** This article suggests the classification of the Podillya peasants' moods during the total collectivization and discurculization under the forms of their appearance. While studying a great deal of documents of the Party committees, Soviet establishments, bodies of State Security -a great variety of peasants' moods from a passive watching of the situation to a radical forms of a protest ( an armed uprising)- was found out.

***Key words:*** collectivization, discurculization, moods Podillya moods classification.

Положительный результат реформирования политической и социально-экономической сферы общества весомым образом зависит от умения государственных лидеров использовать потенциал позитивных настроений населения и максимально сгладить негатив от непопулярных, но необходимых управленческих решений.

В этом контексте возрастает актуальность исследования настроений и поведения сельского населения Украины в условиях политического и социально-экономического кризиса. Поскольку в «спокойные» исторические периоды человек ограничен традиционными, устоявшимися социальными, политическими, экономическими и другими связями, которые в определенной степени обеспечивают их стабильность. Некоторые неудовлетворенные потребности компенсировались именно чувством стабильности и возможной перспективы их решения.

В кризисных условиях разрушаются все устоявшиеся связи, обостряется эмоциональное восприятие действий государственного руководства, местной власти и в целом окружающей социальной среды. Ведь резко возросло расхождение между потребностями, личностными ожиданиями и реальными возможностями их реализации, условиями жизни и деятельности. Кризис заставляет человека искать выход из имеющегося положения для собственного выживания и своей семьи

Войны, экономические и политические кризисы, постоянная сменяемость власти в первые десятилетия XX в. заставили украинских крестьян спланироваться и через крестьянское самоуправление самостоятельно решать повседневные проблемы собственной жизни с позиций целесообразности, прагматизма и здравого смысла. Именно ликвидация основ традиционной демократии украинского народа

стало одной из задач российского большевизма. Коммунистические лидеры считали, что население беспрекословно должно поддерживать инициативы Кремля, проявлять политическую благонадежность, инициировать только коррекции экономического курса, которые бы совпадали с общегосударственными интересами.

Влияние коммунистической идеологии обусловило формирование советскими обществоведами «черно-белой» картины взаимоотношений «власть - население». Тех, кто критиковал политический, социально-экономический курс Кремля сразу называли «врагом народа», «антисоветчиком», другие - кто даже формально поддерживал инициативы Коммунистической партии - «советским человеком», «защитником народных интересов». В такой мировоззренческой картине терялось все разнообразие настроений и поведения населения, делались ложные выводы относительно исторического прошлого. Последнее, в свою очередь, влияло на последующие управленческие решения политического руководства страны.

Выявление всего спектра настроений и поведения населения в конкретном историческом периоде, причин возникновения, творческого их осмысления, учета последствий событий прошлого в проведении современного реформирования политических и социально-экономических отношений украинского государства, избавит от угрозы очередного разрушительного для независимости Украины социального взрыва.

Целью научного исследования стала типологизация настроений населения Подолья в конце 1920-х - начале 1930-х гг. на фоне проведения раскулачивания и сплошной коллективизации.

Научная новизна исследования заключается в изучении на основе широкой архивной и историографической базы типологии настроений крестьянства Подолья, определения их общности и различий с другими регионами УССР в конце 1920-х - начале 1930-х гг.

Использование проявлений различных настроений лишь как иллюстрации социально-экономических и политических процессов в конце 1920-х - 1930-х гг. обусловило отсутствие их классификации. В частности, исследовательница Н.Бем, не предлагая классификации, проиллюстрировала примеры крестьянских политических настроений во время хлебозаготовки 1928 - 1929 гг., раскулачивание, сплошной коллективизации сельского хозяйства и Голодомора [3].

Попытки классифицировать настроения по источнику их возникновения / провоцирование, в частности, политические, социальные, экономические, культурные решение высшего партийно-государственного руководства СССР оказались неудачными. Ведь каждая инициатива большевистского руководства касалась практически всех сторон повседневной крестьянской жизни и сельскохозяйственного производства.

Другой вариант типологизации настроений крестьян - по основным линиям повседневной жизни крестьянина (изменение традиционного быта и создания социалистического, колхозного быта, уничтожение Церкви и т.п.) и видами



сельскохозяйственного процесса (посевная, прополка, борьба с сорняками, уборка урожая, заготовки сельскохозяйственной продукции, выплата налогов и т.д.). Но он тоже требовал учета всего комплекса влияния решений высшего партийно-советского руководства. Поэтому автор предлагает типологизацию настроений крестьян в исследуемый период через формы их проявления.

Одним из видов реакции сельского населения на «социалистическую перестройку сельского хозяйства» стала апатия и пассивное отношение к производственному процессу, собственной повседневности.

Местные руководители информировали кремлевских руководителей об отсутствии «желаемого стимула среди крестьян и колхозников к работе». В частности, директор Томашпольского сахарного завода Фадеев писал, что у «основной массы крестьян тупая апатия, полное безразличие» [13, стр. 74-75].

Массированное применение насилия во время сплошной коллективизации, раскулачивания, разорения хозяйств, изъятие имущества повлекло растерянность среди крестьянства. По утверждению председателя ГПУ УССР В.Балицкого некоторые «кулаки» поняли лозунг «Ликвидация кулачества как класса» буквально как их физическое уничтожение. Действительно, крестьяне не всегда сопротивлялись бригадам сельских активистов, выселяли и конвоировали их к железнодорожным станциям для отправки на Север. Некоторые крестьяне заявляли: «Здесь нам нет жизни, все забрали и разорили, поедем работать на север». Поэтому многочисленные колонны деморализованных кулацких семейств конвоировали несколько сельских активистов с дробовиками. Балицкий описал случай, когда один комсомолец на станцию погрузки привез 30 телег кулацких семей [38, стр. 33-34].

Важным для понимания крестьянского мировоззрения в конце 1920-х - начале 1930-х гг. стало увязывание внешнеполитических событий с повседневной ситуацией. Угроза войны с «международным империализмом», реальные дипломатические и военные конфликты, различные ультиматумы западных государств СССР связывались крестьянами с возможным падением большевистской / советской власти или хотя бы с облегчением административного давления. Прагматичный крестьянский ум не понимал как в период угрозы войны или военного конфликта побудить собственный народ к сопротивлению властям за ее нелепые социально-экономические решения? Ведь малейшее нарушение взаимодействия «фронта и тыла» приведет к неизбежному поражению большевиков.

Для крестьян Подолья в исследуемый период наиболее характерными были следующие «внешнеполитические» настроения:

- «приход поляков». Сотрудники органов государственной безопасности и партийно-советские работники интерпретировали распространения данного типа настроений как весомое влияние польского национального меньшинства. В докладных записках местные органы ГПУ УССР часто рядом с названием населенного пункта добавляли: «Преобладание польского населения» [15, стр. 2]. Крестьяне надеялись, что приход польских войск позволит вернуть

обобществленное имущество, наказать представителей сельсовета и колхоза за разворованное и уничтоженное имущество [15, л. 4].

Некоторые крестьяне связывали приход войск Польши в союзе с действующими политическими деятелями УНР, в частности, часто упоминалась фигура одного из соучредителя Украинской национально-демократического объединения (УНДО) Дмитрия Левицкого. Вероятно, его фамилия цитировалось в газетах как врага «Советской Украины» [10, л. 76];

- «ожидание войны». Информация о внешнеполитических или военных конфликтах, угрозы правительств других государств руководству СССР, подаваемые большевистскими пропагандистами или прочитанные в газетах, крестьянами интерпретировалось как возможное «предвоенное состояние». Так, в октябре 1928 крестьянин с. Тарасовка Тульчинского района Захар Древяга во время проведения «Недели обороны», где пропагандисты акцентировали внимание населения на «империалистической угрозе» стран-соседей, сделал вывод о близости войны и призвал «крестьян в случае войны бить коммунистов и жидов, убеждал, что в после разгрома советской власти крестьянам будет лучше жить, чем сейчас» [10, стр. 76-77].

«Война» как возможность уничтожения советского строя была постоянным трендом в крестьянских настроениях 1920-х - 1930-х гг. [16, стр. 3-10]. Крестьянин с. Вербки Мьястківського района Иван Кройтер, распространяя слухи о скором начале войны, подчеркивал собеседникам, что это шанс «избавиться от советской власти, которая нас грабит» [10, л. 76].

Отдельные крестьяне, очевидно, объединили прошлые внешнеполитические события, слухи с приграничья государств-соседей и сделали вывод о существовании антибольшевистской коалиции. В с. Чернява поляк Д.Крупницький рассказал собеседникам о существовании «союза Японии, Польши и Румынии», которые «двинут свои войска на Советский Союз» [15, стр.4].

Еще одним распространенным типом реакции на «ожидания войны» стали религиозные верования в падение «власти антихриста». Нестабильность внешнеполитической ситуации активно использовали представители разных Церквей для распространения религиозных настроений. Верующие крестьяне часто были уверены в обусловленности падения советской власти. Так, крестьянин с.Заливайки Волочисского района Юзек Белинский в разговорах отмечал: «В Библии написано, что в 1932 году. падет советская власть и все идет к тому. Если Япония начнет войну, то мы сделаем все необходимое для борьбы с Советской властью. Наши намерения – это Польша, так как при Советской власти жизнь нам нет. У крестьян забрали хлеб, скот, заставляют нас голодать, ведут населения к нищете» [15, л. 2].

Анализируя целый ряд подобных высказываний, следует отметить, что подольские крестьяне, пытались почерпнуть информацию из газет и выступлений пропагандистов, используя собственный анализ событий гражданской войны в Советской России в целом ориентировались в геополитических амбициях

западных стран и Японии. Однако, их надежды на распад СССР в 1930-х гг. не осуществились.

Одним из видов протеста против коллективизации стал выход из колхозов. Первая волна массовых выходов из колхозов была зафиксирована в марте - июне 1930 после публикации статьи Сталина «Головокружение от успеха. К вопросу колхозного движения» [35]. Так, в Могилев-Подольском округе, где прошли массовые крестьянские выступления [37, стр. 62-74], по состоянию на 28 марта 1930 наибольший процент выходов из колхоза пришелся на следующие районы: в Шаргородском было коллективизировано 82% хозяйств, осталось 15 4%, в Лучинецкому - 65%, осталось 37%, в Яришівському - 83%, осталось 39%, в Джурином - 54%, осталось 29%, в Могилев-Подольском - 72%, осталось 42% [9, л. 276-277]. Таким образом, крестьяне определили свое отношение к темпам коллективизации и действиям местного партийно-советского аппарата.

Следующий пик выхода из колхозов начался в апреле - мае 1932 года. Секретарь Винницкого обкома КП (б) У М.Алексеев 18 июня 1932 писал в ЦК КП(б)У о массовом выходе крестьян из колхозов. В частности, в Бершадском районе более 600 колхозников подали заявления о выходе из колхоза, Могилев-Подольском районе - 342, Томашпольском - 227, Теплицком - 208, Тростянецком - 78, Юринецком - 183, Ярмолинецком - 243, Барском - 79, Липовецком - 149 заявлений [13, стр. 60-62]. Анализ выявил основную причину выхода - массовый голод колхозников. В данном случае крестьяне не только протестовали против самого принципа большевистского коллективного сельскохозяйственного производства. Такой шаг можно квалифицировать как одну из практик выживания в условиях массового Голодомора, поскольку крестьяне могли выехать и устроиться на работу на многочисленные новостройки, где имели стабильный пищевой минимум.

Многогранной стала реакция крестьян на насильственные действия сельских активистов и представителей районных партийно-советских органов. Спектр настроений и вариаций поведения был чрезвычайно широк - от пренебрежительного, презрительного отношения к насильственным действиям. В современной историографии немало уже написано о вариации издевательств над крестьянами в исследуемый период [20,21,32,26]. Для нас интересна их реакция на издевательство. Так, после массовых пыток (поджигания бород, посадки на мешок пороха с зажженным фитилем, избивание тела колючими ветками и т.д.), крестьяне которые отказывались сдавать последние остатки хлеба, начали покидать свои дома. В частности, в с. Каменечье насчитывалось 250 заброшенных домов, в с. Небеливцы - 300 домов, с. Левковцы - 176. Особой разницы в количестве оставленных дворов между колхозниками и единоличниками по заключению работников Винницкого обкома партии не наблюдалось [14, стр.71-72].

Неоднозначной была реакция крестьян на раскулачивание. Ведь этот процесс поставил перед членами крестьянской общины моральный выбор – признать необходимость по социально-политическим причинам не только забрать имущество у своего односельчанина, но и выселить в неизвестные северные территории, где

он и его семья однозначно погибнут. Выселение крестьян за пределы села в целом практиковалось в крестьянской традиции. Но для этого надо было осуществить проступок, который находится за моральной чертой сельского общежития.

Сельские активисты соблазняли крестьян имуществом кулаков, что должно стать основой коллективного хозяйства. Но это выходило за пределы ценностной шкалы крестьянского мировоззрения. В с. Пиковец Козятинского района во время срочной распродажи хозяйства крестьянина Дроздовича, которого определили на выселение, его односельчанка Агафья Кондратюк обратилась к тем, кто покупал дешевое имущество: «Покупайте все, завтра вас также будут распродавать. Порядочный человек покупать ничего не будет, только босота» [17, стр.125]. Большинство крестьян понимало, что краденое имущество не принесет пользы. Именно поэтому среди основных лозунгов крестьянских «волынок» и восстаний было «Верните кулаков» [19, стр.145-146; 37, стр.19-20].

Зато реакция сельских активистов на раскулачивание была положительной, ведь в этих действиях они намеревались показать свою политическую лояльность и надеяться на улучшение своего социального статуса и карьерного роста [38, стр.34-35].

Но большинство крестьян были категорически против выселения зажиточных односельчан, тем более, что в списки часто попадали и семьи со средним достатком. Последние достигли экономического благосостояния благодаря не эксплуатации односельчан, а собственным трудом, что всегда вызывало уважение крестьянской общины. В общем крестьяне выражали сочувствие и пытались найти варианты помощи.

Наиболее радикальным проявлением настроений и поведения подольских крестьян стали восстания. В последнее время исследователи стали внимательно изучать различные формы крестьянского сопротивления - от восстаний до крестьянских «волынок» [1-2, 4-6, 23-24,29,31,]. Анализируя его формы, исследователи в основном копировали, определение форм крестьянского сопротивления из документов партийно-советского аппарата и органов государственной безопасности - «восстание», «волынка», «бабий бунт», «женская волынка», «крестьянские волнения» и т.п. Все они имели общие черты: стихийность; массовость; антибольшевистскую / антикоммунистическую направленность. Во время протестов крестьяне разбирали обобщественное имущество колхозных коллективов. Большинство из них завершалась насилием над представителями сельской и районной администрации, сельскими активистами. Подавление сопровождалось насилием и массовыми арестами крестьян.

В радикальных проявлениях крестьянского сопротивления наблюдались следующие отличия, в частности, в идеологическом наполнении лозунгов восстаний, участниках (весомый женский компонент), использовании оружия и подручных материалов (сельскохозяйственные орудия, топоры, деревянные палки), уровни эмоционального напряжения.

При анализе радикального сопротивления стоит акцентировать внимание,

что он происходил в условиях противостояния между представителями советской власти и традиционной крестьянской общины. Это было обусловлено постоянной пропагандой идеи Сталина и его окружения о «нарастании классовой борьбы на фоне строительства социализма», поскольку крестьянство интерпретировалось большевиками как «мелкобуржуазная масса». Внедрение в конце 1929 года новых пропагандистских стереотипов как нельзя лучше сыграли свою роль для местного партийно-советского аппарата. Создание атмосферы страха, недоверия, разрушение традиционной повседневности, ценностных ориентиров конечно вызвало крестьянское сопротивление. Но значительная часть местных руководителей и сельских активистов были идеологически подготовлены.

Исходя из анализа имеющихся документов, крестьянские выступления можно классифицировать на два типа: первый - протест, имел целью ликвидацию колхоза и завершался после разбора обобщественного имущества. Второй - предусматривал изменение по крайней мере сельской администрации, а лозунги участников восстания свидетельствовали о перспективах изменения / свержения коммунистического режима.

К первому типу, в основном, относились многочисленные так называемые «женские бунты», «женские волынки», где основными действующими лицами были женщины. Их участие в крестьянском сопротивлении определялась, прежде всего, статусом украинской женщины - не только хранительницы рода, домашнего уюта, но и защитницы семьи в кризисных случаях. Этому и способствовала политика высшего партийно-советского руководства, которое пыталось активизировать «женский потенциал» в социально-экономической и политической сферах, максимально привлечь женщин к формированию новой советской повседневности, где бы женщина занимала равное с мужчинами позиции [40].

Современные исследования об участии женщин в сплошной коллективизации доказали, что большевистское руководство рассматривало женщину как гарантийный резерв рынка труда, который можно вводить в действие при мобилизации мужчин на нужды промышленности. В результате организационных и пропагандистских мероприятий многие женщины добровольно шли на такие виды работы, которые считались мужскими. В то же время, советская власть полностью исключала «женственность» как черту «советской женщины», рассматривая сельских женщин, прежде всего, как субъекты выполнения экономических целей государства [33-34].

Но чекисты, анализируя так называемые «женские бунты», сделали вывод, что женщины сознательно шли на конфликт с местными партийно-советскими органами. Чекисты утверждали, что за спинами женщин стоят мужчины [37, стр.19-20]. Ведь они были уверены, что против женщин власть не будет применять силу.

«Женские волынки» были не только массовыми. Они были разной интенсивности, эмоционального всплески, количества участников и последствий они состоялись в большинстве сел районов Подолья. Только за 5 дней 10-15 марта

1930 в Мурафском районе Могилев-Подольского округа «волынки» прошли в 17 селах района, среди них, в семи селах женщины вышли на демонстрации и разгромили сельсоветы, в четырех - отличились массовыми выходами из колхозов [9, стр. 249]. Документы свидетельствуют, что «женские волынки» действительно имели чрезвычайно большое напряжение и сельские руководители, которые непосредственно сталкивались с женским гневом, прибывали в растерянности и не могли ему противостоять [12, стр. 78-79].

Анализируя «женские волынки», местный партийно-советский аппарат обвинял в их организации и проведении «кулаков» и «антисоветски настроенных граждан». Часто руководители пользовались словосочетаниями «бессознательные женщины», выражая этим неуважение к женщине как личности и гражданину. Таким образом, несмотря на общую советскую пропагандистскую кампанию о «равенстве женщин и мужчин», подавляющее большинство мужчин из числа бюрократического аппарата остались на позициях неполноценности женщины как члена общества.

Если «женские волынки» проходили с минимальным применением насилия, то крестьянские восстания продемонстрировали решимость крестьян в борьбе против коллективизации и коммунистического режима. Одним из центров крестьянского восстания стало Подолье. Основные события развернулись именно в приграничных округах: Проскуровском, Шепетовском, Могилев-Подольском, Каменец-Подольском. Масштабными были восстания в Винницком, Тульчинском, Шепетовском округах.

Одними из первых вспыхнули восстания в Шепетовском округе. Это восстание было настолько знаковым, что о нем осталось немало материалов. О нем упоминалось неоднократно в отечественной историографии [30].

Председатель ГПУ УССР Балицкий проинформировал о типичных лозунгах и требованиях крестьян. Анализируя ход значительного количества восстаний, четко прослеживается их эволюция. Сначала на стихийных выступлениях крестьяне требовали прекратить те действия, которые стали непосредственной причиной протеста. Это, в частности, «Прекратить коллективизацию», «Вернуть семена и инвентарь», «Прекратить обыски», «Отменить высылки кулаков». Сюда входит и религиозный компонент крестьянских требований. Ведь закрытие церкви или костела означало потерю традиционного сегмента крестьянского мировоззрения и повседневности. Поэтому крестьяне требовали «Открыть церковь», «Вернуть священника». Представителям власти иногда приходилось отвечать и на вопрос: «Зачем замучили ксендза?».

Также крестьяне думали на перспективу и пытались оставить традиционные ценностные ориентиры для потомков. Поэтому среди прочих лозунгов встречалась требование «Вернуть Закон Божий в школу» и «Ввести в школе преподавание славянского языка (имелось в виду старославянский), чтобы лучше понимать церковную службу».

В общем крестьяне требовали закрыть «советские школы» или выгнать



тех учителей, которые принимали участие в сплошной коллективизации и внедряли советские образовательные основы среди сельских детей. Крестьяне были недовольны тем, что созданные пионерские организации привлекались к пропагандистским акциям во время хлебозаготовок, детей натравливали доносить о тайниках зерна своих родителей. Именно поэтому крестьяне во время выступлений часто совершали насильственные акты относительно учителей. В частности, в с. Марковка Вапнярского района крестьяне избili молодую учительницу-комсомолку [11, стр. 37]. Учителей, которые открыто не поддерживали мероприятия советской власти, не принимали участия в сплошной коллективизации крестьяне не трогали [18, стр. 6-7].

Следующим этапом стали экономические требования: «Прекратить самообложение», «Восстановить свободную торговлю», «Долой налоги», «Прекратить раскулачивание», «Отменить обязательные займы». Это касалось экономической состоятельности крестьянских хозяйств и их появление было насущным и закономерным.

Но наиболее опасным для Компартии этапом эволюции крестьянских требований стали лозунги политического содержания. Провозглашение этого типа лозунгов совпали с наиболее острыми периодами крестьянского сопротивления - вооруженного выступления.

Главные требования крестьян заключались в изменении государственного устройства: «Сбросили царя, сбросим и советы», «Нам не надо советской власти, которая грабит крестьян».

В этом контексте следует выделить требования крестьян об отстранении членов Коммунистической партии от участия в государственном управлении. Деятельность коммунистов в проведении политических и хозяйственных кампаний, их идеологическая агрессивность, нетерпимость, непримиримость в отношении крестьянского мировоззрения, которое они считали «мелкобуржуазным», попытки срочно сделать его «советским» оттолкнула крестьянскую общину от Компартии. Это четко прослеживается по следующим лозунгам: «Долой коммунистов», «Бей коммунистов». Иногда звучали несколько экзотические лозунги: «Да здравствует Сталин без коммунистов» [8, стр. 35-36]. Такой лозунг свидетельствовал о восприятии Сталина как популиста. Крестьяне в данном случае воспринимали главу ВКП(б) как руководителя, не информированного о преступной деятельности местного партийно-советского аппарата. Это вообще было типичным крестьянским заблуждением, характерным для прошлых поколений - «вера в доброго царя». Это также подтверждалось реакцией крестьян на упомянутую статью Сталина «Головокружение от успеха. К вопросу колхозного движения».

В некоторых лозунгах акцентировалось внимание на вероятной помощи соседних государств в антикоммунистической борьбе: «Бей коммунистов, нам поможет Польша». Последнее основывалось на прошлом историческом опыте политического и военного сотрудничества УНР и Польши в борьбе против Советской России [22, 25, 28].



Немало в крестьянской среде было дискуссий о форме государственного управления. «Рады» как форма управления в целом не вызывали у крестьян возражения. Они учитывали общие принципы крестьянского общежития - выборность местного руководства, делегирование представителей определенного количества жителей села, возможность влиять на решения представительного органа через общее собрание. Но участие коммунистов в выборах в советы, верховенство коммунистических начал в принятии решений, захват всех руководящих должностей, лишение значительной части крестьян избирательных прав (так называемые лишения) дискредитировали советы как форму управления. В то же время лозунг «Советы без коммунистов» стал типичным и популярным на Подолье во время крестьянских волнений. Крестьяне в лозунгах требовали «Заменить сельсоветы старостами». В с. Троповое Лучинецкого района Могилев-Подольского округа крестьяне разогнали сельсовет и выбрали старосту [37, стр. 63-64]. Это свидетельствует об изменении дискредитированного «сельсовета» на привычный с «прошлых времен» выборный старостат.

Но высшее партийно-государственное руководство УССР больше всего волновали лозунги о провозглашении Украинской Народной Республики в приграничной территории Советского Союза. Это свидетельствовало о том, что за непродолжительное время существования УНР, ее демократические принципы, украиноцентричность ее направления, практика государственного управления надолго остались в исторической памяти населения Подолья. По показаниям В.Балицкого, больше этот лозунг встречался в районах, где в прошлом была распространена деятельность «петлюровских банд» - Бершадский, Джулинский, Ольгопольский, Ободовский районы Тульчинского округа. Ведь там, по его мнению, остались «кадры политических бандитов». Население этих районов провозглашало следующие лозунги: «Долой советскую власть, да здравствует Самостоятельная Украина». Крестьяне пели «Ще не вмерла Украина» (так в тексте. - Авт.). Лозунги «Да здравствует свободная Украина» были также зафиксированы на территории Винницкого и Бердичевского округа [37, стр. 50-51, 62-63].

Идея построения государственного строя на принципах Украинской Народной Республики и в дальнейшем была популярной среди подольян. В июле 1932 года Винницкий областной отдел ГПУ докладывал Винницкому обкому партии об очередном росте антисоветских настроений и активизацию «кулацких элементов». Начальник Винницкого областного отдела ГПУ В.Левочкин акцентировал внимание на основных политических принципах, распространенных среди крестьян Подолья. Это уже были известные еще с восстаний 1930 года лозунги: «Советская власть без коммунистов и коллективизации», «Самоопределение Украины», «Восстановление демократического управления типа УНР». По его свидетельству крестьяне в разговорах обсуждали создание сельских управ вместо сельсоветов [15, стр. 59-60].

Также в 1930 году были единичные случаи требований о «возвращении царя». Об этом вспомнил Балицкий 17 марта 1930 года в докладной записке в ЦК КП(б)

У. В селах Старолуг и Слаболуг Чечельницкого района толпа пела «Боже, царя сохрани» и требовали от местного священника проведения молебна «за свержение советской власти» [37, стр. 48-49].

Также В.Балицкий описывал интересные детали течения восстаний. Крестьяне после разгона сельсоветов вооружались вилами, топорами, палками, редко охотничьим оружием и втычками. Они выставляли на въезде в село пикеты, иногда копали окопы, делали инженерные заграждения, поддерживали постоянную связь с соседними восставшими селами [29].

Следующим элементом насилия стали убийства, избиения сельских активистов, активных колхозников, представителей сельской и районной администрации, поджоги хозяйств и тому подобное. Анализируя поведение крестьян в условиях жесткого противостояния между крестьянской общиной и активистами, сельской и районной администрациями при сплошной коллективизации, раскулачивании, Голодоморе, объекты и направленность насилия, можем квалифицировать их действия именно как «террористический акт».

Фактическое восстановление продразверстки, насильственные хлебозаготовки в 1929 года спровоцировали рост террористических актов. По состоянию на ноябрь 1929 года по информации начальника Винницкого окружного уголовного розыска Корнута в Винницком округе было совершено 40 террористических актов [7, стр. 114-117]. В Каменец-Подольском округе в течение октября 1929 года - апреле 1930 года было осуществлено 37 террористических актов, из них 20 поджогов [27, стр. 89]. В июне 1930 года в с. Мирутин Шепетовского округа постоянно происходили поджоги усадеб сельских активистов и колхозников [39, стр. 95].

Практика террористических актов продолжалась в дальнейшем. Ведь отчаявшиеся в способности власти изменить политику в отношении сельского хозяйства крестьяне считали поджоги или убийство сельского активиста единственной формой мести. Поэтому 15 мая 1932 года секретарь Винницкого обкома М.Алексеев информировал ЦК КП(б)У о террористических актах в районах области. Он писал, что с 15 декабря 1931 года по 28 апреля 1932 года в области было совершено 37 терактов, из них убийства советского и колхозного актива - 8 случаев, ранения - 1, поджогов - 26. Он акцентировал внимание ЦК КП(б)У, количество терактов резко увеличилось в период начала массовой голодовки [13, стр. 39-40]. В последующие месяцы количество терактов только росло. Впоследствии М.Алексеев докладывал в ЦК КП(б)У о проведении 27 террористических актов только за август 1932 года.

Наращение количества терактов власть пыталась остановить показательными процессами, где 5 человек приговорили к расстрелу. В то же время М.Алексеев жаловался на республиканские судебные учреждения, которые задерживали рассмотрение кассационных жалоб. Также для быстрого реагирования на теракты были организованы 5 выездных судебных сессий, охвативших 50% районов области [13, стр. 117-118]. В декабре 1932 года по неполным данным было убито двое и ранено двое уполномоченных райкома партии, убиты трое и ранены трое председателей сельсоветов, убит 1 и ранено 3 сельских активистов, совершено 25

поджогов [13, стр. 181-188].

Но доведенные до отчаяния конфискационными хлебозаготовками, массовым насилием, надругательством над традиционными ценностями крестьяне внутренне были согласны совершать убийства. В с. Ново-Почапинцы Затонского района у владельца 4 десятин земли Непийводы, который 2 декабря 1932 года не выполнил хлебозаготовки, бригада в составе секретаря партийной ячейки, председателя колхоза, нескольких сельских активистов и уполномоченного райкома партии Фиголя в его отсутствие изъяла в его усадьбе 3 центнера хлеба. Вернувшись домой и узнав о конфискации зерна, Непийвода взял топор и пришел в сельсовет. Он нанес три удара топором уполномоченному Фиголю, тяжело ранив его. Задержанный Непийвода следующим образом мотивировал свой поступок: «Я пришел в сельсовет с целью порубить вас всех за то, что приняли мой хлеб» [13, стр. 181].

Всего в осуществлении терактов прослеживаются сознательные действия крестьян. Ведь поджог, выстрел из ружья или втычки, убийство ножом или топором требовало предварительного обдумывания своего поступка. Несмотря на религиозное воспитание, традиционные моральные ориентиры относительно ценности человеческой жизни, человек принимал для себя непростое решение об убийстве другого человека. По нашему мнению, весомым аргументом для дальнейшего преступления стало поведение представителей местного партийно-советского аппарата и сельских активистов, которые во время раскулачивания и депортации крестьян с пренебрежением относились к своим односельчанам. Своим поведением они показали презрение к ценности человеческой жизни. Вполне вероятно, что на их решение повлияло понятие традиционной «высшей» справедливости, основанное на дохристианских представлениях мести - «око за око».

В то же время, в некоторых случаях следует также учитывать фактор неконтролируемого эмоционального состояния, когда человек ослепленный оскорблением, нанесенным сельскими активистами, может совершить убийство. Ведь посягательство на личное имущество, результаты крестьянского труда традиционно каралось как тяжкое преступление.

**Выводы.** Таким образом, в течение сплошной коллективизации и раскулачивания подольские крестьяне проявили различные типы настроений - от пассивного созерцания за развитием ситуации к радикальным формам протеста - вооруженным восстаниям.

Исследовательская практика показала, что практически во всех формах протеста женщинам принадлежала одна из главных ролей. Это определялось не только ее местом в традиционном крестьянском мировоззрении - женщины-хранительницы, но и политикой советской власти, которая пыталась привлечь женщин к активной общественно-политической деятельности и использовать ее как трудовой резерв в так называемых мужских профессиях.

Анализ хода крестьянских восстаний подтвердил их стихийной характер.

Однако, при их переходе в фазу вооруженного конфликта крестьяне пытались придать восстанию организованной формы (формирование вооруженных отрядов, создание инженерных заграждений, связь с соседними восставшими селями).

В ходе восстания или проведения террористического акта крестьяне демонстрировали свой собственный выбор - вооруженная борьба против большевизма. Это был сознательный нравственный выбор. Он не был характерен для традиционной подольской крестьянской повседневности, но был обусловлен грабительской политикой высшего политического руководства СССР.

Провозглашённые во время радикальных форм крестьянского сопротивления лозунги прошли определенную эволюцию - от прекращения действий, повлекших сопротивление к изменению государственной формы управления и прекращения деятельности Коммунистической партии в СССР.

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## **TECHNICAL SCIENCES**

### **NEURO-FUZZY TECHNOLOGY APPLICATION ON PMI PROJECT MANAGEMENT**

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**Annotation.** *The methodological approach of PMBOK PMI and mathematical model with application of neuron-fuzzy technologies for the analysis of the efficiency of project management in IT-sphere is described. A neuro-fuzzy model that provides high applicantsy for relatively small data set defined on expert linguistic variables or where input data may be is described which the input data are inaccurate, incomplete or undefined is developed. The model allows creating subsystems for project management decision support based on neuro-fuzzy approach with the aim of reducing its implementation cost.*

**Key words:** *project management, PMBOK PMI, efficiency analysis, neuro-fuzzy technologies.*

**Introduction.** The most software products are unique. This allows them to compete with other products. Creating a unique product in a limited period of time leads us to the concept of a project. A project is a temporary enterprise aimed at creating a unique product, service or result. [1] According to statistics, 90% of IT projects are completed without achieving project objectives. In this regard, the task of analyzing the project management and its processes efficiency is crucial in software development.

The efficiency of project management is defined as stakeholders assessment of project's objectives achievement. Since the objectives of the project may be achieved in different ways, the most important condition for the success of the project is to find a balance between competing baselines (scope of work, resources and schedule) and additional constraints (quality, risks, stakeholder involvement, communication, team expertise ( given city / country), etc.). Classical project management (cascading model) in information technologies becomes less applicable due to the rapid variability of this area and rapid market challenges. In this regard, the Agile model and related methodologies / frameworks like Scrum, Kanban, PRINCE2 and flexible methods of management in the Project Management Body of Knowledge (PMBOK PMI) guide 5th [1] and especially upcoming 6th edition are applicable much better. At the same time, the Japanese method of continuous improvement of processes and practices of kaizen is also widely used.

**PMI approach for modeling.** PMBOK v.5 from PMI defines 9 project management factors (areas of knowledge) that affect the success of the project: project management, project content management, project time management, project cost management, project quality management, project human resources management, project communication management, risk management project management, project supply management, stakeholder involvement management.



Obvious that, during project implementation, it is necessary to understand what factors have the greatest impact on the final result. Quantitative assessment of risks, soft-skills, motivation, communication, involvement of stakeholders becomes a challenge. Nevertheless is possible to assess these factors qualitatively. To model complex processes, objects, systems, when there is no explicit analytical dependence describing the behavior of the object under investigation, or if the expert knowledge of the object can be formulated only in linguistic form, it is advisable to use systems with fuzzy logic [2].

The process of fuzzy inference is a certain algorithm for obtaining fuzzy conclusions based on fuzzy conditions or assumptions using the basic concepts and methods of fuzzy-set theory and fuzzy logic such as membership functions, linguistic variables, operations on fuzzy sets, fuzzy relationships, methods of fuzzy implication and fuzzy composition, etc. However, the accuracy of the fuzzy model depends on its structure, especially the knowledge base and the parameters of the membership functions, as well as the implementation of logical operations, etc. Since these components are chosen subjectively, they may not be completely adequate to the modeled object, therefore, at the first stage a rough model of the object is formed, which approximates the input-output connection. At present, more and more often neural networks are used to improve the quality of the model in systems with fuzzy logic. Neural networks are used to obtain a more accurate model, solving the problem of optimizing its parameters through the tuning of a fuzzy neural network.

Such a combination of neural networks and fuzzy logic underlies neuron-fuzzy technologies that allow to take into account the uncertainties not only of statistical but also linguistic nature. The latter is typical for the task. Therefore, it is proposed to build a mathematical model for analyzing the effectiveness of project management based on neuron-fuzzy technologies.

**Modeling description.** There are neural networks, where unstructured numerical data is used to find a solution to a problem through training and tuning and fuzzy technologies (fuzzy systems) that uses expert information about the regularities found in available experimental data in the form of natural language rules "IF-TO ". These rules are formalized with the help of fuzzy logic, they allow to build identification models with relatively small datasets.

The combination of the two described technologies is a combination of abilities to teach neural networks with visibility and understandable interpretation of fuzzy IF-TO rules.

The typical structure of a fuzzy model consists of such basic blocks:

- fuzzy knowledge base that contains information on the  $y = f(x_1, x_2, \dots, x_n)$  in the form of linguistic rules such as "if-then";
- a machine of fuzzy logical inference, which determines the value of the output variable as a fuzzy set that corresponds to fuzzy values of the input variables based on the knowledge base rules,.

To construct a mathematical model for the analysis of the IT project management efficiency as factors affecting the efficiency of the project (input variables), we will consider the variables presented in Table. 1.

Table 1

**An example of input variables of mathematical model to valuate project management efficiency**

Variable name	Variable description
x1	Requirements quality
x2	Requirements analysis
x3	Requirements elicitation
x4	Justification of tasks assessment: are task estimation is realistic and justified
x5	Compliance with the software delivery schedule
x6	Quality of the source code
x7	Soft skills of the team
x8	Soft skills of the team leader
x9	Quality of project reporting

The output variable (integral evaluation of project efficiency) is defined as a linguistic variable that can take values <Effective - E> and <Non-effective - NE>.

Then, the mathematical model of the project success dependence based on factors that affect its success, will be presented in the next form:

$$y = f(x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8, x_9)$$

We begin the construction of the model (1) explicitly with the formation of a fuzzy production knowledge base, which is a set of fuzzy expert-linguistic rules of the "IF-TO" type and connects the linguistic estimates of the input variables ( $x_1, x_2, \dots, x_9$ ) and the output variable  $y$ .

We begin the construction of the model (10) explicitly with the formation of a fuzzy production knowledge base, which is a set of fuzzy expert-linguistic rules of the "If-Then" type and connects the linguistic estimates of the input variables ( $x_1, x_2, \dots, x_9$ ) and the output variable  $y$ . For this purpose, experimental data on 10 completed projects in the IT field, using linguistic estimates of input and input variables

Thus, to build the model a fuzzy knowledge base is formed as a system of fuzzy linguistic definitions of the "IF-THEN" type, which connect linguistic estimates (excellent, good, normal, bad, very bad) of input variables with the output variable  $y$ .

The output variable, as mentioned above, takes two values. The classes and their centers for the output variable  $y$  are given in Table 3.

Table 3

**Classes and its centers for the output variable model**

Class	Values	Center of class	Value of center
C1	Yes	d1	1
C2	No	d2	2

We represent the base know from Table 2 in a form with better visibility for constructing the model in table 4.

Table 4

**Compact type of knowledge base**

j	p	x1	x2	x3	x4	x5	x6	x7	x8	x9
YES	1	E	W	W	W	W	E	E	N	E
	2	W	W	W	W	W	E	B	E	W
	3	W	N	N	E	N	W	W	W	W
	4	W	W	N	W	W	N	E	E	W
	5	W	W	W	W	W	E	E	E	W
NO	1	VB	W	W	W	N	W	B	B	VB
	2	N	W	W	W	W	N	B	N	N
	3	VB	W	N	N	N	W	W	B	VB
	4	W	N	N	W	N	W	B	W	W
		E	N	N	W	N	W	N	N	E

Based on the experimental data from Table 2, the decision of the first project (P1) effectiveness can be represented by a linguistic utterance of the type: IF <x1-E> AND <x2-W> AND <x3-W> AND <x4-W> AND <x5-W> AND <x6-E> AND <x7-E> AND <x8-N> AND <x9-E> THEN <y-YES>. This rule is given in the line for project P1 in Table. 2. This rule is given in the line for project P1 in Table. 2. The whole fuzzy knowledge base is formed in a similar way.

Thus, to build the model (32), a fuzzy knowledge base is formed as a system of fuzzy linguistic definitions of the "IF-THEN" type, which connect linguistic estimates (excellent, good, normal, bad, very bad) of input variables with the output variable y. The membership function may be built based on table 4. Thus, the constructed fuzzy model of the object (1) in the form of the calculated relations represents a non-linear analytical dependence of the project management efficiency based on changes in factors that affects its efficiency.

**Conclusions.** PMI approach for project management provides various processes, documents and tools as best practices. Described processes are linked together and may be modeled to define which and how affects the final result. This goal may be achieved

with software creation with modeling engine core.

Proposed model built based on neuro-fuzzy approach represent non-linear analytic dependency of project management from factors affecting its effectiveness. As advantages of the model we may present it high variability and extensibility. As a main disadvantage we define high involvement of stakeholders to extend the knowledge base. This disadvantage may be mitigated with automation parameters gathering, especially in software industry.

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